

PROSPECTUS SUPPLEMENT
(to Prospectus Dated April 21, 2023)

Up to \$150,000,000
BigBear.ai Holdings, Inc.

Common Stock

We have entered into a Controlled Equity OfferingSM Sales Agreement (the “*Sales Agreement*”) with Cantor Fitzgerald & Co. (“*Cantor*”) relating to the sale of shares of our common stock, par value \$0.0001 per share (“*common stock*”), offered by this prospectus supplement and the accompanying prospectus. In accordance with the terms of the Sales Agreement, we may offer and sell shares of common stock having an aggregate offering price of up to \$150,000,000 from time to time through Cantor, acting as our sales agent.

Our common stock is listed on the New York Stock Exchange (“*NYSE*”) under the symbol “BBAI.” On May 30, 2025, the last sale price of our common stock as reported on the NYSE was \$4.16 per share.

Sales of our common stock, if any, under this prospectus supplement and the accompanying prospectus will be made in sales deemed to be an “at the market offering” as defined in Rule 415(a)(4) promulgated under the Securities Act of 1933, as amended (the “*Securities Act*”). Cantor is not required to sell any specific number or dollar amount of common stock, but will act as our sales agent using commercially reasonable efforts consistent with its normal trading and sales practices, on mutually agreed terms between Cantor and us. There is no arrangement for funds to be received in any escrow, trust or similar arrangement.

The compensation to Cantor as sales agent will be an amount equal to up to 3.0% of the gross proceeds of any common stock sold under the Sales Agreement. In connection with the sale of the common stock on our behalf, Cantor will be deemed to be an “underwriter” within the meaning of the Securities Act and the compensation to Cantor will be deemed to be underwriting commissions or discounts. We have also agreed to provide indemnification and contribution to Cantor with respect to certain liabilities, including liabilities under the Securities Act or the Securities Exchange Act of 1934, as amended, (the “*Exchange Act*”). See the section titled “*Plan of Distribution*” beginning on page S-11 for additional information regarding the compensation to be paid to Cantor.

We are an “emerging growth company” under applicable federal securities laws and therefore subject to reduced public company reporting requirements.

An investment in our common stock involves significant risks. These risks are described in the section titled “[Risk Factors](#)” beginning on page S-5 of this prospectus supplement and under similar headings in the documents incorporated by reference into this prospectus supplement and the accompanying prospectus.

Neither the Securities and Exchange Commission (the “*SEC*”) nor any state securities commission has approved or disapproved of these securities or determined if this prospectus supplement or the accompanying prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

Cantor

The date of this prospectus supplement is June 2, 2025.

TABLE OF CONTENTS

Prospectus Supplement

	<u>Page</u>
ABOUT THIS PROSPECTUS SUPPLEMENT	S-ii
CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS	S-iii
PROSPECTUS SUPPLEMENT SUMMARY	S-1
RISK FACTORS	S-5
USE OF PROCEEDS	S-8
DILUTION	S-9
PLAN OF DISTRIBUTION	S-11
LEGAL MATTERS	S-12
EXPERTS	S-12
WHERE YOU CAN FIND MORE INFORMATION	S-12
INCORPORATION OF CERTAIN INFORMATION BY REFERENCE	S-13

Prospectus

	<u>Page</u>
ABOUT THIS PROSPECTUS	ii
WHERE YOU CAN FIND MORE INFORMATION	iv
INCORPORATION OF DOCUMENTS BY REFERENCE	iv
CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS	vi
SUMMARY OF THE PROSPECTUS	1
RISK FACTORS	6
USE OF PROCEEDS	7
DESCRIPTION OF CAPITAL STOCK	8
DESCRIPTION OF NEW WARRANTS	14
DESCRIPTION OF RIGHTS	17
DESCRIPTION OF UNITS	18
PLAN OF DISTRIBUTION	19
LEGAL MATTERS	21
EXPERTS	21

You should rely only on the information contained or incorporated by reference in this prospectus supplement, the accompanying prospectus or any free writing prospectus that we may provide to you in connection with this offering. We have not, and Cantor has not, authorized anyone to provide you with different information, and you should not rely on any information not contained in or incorporated by reference into this prospectus supplement, the accompanying prospectus or any free writing prospectus that we may provide you. This prospectus supplement does not constitute an offer to sell or a solicitation of an offer to buy any securities other than our common stock. We are not, and Cantor is not, offering to sell shares of our common stock or seeking offers to buy shares of our common stock in any jurisdictions where offers and sales are not permitted. The information contained in this prospectus supplement, the accompanying prospectus or any free writing prospectus that we may provide to you is accurate only as of the date of each document regardless of the time of delivery of this prospectus supplement and the accompanying prospectus or any sale of shares of our common stock. In case there are any differences or inconsistencies between this prospectus supplement, the accompanying prospectus or any free writing prospectus that we may provide to you and the information incorporated by reference in them, you should rely on the information in the document with the most recent date.

ABOUT THIS PROSPECTUS SUPPLEMENT

This document is in two parts. The first part is this prospectus supplement, which contains specific information about the terms on which we are offering and selling our common stock pursuant to this prospectus supplement and important business information about us and also adds to and updates information contained in the accompanying prospectus and the documents incorporated herein and therein by reference. The second part is the accompanying prospectus, which provides more general information, some of which may not apply to the offering being made pursuant to this prospectus supplement. This prospectus supplement and the accompanying prospectus are part of a registration statement on Form S-3 (File No. 333-271230) (the “*Registration Statement*”) that we filed with the SEC using a “shelf” registration process.

This prospectus supplement and the accompanying prospectus do not contain all of the information included in the Registration Statement, as permitted by the rules and regulations of the SEC. For further information, we refer you to our Registration Statement, including its exhibits, of which this prospectus supplement and the accompanying prospectus form a part. We are subject to the informational requirements of the Exchange Act, and therefore file reports and other information with the SEC. Statements contained in this prospectus supplement and the accompanying prospectus about the provisions or contents of any agreement or other document are only summaries. If SEC rules require that any agreement or document be filed as an exhibit to the Registration Statement, you should refer to that agreement or document for its complete contents.

You should read both this prospectus supplement and the accompanying prospectus as well as additional information incorporated by reference herein and described in the sections titled “*Where You Can Find Additional Information*” and “*Incorporation of Certain Information by Reference*” before investing in our common stock.

Neither we nor Cantor have authorized anyone to provide you with any information other than that contained or incorporated by reference in this prospectus supplement and the accompanying prospectus, along with the information contained in any free writing prospectuses we have authorized for use in connection with this offering. Neither we nor Cantor take any responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. This prospectus supplement and the accompanying prospectus is an offer to sell only the securities offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so.

The information appearing in this prospectus supplement and the accompanying prospectus is accurate only as of the date on the front of the document and that any information we have incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus supplement and the accompanying prospectus, or any sale of securities. Our business, financial condition, results of operations and prospects may have changed since those dates.

If the description of this offering varies between this prospectus supplement and the accompanying prospectus, you should rely on the information in this prospectus supplement. Any statement made in this prospectus supplement or in a document incorporated or deemed to be incorporated by reference in this prospectus supplement will be deemed to be modified or superseded for purposes of this prospectus supplement to the extent that a statement contained in this prospectus supplement or in any other subsequently filed document that is also incorporated or deemed to be incorporated by reference in this prospectus supplement modifies or supersedes that statement. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this prospectus supplement.

Unless otherwise specified, references to the “*Company*,” “*we*,” “*us*” or “*our*,” are to BigBear.ai Holdings, Inc. and its subsidiaries.

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

Certain statements included in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein that are not historical facts contain forward-looking statements within the meaning of the Securities Act, the Exchange Act, and the Private Securities Litigation Reform Act of 1995. All statements contained in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein and therein other than statements of historical fact, including statements regarding our future operating results and financial position, our business strategy and plans and our objectives for future operations, are forward-looking statements. Forward-looking statements generally are accompanied by words such as “believe,” “may,” “will,” “estimate,” “continue,” “anticipate,” “intend,” “expect,” “should,” “would,” “plan,” “predict,” “potential,” “seem,” “seek,” “future,” “outlook,” and similar expressions that predict or indicate future events or trends or that are not statements of historical matters. These forward-looking statements include, but are not limited to, statements regarding our industry, future events and other statements that are not historical facts. These statements are based on current expectations and beliefs concerning future developments and their potential effects on us and should not be relied upon as representing our assessment as of any date subsequent to the date of this prospectus supplement. There can be no assurance that future developments affecting us will be those that we have anticipated. Many actual events and circumstances are beyond our control. These forward-looking statements are subject to a number of risks and uncertainties, including those relating to:

- changes in domestic and foreign business, market financial, political, and legal conditions;
- the uncertainty of projected financial information;
- delays caused by factors outside of our control, including changes in fiscal or contracting policies or decreases in available government funding;
- changes in government programs or applicable requirements or budgetary constraints, including any potential constraints as a result of recent or future federal government layoffs, including automatic reductions as a result of “sequestration” or similar measures and constraints imposed by any lapses in appropriations for the federal government or certain of its departments and agencies, including government shutdowns or the ability of the U.S. federal government to unilaterally cancel a contract with or without cause, and more specifically, the potential impact of the U.S. DOGE Service Temporary Organization on government spending and terminating contracts for convenience;
- implementation of spending limits or changes in budgetary constraints;
- influence by, or competition from, third parties with respect to pending, new, or existing contracts with government customers;
- changes in our ability to successfully compete for and receive task orders and generate revenue under Indefinite Delivery/Indefinite Quantity contracts;
- our ability to realize the benefits of our strategic partnerships;
- risks that the new businesses will not be integrated successfully or that the combined companies will not realize estimated cost savings;
- failure to realize anticipated benefits of the combined operations;
- potential delays or changes in the government appropriations or procurement processes, including as a result of events such as war, incidents of terrorism, natural disasters, and public health concerns or epidemics; and
- other factors described in our Annual Report on Form 10-K for the period ended December 31, 2024, and as described or may be described in any subsequent Annual Report on Form 10-K or any Quarterly Report on Form 10-Q under the heading “Item 1A. Risk Factors.”

[Table of Contents](#)

Should one or more of these risks or uncertainties materialize, or should any of our assumptions prove incorrect, actual results may vary in material respects from those projected in these forward-looking statements. In addition, statements that contain “we believe” and similar statements reflect our beliefs and opinions on the relevant subject. These statements are based on information available to us as of the date of this prospectus supplement. While we believe that this information provides a reasonable basis for these statements, this information may be limited or incomplete. Our statements should not be read to indicate that we have conducted an exhaustive inquiry into, or review of, all relevant information. These statements are inherently uncertain, and investors are cautioned not to unduly rely on these statements.

It is not possible to predict or identify all such risks. Accordingly, undue reliance should not be placed upon the forward-looking statements. We do not undertake any obligation to update or revise any forward-looking statements whether as a result of new information, future events or otherwise, except as may be required under applicable securities laws.

PROSPECTUS SUPPLEMENT SUMMARY

This summary highlights selected information about us but does not contain all the information that may be important to you. This prospectus supplement and the accompanying prospectus include specific terms of the offering and information about our business. Before making an investment decision, you should carefully read this entire prospectus supplement and the accompanying prospectus, including the matters set forth in the section titled “Risk Factors,” beginning on page S-5 of this prospectus supplement and under the heading “Item 1A. Risk Factors” in our Annual Report on Form 10-K for the fiscal year ended December 31, 2024 and our Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2025, and as described or may be described in any subsequent Annual Report on Form 10-K or Quarterly Report on Form 10-Q under the heading “Item 1A. Risk Factors,” as well as in any other documents we file with the SEC that are deemed incorporated by reference into this prospectus supplement and the accompanying prospectus.

Company Overview

We are an AI-driven technology solutions company. We provide technology that helps organizations operationalize AI: making faster, more informed decisions by analyzing complex data and providing actionable insights in areas of critical national security, defense and related markets. Many of our customers rely on our specialized resources to supplement their technical and operational staff for long-term engagements. Hence we provide both software and services to our customers.

Stock Exchange Listing

Our common stock is listed on the NYSE under the symbols “BBAI.”

Corporate Information

We are a Delaware corporation. Our principal executive offices are located at BigBear.ai Holdings, Inc., 7950 Jones Branch Drive 1st Floor North Tower, McLean, Virginia, 22102, and our telephone number is (410) 312-0885. Our principal website address is <https://bigbear.ai>. Information contained in, or accessible through, our website is not a part of, and is not incorporated by reference into, this prospectus supplement and accompanying prospectus.

Emerging Growth Company

We are an “emerging growth company,” as defined under the Jumpstart Our Business Startups Act of 2012, as amended (the “JOBS Act”). As an emerging growth company, we are eligible to take advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies. These include, but are not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended (the “Sarbanes-Oxley Act”), reduced disclosure obligations regarding executive compensation in its periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and the requirement to obtain stockholder approval of any golden parachute payments not previously approved.

In addition, Section 107 of the JOBS Act provides that an emerging growth company can take advantage of an extended transition period provided in Section 7(a)(2)(B) of the Securities Act for complying with new or revised accounting standards.

We will remain an emerging growth company until the earlier of (i) December 31, 2026 (the last day of the fiscal year following the fifth anniversary of the consummation of our initial public offering), (ii) the last day of the fiscal year in which we have total annual gross revenue of at least \$1.235 billion, (iii) the last day of the fiscal year in which we are deemed to be a “large accelerated filer,” as defined in the Exchange Act and (iv) the date on which we have issued more than \$1.0 billion in nonconvertible debt during the prior three-year period.

The Offering

The summary below describes the principal terms of this offering. Certain of the terms and conditions described below are subject to important limitations and exceptions.

Issuer	BigBear.ai Holdings, Inc.
Shares of Common Stock Offered Hereby	Shares of common stock having an aggregate offering price of up to \$150,000,000.
Common Stock Outstanding After the Offering	Up to 325,110,061 shares of common stock, assuming sales of 36,057,692 shares of common stock, based on the public offering price of \$4.16 per share of common stock, which was the last reported sale price of our common stock on the NYSE on May 30, 2025. The actual number of shares issued will vary depending on how many shares of our common stock we choose to sell and the prices at which such sales occur.
Manner of Offering	“At the market offering” that may be made from time to time through our sales agent, Cantor. See the section titled “ <i>Plan of Distribution</i> ” on page S-11 of this prospectus supplement.
Use of Proceeds	We intend to use the net proceeds from this offering, if any, for general corporate purposes. Our management will retain broad discretion regarding the allocation and use of the net proceeds from this offering. See the section titled “ <i>Use of Proceeds</i> ” on page 8 of this prospectus supplement.
NYSE Symbol	“BBAI”
Risk Factors	Any investment in the securities offered hereby is speculative and involves a high degree of risk. You should carefully consider the information set forth in the section titled “ <i>Risk Factors</i> ,” beginning on page S-5 of this prospectus supplement, and “ <i>Item 1A. Risk Factors</i> ” in our Annual Report on Form 10-K for the fiscal year ended December 31, 2024 and our Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2025, and as described or may be described in any subsequent Annual Report on Form 10-K or Quarterly Report on Form 10-Q under the heading “ <i>Item 1A. Risk Factors</i> ” as well as in any other documents we file with the SEC that are deemed incorporated by reference into this prospectus supplement and the accompanying prospectus.
Transfer Agent	Continental Stock Transfer & Trust Company

The number of shares of common stock to be outstanding after this offering as set forth above is based on 289,052,369 shares issued and outstanding as of March 31, 2025, and excludes:

- 2,918,494 shares of common stock issuable upon vesting and exercise of stock options outstanding as of March 31, 2024 under our 2021 Long-Term Incentive Plan (the “Plan”) (of which 1,762,322 shares are vested and exercisable as of March 31, 2025);
- 1,319,687 shares of common stock issuable upon the vesting of performance-based stock units outstanding as of March 31, 2025 under the Plan;
- 12,036,633 shares of common stock issuable upon the vesting of restricted stock units outstanding as of March 31, 2025 under the Plan;
- 5,832,221 shares of common stock reserved for grants and unsold pursuant to our 2021 Employee Stock Purchase Plan (the “ESPP”);
- 36,734,416 shares of common stock issuable upon conversion of our outstanding convertible notes;
- 3,770,000 shares of common stock issuable upon exercise of our outstanding warrants; and
- 37,619,415 shares of common stock issued and sold pursuant to the Sales Agreement after March 31, 2025 as of May 28, 2025.

RISK FACTORS

An investment in our securities involves a high degree of risk. Before deciding whether to invest in our securities, you should consider carefully all the information we have included or incorporated by reference in this prospectus supplement and the accompanying prospectus, including the information under the heading “Item 1A. Risk Factors” in our Annual Report on Form 10-K for the fiscal year ended December 31, 2024 and our Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2025, as supplemented by any subsequent Annual Report on Form 10-K or Quarterly Report on Form 10-Q and other SEC filings. In addition, you should carefully consider the risk factors described below related to this offering and an investment in our securities. If any of these risks actually occur, our business, financial condition, results of operations and cash flow could be seriously harmed. This could cause the trading price of our securities to decline, resulting in a loss of all or part of your investment.

Risks Related to this Offering

If you purchase shares of common stock in this offering, you will suffer immediate dilution of your investment.

The public offering price of our common stock is substantially higher than the net tangible book value per share of our outstanding common stock. Therefore, if you purchase shares of our common stock in this offering, you will pay a price per share that substantially exceeds our net tangible book value per share after giving effect to this offering. If you purchase common stock in this offering, you will incur an immediate and substantial dilution in net tangible book value of \$3.83 per share, based on the public offering price of \$4.16 per share of common stock, which was the last reported sale price of our common stock on the NYSE on May 30, 2025. For a further description of the dilution that you will experience immediately after this offering, see “Dilution.” In addition, in the past, we have issued options and warrants to acquire common stock at prices significantly below the offering price and have granted restricted stock units. To the extent these outstanding options and warrants are ultimately exercised or these restricted stock units vest, you will incur additional dilution.

We have broad discretion in the use of the net proceeds from this offering and may not use them effectively.

Our management will have broad discretion in the application of the net proceeds from this offering, including for any of the purposes described in the section titled “Use of Proceeds,” and you will not have the opportunity as part of your investment decision to assess whether the net proceeds are being used appropriately. Because of the number and variability of factors that will determine our use of the net proceeds from this offering, their ultimate use may vary substantially from their currently intended use. Our management might not apply our net proceeds in ways that ultimately increase the value of your investment. If we do not invest or apply the net proceeds from this offering in ways that enhance stockholder value, we may fail to achieve expected financial results, which could cause our stock price to decline.

It is not possible to predict the actual number of shares of common stock we will issue under the Sales Agreement or the aggregate proceeds resulting from sales made under the Sales Agreement.

Subject to certain limitations in the Sales Agreement and compliance with applicable law, we have the discretion to deliver a placement notice to Cantor at any time throughout the term of the Sales Agreement. The number of shares and the per share price of the shares that are sold through Cantor after delivering a placement notice will fluctuate based on a number of factors, including the market price of our common stock during the sales period, any limits we may set with Cantor in any applicable placement notice and the demand for our common stock. It is not possible at this stage to predict the number of shares of common stock that will be ultimately sold nor is it currently possible to predict the aggregate proceeds to be raised in connection with sales under the Sales Agreement.

The common stock offered hereby will be sold in “at-the-market offerings,” and investors who buy shares at different times will likely pay different prices.

Investors who purchase shares in this offering at different times will likely pay different prices, and accordingly may experience different levels of dilution and different outcomes in their investment results. We will have discretion, subject to market demand, to vary the timing, prices and number of shares sold in this offering. In addition, subject to the final determination by our board of directors or any restrictions we may place in any applicable placement notice, there is no minimum or maximum sales price for shares to be sold in this offering. Investors may experience a decline in the value of the shares they purchase in this offering as a result of sales made at prices lower than the prices they paid.

The availability of shares for sale or other issuance in the future could reduce the market price of our common stock.

Our board of directors (our “Board”) has the authority, without action or vote of our stockholders, to issue all or any part of our authorized but unissued shares of common stock, or issue additional shares of preferred stock, which are convertible into shares of common stock. In the future, we may issue securities to raise cash for acquisitions, as consideration in acquisitions, to pay down debt, to fund capital expenditures or general corporate expenses, in connection with the exercise of stock options or to satisfy our obligations under our incentive plans. We may also acquire interests in other companies by using a combination of cash, our preferred stock and our common stock or just our common stock. We may also issue securities, including our preferred stock, that are convertible into, exchangeable for, or that represent the right to receive, our common stock. The occurrence of any of these events or any issuance of common stock may dilute your ownership interest in our Company, reduce our earnings per share and have an adverse impact on the price of our common stock.

We may issue preferred stock whose terms could adversely affect the voting power or value of our common stock.

Our governing documents authorize us to issue, without the approval of our stockholders, one or more classes or series of preferred stock having such designations, preferences, limitations and relative rights, including preferences over our common stock respecting dividends and distributions, as our Board may determine. The terms of one or more classes or series of preferred stock could adversely impact the voting power or value of our common stock. For example, we might grant holders of preferred stock the right to elect some number of our directors in all events or on the happening of specified events or the right to veto specified transactions. Similarly, the repurchase or redemption rights or liquidation preferences we might assign to holders of preferred stock could affect the residual value of our common stock.

The terms of any future preferred equity or debt financing may give holders of any preferred securities or debt securities rights that are senior to the rights of our common stockholders or impose more stringent restrictions on our operations.

If we incur additional debt or raise equity through the issuance of preferred stock, the terms of the debt or the preferred stock issued may give the holders rights, preferences and privileges senior to those of holders of our common stock, particularly in the event of liquidation. The terms of the debt may also impose additional and more stringent restrictions on our operations. If we raise funds through the issuance of additional equity, the ownership percentage of our existing stockholders would be diluted.

There may be future sales or issuances of our common stock, which will dilute the ownership interests of stockholders and may adversely affect the market price of our common stock.

Our Second Amended and Restated Certificate of Incorporation currently in effect authorizes us to issue 500,000,000 shares of common stock, of which 289,052,369 shares were issued and outstanding as of March 31, 2025. We may in the future issue additional shares of common stock, including securities that are convertible

[Table of Contents](#)

into or exchangeable for, or that represent the right to receive, common stock or substantially similar securities, which may result in dilution to our stockholders. In addition, our stockholders may be further diluted by future issuances under our equity incentive plans. The market price of our common stock could decline as a result of sales or issuances of a large number of shares of our common stock or similar securities in the market after this offering or the perception that such sales or issuances could occur.

If securities or industry analysts publish negative reports about our business, our share price and trading volume could decline.

The market price for our common stock depends in part on the research and reports that securities or industry analysts publish about us or our business, our market and our competitors. We do not have any control over these analysts. If one or more of the analysts who cover us downgrade our shares or change their opinion of our shares, our share price would likely decline. If one or more of these analysts cease coverage of our Company or fail to regularly publish reports on us, we could lose visibility in the financial markets, which could cause our share price or trading volume to decline.

USE OF PROCEEDS

We may issue and sell shares of our common stock having aggregate sales proceeds of up to \$150,000,000 from time to time pursuant to the Sales Agreement. Because there is no minimum offering amount required as a condition to close this offering, the actual total public offering amount, commissions and proceeds to us, if any, are not determinable at this time. There can be no assurance that we will sell any shares of our common stock under or fully utilize the Sales Agreement as a source of financing.

We intend to use the net proceeds from this offering for working capital and general corporate purposes. We may use a portion of the net proceeds for strategic investments in complementary products or technologies and other activities or partnerships that may accelerate our growth. We may find it necessary or advisable to use the net proceeds for other purposes, and we will have broad discretion in the application of the net proceeds.

We have not determined the amount of net proceeds to be used specifically for such purposes and, as a result, management will retain broad discretion over the allocation of net proceeds. The occurrence of unforeseen events or changed business conditions could result in the application of the net proceeds from this offering in a manner other than as described in this prospectus supplement. Pending those uses, we intend to invest the net proceeds in short-term, interest-bearing, investment-grade investments, certificates of deposit or guaranteed obligations of the U.S. government.

DILUTION

If you invest in our common stock in this offering, your ownership interest will be diluted immediately to the extent of the difference between the price you pay in this offering and the net tangible book value per share of common stock after this offering.

As of March 31, 2025, we had a net tangible book value of \$(38.9) million, or \$(0.13) per share of common stock, based on 289,052,369 shares of common stock outstanding as of such date. Our historical net tangible book value per share represents total tangible assets less total liabilities, divided by the number of shares of common stock outstanding at March 31, 2025.

After giving effect to the assumed sale by us of \$150.0 million of shares of our common stock at an assumed public offering price of \$4.16 per share, which was the last reported sale price of our common stock on the NYSE on May 30, 2025, less commissions and estimated offering expenses payable by us, our as-adjusted net tangible book value at March 31, 2025 would have been \$106.5 million, or \$0.33 per share of common stock. This represents an immediate increase in net tangible book value of \$0.46 per share to our existing stockholders and an immediate dilution of \$3.83 per share to new investors in this offering.

The following table illustrates this per share dilution. The as adjusted information is illustrative only and will adjust based on the actual price to the public, the actual number of shares of common stock sold and other terms of the offering determined at the time the shares of common stock are sold pursuant to this prospectus supplement and accompanying prospectus. The shares of common stock sold in this offering, if any, will be sold from time to time at various prices.

Assumed public offering price per share	\$4.16
Net tangible book value per share as of March 31, 2025	\$(0.13)
Increase per share attributable to new investors purchasing shares of our common stock in this offering	\$ 0.46
As adjusted net tangible book value per share after giving effect to this offering	\$0.33
Dilution per share to new investors	\$3.83

The shares of common stock subject to the Sales Agreement are being sold from time to time at various prices. An increase of \$1.00 per share of common stock in the price at which the shares of common stock are sold from the assumed offering price of \$4.16 per share of common stock shown in the table above, assuming all of our shares of common stock in the aggregate amount of \$150.0 million during the term of the Sales Agreement with Cantor are sold at that price, would increase our adjusted net tangible book value per share of common stock after the offering to \$0.33 per share of common stock and would increase the dilution in net tangible book value per share of common stock to new investors in this offering to \$4.83 per share of common stock, after deducting commissions and estimated offering expenses payable by us. A decrease of \$1.00 per share of common stock in the price at which the shares of common stock are sold from the assumed offering price of \$4.16 per share of common stock shown in the table above, assuming all of our shares of common stock in the aggregate amount of \$150.0 million during the term of the Sales Agreement with Cantor are sold at that price, would decrease our adjusted net tangible book value per share of common stock after the offering to \$0.32 per share of common stock and would decrease the dilution in net tangible book value per share of common stock to new investors in this offering to \$2.84 per share of common stock, after deducting commissions and estimated aggregate offering expenses payable by us. This information is supplied for illustrative purposes only and may differ based on the actual offering price and the actual number of shares of common stock offered.

[Table of Contents](#)

The outstanding share information in the table above is based on 289,052,369 shares issued and outstanding as of March 31, 2025, and excludes:

- 2,918,494 shares of common stock issuable upon vesting and exercise of stock options outstanding under the Plan (of which 1,762,322 shares are vested and exercisable);
- 1,319,687 shares of common stock issuable upon the vesting of performance-based stock units outstanding under the Plan;
- 12,036,633 shares of common stock issuable upon the vesting of restricted stock units outstanding under the Plan;
- 5,832,221 shares of common stock reserved for grants and unsold pursuant to the ESPP;
- 36,734,416 shares of common stock issuable upon conversion of our outstanding convertible notes;
- 3,770,000 shares of common stock issuable upon exercise of our outstanding warrants; and
- 37,619,415 shares of common stock issued and sold pursuant to the Sales Agreement after March 31, 2025 as of May 28, 2025.

The above illustration of dilution per share to the investors participating in this offering assumes no exercise of outstanding options to purchase our common stock or warrants to purchase shares of our common stock that will be outstanding after this offering. To the extent that outstanding options or warrants are exercised, you will experience further dilution. In addition, we may choose to raise additional capital due to market conditions or strategic considerations even if we believe we have sufficient funds for our current or future operating plans. To the extent that additional capital is raised through the sale of equity or convertible debt securities, the issuance of such securities may result in further dilution to our stockholders.

PLAN OF DISTRIBUTION

We have entered into a Controlled Equity OfferingSM sales agreement with Cantor. Pursuant to this prospectus, we may offer and sell shares of our common stock having an aggregate gross sales price of up to \$150.0 million from time to time through Cantor acting as our sales agent. A copy of the sales agreement has been filed as an exhibit to the Registration Statement on Form S-3 of which this prospectus forms a part.

Upon delivery of a placement notice and subject to the terms and conditions of the sales agreement, Cantor may sell shares of our common stock by any method permitted by law deemed to be an “at-the-market” offering as defined in Rule 415(a)(4) promulgated under the Securities Act. We may instruct Cantor not to sell common stock if the sales cannot be effected at or above the price designated by us from time to time. We or Cantor may suspend the offering of common stock upon notice and subject to other conditions.

We will pay Cantor commissions, in cash, for its service in acting as our sales agent in the sale of our common stock. Cantor will be entitled to compensation at a fixed commission rate of up to 3.0% of the gross proceeds per share sold under the sales agreement. Because there is no minimum offering amount required as a condition to close this offering, the actual total public offering amount, commissions and proceeds to us, if any, are not determinable at this time. We have also agreed to reimburse Cantor for certain specified expenses, including the fees and disbursements of their legal counsel in an amount not to exceed (a) \$75,000 in connection with the execution of the sales agreement and (b) \$25,000 per calendar quarter thereafter pursuant to the terms of the sales agreement. We estimate that the total expenses for the offering, excluding compensation and reimbursements payable to Cantor under the terms of the sales agreement, will be approximately \$300,000.

Settlement for sales of shares of our common stock will occur on the first business day following the date on which any sales are made, or on some other date that is agreed upon by us and Cantor in connection with a particular transaction, in return for payment of the net proceeds to us. Sales of our common stock as contemplated in this prospectus will be settled through the facilities of The Depository Trust Company or by such other means as we and Cantor may agree upon. There is no arrangement for funds to be received in an escrow, trust or similar arrangement.

Cantor will use its commercially reasonable efforts, consistent with its sales and trading practices, to solicit offers to purchase the common stock under the terms and subject to the conditions set forth in the sales agreement. In connection with the sale of the common stock on our behalf, Cantor will be deemed to be an “underwriter” within the meaning of the Securities Act and the compensation of Cantor will be deemed to be underwriting commissions or discounts. We have agreed to provide indemnification and contribution to Cantor against certain civil liabilities, including liabilities under the Securities Act.

The offering of shares of our common stock pursuant to the sales agreement will terminate upon the termination of the sales agreement as permitted therein. We and Cantor may each terminate the sales agreement at any time upon ten days’ prior notice.

Cantor and its affiliates may in the future provide various investment banking, commercial banking and other financial services for us and our affiliates, for which services they may in the future receive customary fees. To the extent required by Regulation M, Cantor will not engage in any market making activities involving our common stock while the offering is ongoing under this prospectus.

This prospectus supplement and the accompanying prospectus may be made available in electronic format on a website maintained by Cantor, and Cantor may distribute this prospectus supplement and the accompanying prospectus electronically.

LEGAL MATTERS

The validity of the issuance of our common stock and certain other legal matters in connection with the issuance of our common stock will be passed upon for us by Latham & Watkins LLP, New York, New York. Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C., Boston, Massachusetts, is counsel for Cantor in connection with this offering.

EXPERTS

The audited financial statements incorporated by reference in this prospectus supplement and accompanying prospectus have been so incorporated by reference in reliance of the report of Grant Thornton LLP, independent registered public accountants, upon the authority of said firm as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We are subject to the information and periodic reporting requirements of the Exchange Act and, in accordance therewith, file periodic reports, proxy statements and other information with the SEC. Such periodic reports, proxy statements and other information are available at the website of the SEC at <http://www.sec.gov>. We also furnish our stockholders with annual reports containing our financial statements audited by an independent registered public accounting firm and quarterly reports containing our unaudited financial information. We maintain a website at www.bigbear.ai. You may access our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports, filed or furnished pursuant to Section 13(a) or 15(d) of the Exchange Act with the SEC free of charge at our website as soon as reasonably practicable after this material is electronically filed with, or furnished to, the SEC. Information contained on, or that is or becomes accessible through, our website does not constitute a part of this prospectus supplement. The reference to our website or web address does not constitute incorporation by reference of the information contained at that site.

INCORPORATION OF CERTAIN INFORMATION BY REFERENCE

The SEC allows us to “incorporate by reference” the information we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is an important part of this prospectus supplement and the accompanying prospectus, and information that we file later with the SEC will automatically update and supersede this information. We incorporate by reference the documents listed below that we have previously filed with the SEC:

- Our Annual Report on [Form 10-K](#) for the fiscal year ended December 31, 2024, filed with the SEC on March 25, 2025;
- Our Quarterly Report on [Form 10-Q](#) for the fiscal quarter ended March 31, 2025, filed with the SEC on May 2, 2025;
- The information specifically incorporated by reference in our Annual Report on [Form 10-K](#) for the year ended December 31, 2024 from our Definitive Proxy Statement on [Schedule 14A](#) relating to our 2025 annual meeting of stockholders, filed with the SEC on April 29, 2025;
- Our Current Reports on Form 8-K filed with the SEC on each of [January 16, 2025](#), [February 6, 2025](#), [March 6, 2025](#), [March 18, 2025](#), [March 27, 2025](#), [April 14, 2025](#) and [May 15, 2025](#) (excluding any information furnished but not filed in such reports under Item 2.02, Item 7.01, or Item 9.01); and
- The description of our common stock contained in our Registration Statement on [Form 8-A](#), filed with the SEC on February 8, 2021, as updated by the description of our common stock contained in [Exhibit 4.4](#) to our Annual Report on Form 10-K for the year ended December 31, 2022, and any subsequent amendment or report filed with the SEC for the purpose of updating the description.

In addition, all future filings made with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act from the date of the prospectus supplement until all of the shares of common stock offered hereby have been sold or the offering is otherwise terminated (in each case, other than any portions of any such documents that are not deemed “filed” under the Exchange Act in accordance with the Exchange Act and applicable SEC rules) shall be deemed to be incorporated by reference into this prospectus supplement and the accompanying prospectus supplement and will automatically be deemed to modify and supersede any information in this prospectus supplement, the accompanying prospectus and any document we previously filed with the SEC that is incorporated or deemed to be incorporated herein or therein by reference to the extent that statements in the later filed document modify or replace such earlier statements.

You may request a copy of these filings, at no cost, by writing or telephoning us at the following address:

Julie Pepper
Chief Financial Officer
BigBear.ai Holdings, Inc.
7950 Jones Branch Drive 1st Floor North Tower
McLean, Virginia
22102 (410) 312-0885

You should rely only on the information incorporated by reference or provided in this prospectus supplement or the accompanying prospectus. We have not authorized anyone else to provide you with different information. You should not assume that the information in this prospectus supplement or the accompanying prospectus is accurate as of any date other than the date on the front of those documents.

PROSPECTUS

BIGBEAR.AI HOLDINGS, INC.

Common Stock
Preferred Stock
Warrants
Rights
Units

From time to time, we may offer and sell any combination of the securities described in this prospectus in one or more offerings. The securities we may offer may be convertible into or exercisable or exchangeable for other securities. We may offer the securities separately or together, in separate classes or series and in amounts, at prices and on terms that will be determined at the time the securities are offered.

This prospectus describes some of the general terms that may apply to these securities. Each time securities are sold, the specific terms and amounts of the securities being offered, and any other information relating to the specific offering will be set forth in a supplement to this prospectus. The prospectus supplement may also add, update or change information contained in this prospectus.

We may sell these securities on a continuous or delayed basis, directly, through agents, dealers or underwriters as designated from time to time, or through a combination of these methods. If any agents, dealers or underwriters are involved in the sale of any securities, the applicable prospectus supplement will set forth their names and any applicable commissions or discounts. See “Plan of Distribution.”

We urge you to read carefully this prospectus, any accompanying prospectus supplement, any amendment and any documents we incorporate by reference into this prospectus and any accompanying prospectus supplement before you make your investment decision.

Our common stock, par value \$0.0001 per share (“*Common Stock*”), and Public Warrants (as defined below) are traded on The New York Stock Exchange (“*NYSE*”) under the symbol “BBAI” and “BBAI.WS,” respectively. On April 5, 2023, the last reported sale price on NYSE of our Common Stock was \$2.20 per share and the last reported sale price of our Public Warrants was \$0.22 per warrant. The applicable prospectus supplement will contain information, where applicable, as to other listings, if any, of the securities covered by the applicable prospectus supplement.

Our principal executive office is located at 6811 Benjamin Franklin Drive, Suite 200, Columbia, Maryland 21046, and our telephone number is (410) 312-0885.

This prospectus may not be used to offer or sell any of our securities unless accompanied by a prospectus supplement.

We are an “emerging growth company” under applicable federal securities laws and will be subject to reduced public company reporting requirements.

Investing in our securities involves a high degree of risk. You should review carefully the risks and uncertainties referenced under the heading “[Risk Factors](#)” beginning on page 6 of this prospectus as well as those contained in the applicable prospectus supplement and in the other documents that are incorporated by reference into this prospectus or the applicable prospectus supplement.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is April 21, 2023.

TABLE OF CONTENTS

	<u>Page</u>
ABOUT THIS PROSPECTUS	ii
WHERE YOU CAN FIND MORE INFORMATION	iv
INCORPORATION OF DOCUMENTS BY REFERENCE	iv
CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS	vi
SUMMARY OF THE PROSPECTUS	1
RISK FACTORS	6
USE OF PROCEEDS	7
DESCRIPTION OF CAPITAL STOCK	8
DESCRIPTION OF NEW WARRANTS	14
DESCRIPTION OF RIGHTS	17
DESCRIPTION OF UNITS	18
PLAN OF DISTRIBUTION	19
LEGAL MATTERS	21
EXPERTS	21

We are responsible for the information contained and incorporated by reference in this prospectus and in any accompanying prospectus supplement we prepare or authorize. We have not authorized anyone to give you any other information, and we take no responsibility for any other information that others may give you. If you are in a jurisdiction where offers to sell, or solicitations of offers to purchase, the securities offered by this documentation are unlawful, or if you are a person to whom it is unlawful to direct these types of activities, then the offer presented in this document does not extend to you. The information contained in this document speaks only as of the date of this document, unless the information specifically indicates that another date applies. Neither the delivery of this prospectus or any accompanying prospectus supplement, nor any sale of securities made under these documents, will, under any circumstances, create any implication that there has been no change in our affairs since the date of this prospectus or any accompanying prospectus supplement we may provide you in connection with an offering or that the information contained or incorporated by reference is correct as of any time subsequent to the date of such information. You should assume that the information in this prospectus or any accompanying prospectus supplement, as well as the information incorporated by reference in this prospectus or any accompanying prospectus supplement, is accurate only as of the date of the documents containing the information, unless the information specifically indicates that another date applies. Our business, financial condition, results of operations and prospects may have changed since those dates.

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission (the “SEC”) using a “shelf” registration process. Under this process, we may offer and sell any combination of the securities described in this prospectus from time to time in one or more offerings. Before purchasing any securities, you should read this prospectus and any applicable prospectus supplement together with the additional information described under the headings “Where You Can Find Additional Information” and “Incorporation of Documents by Reference.”

This prospectus only provides you with a general description of the securities we may offer. Each time we offer and sell a type or series of securities under this prospectus, we will provide a prospectus supplement that will contain more specific information about the terms of the offering, including the specific amounts, prices and terms of the securities offered or sold. This prospectus may not be used to consummate a sale of securities unless it is accompanied by a prospectus supplement. Each such prospectus supplement that we may authorize to be provided to you may also add, update or change information contained in this prospectus or in documents incorporated by reference into this prospectus. If this prospectus is inconsistent with the prospectus supplement, you should rely upon the prospectus supplement.

We have not authorized anyone to provide any information other than that contained or incorporated by reference in this prospectus, any accompanying prospectus supplement or in any permitted free writing prospectus prepared by or on behalf of us or to which we have referred you. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. You should not assume that the information contained in or incorporated by reference in this prospectus or any prospectus supplement or in any such free writing prospectus is accurate as of any date other than their respective date. This prospectus is an offer to sell only the securities offered hereby, but only under circumstances and in jurisdictions where it is lawful to do so.

This prospectus contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described below under the section titled “Where You Can Find More Information.”

This prospectus incorporates by reference, and any prospectus supplement may contain and incorporate by reference, market data and industry statistics and forecasts that are based on independent industry publications and other publicly available information. Although we believe these sources are reliable, we do not guarantee the accuracy or completeness of this information and we have not independently verified this information. In addition, the market and industry data and forecasts that may be included or incorporated by reference in this prospectus or any prospectus supplement may involve estimates, assumptions and other risks and uncertainties and are subject to change based on various factors, including those discussed under the heading “Risk Factors” contained in this prospectus and the applicable prospectus supplement, and under similar headings in other documents that are incorporated by reference into this prospectus. Accordingly, investors should not place undue reliance on this information.

Unless otherwise specified, references to the “Company,” “we,” “us” or “our,” are to, (i) prior to the closing of the business combination (the “Business Combination”) contemplated by that certain Agreement and Plan of Merger, dated as of June 4, 2021 (as amended on August 6, 2021 and November 29, 2021, the “Merger Agreement”), by and among GigCapital4, Inc., a Delaware corporation (“GigCapital4”), GigCapital4 Merger Sub Corporation, a Delaware corporation and a wholly owned subsidiary of GigCapital4 (“Merger Sub”), BigBear.ai Holdings, LLC, a Delaware limited liability company (“BigBear.ai Holdings, LLC”), and BBAI Ultimate Holdings, LLC, a Delaware limited liability company (“Ultimate”), either (x) BigBear.ai Holdings, LLC

[Table of Contents](#)

(formerly known as Lake Intermediate, LLC) and its subsidiaries or (y) GigCapital4, as the context may require, and (ii) following the closing of the Business Combination, BigBear.ai Holdings, Inc. and its subsidiaries. Unless the section herein specifies otherwise, references to “*BigBear*” are to (i) prior to the closing of the Business Combination, Ultimate and its subsidiaries and (ii) following the closing of the Business Combination, BigBear.ai Holdings, Inc. and its subsidiaries.

WHERE YOU CAN FIND MORE INFORMATION

This prospectus is part of a registration statement on Form S-3 we filed with the SEC under the Securities Act and does not contain all of the information included or incorporated by reference in the registration statement. For further information pertaining to us and our securities, you should refer to the registration statement and our exhibits or the exhibits to the reports or other documents incorporated by reference into this prospectus.

In addition, we file annual, quarterly and current reports, proxy statements and other information with the SEC. Our SEC filings are available to the public on a website maintained by the SEC located at <http://www.sec.gov>. We also maintain a website at <https://ir.bigbear.ai>, where you may access these materials free of charge. Information contained on or accessible through our website is not a part of this prospectus, and the inclusion of our website address in this prospectus is an inactive textual reference only. If you would like additional copies of this prospectus, you should contact us at the following address and telephone number:

BigBear.ai Holdings, Inc.
6811 Benjamin Franklin Drive, Suite 200
Columbia, Maryland 21046
(410) 312-0885

INCORPORATION OF DOCUMENTS BY REFERENCE

The SEC allows us to “incorporate by reference” into this prospectus the information we file with it, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus, and information in documents that we file later with the SEC will automatically update and supersede information in this prospectus. We incorporate by reference into this prospectus the documents listed below and any future filings, including all filings made after the date of the filing of the registration statement of which this prospectus is a part and prior to the effectiveness of such registration statement, made by us with the SEC under Section 13(a), 13(c), 14 or 15(d) of the Exchange Act, except for information “furnished” under Items 2.02, 7.01 or 9.01 on Form 8-K or other information “furnished” to the SEC, which is not deemed filed and not incorporated in this prospectus, until the termination of the offering of securities described in the applicable prospectus supplement. We hereby incorporate by reference the following documents:

- our Annual Report on [Form 10-K](#) for the year ended December 31, 2022, as filed with the SEC on March 31, 2023, as amended by Amendment No. 1 to our Annual Report on [Form 10-K/A](#), as filed with the SEC on April 7, 2023;
- our Current Reports on Form 8-K filed with the SEC on [January 4, 2023](#), [January 19, 2023](#) and [March 24, 2023](#) (excluding any information furnished but not filed in such reports under Item 2.02, Item 7.01, or Item 9.01);
- the description of our securities contained in our Registration Statement on [Form S-1](#), as filed with the SEC on December 23, 2021, including any amendment or report filed for the purpose of updating such description.

Any statement contained in a document incorporated or deemed to be incorporated by reference into this prospectus will be deemed modified, superseded or replaced for purposes of this prospectus to the extent that a statement contained in this prospectus modifies, supersedes or replaces such statement.

[Table of Contents](#)

You may request a copy of these filings, at no cost, by writing or telephoning us at the following address:

BigBear.ai Holdings, Inc.
6811 Benjamin Franklin Drive, Suite 200
Columbia, Maryland 21046
(410) 312-0885

Copies of these filings are also available, without charge, on the SEC's website at <http://www.sec.gov> and on our website at <https://ir.bigbear.ai> as soon as reasonably practicable after they are filed electronically with the SEC. The information contained on our website is not a part of this prospectus and is not incorporated by reference into, this prospectus or the registration statement of which it forms a part.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

Certain statements included in this prospectus, any prospectus supplement and the documents incorporated by reference herein or therein that are not historical facts are forward-looking statements for purposes of the safe harbor provisions under the United States Private Securities Litigation Reform Act of 1995, to the extent those safe harbor provisions are determined to be available. Forward-looking statements generally are accompanied by words such as “believe,” “may,” “will,” “estimate,” “continue,” “anticipate,” “intend,” “expect,” “should,” “would,” “plan,” “predict,” “potential,” “seem,” “seek,” “future,” “outlook,” and similar expressions that predict or indicate future events or trends or that are not statements of historical matters. These forward-looking statements include, but are not limited to, statements regarding BigBear’s industry, future events, and other statements that are not historical facts. These forward-looking statements are based on current expectations and beliefs concerning future developments and their potential effects on us and should not be relied upon as representing BigBear’s assessments as of any date subsequent to the date of this prospectus. There can be no assurance that future developments affecting us will be those that we have anticipated. These forward-looking statements are also subject to a number of risks and uncertainties (some of which are beyond our control) or other assumptions that may cause actual results or performance to be materially different from those expressed or implied, including, but not limited to, risks relating to the following:

- our limited operating history as a combined company, which makes it difficult to evaluate our current business and future prospects;
- our ability to sustain our revenue growth in the future;
- our ability to execute our strategy to grow our business and increase our sales and the number and types of markets we compete in;
- the length of our sales cycle and the time and expense associated with it;
- our ability to grow our customer base and to expand our relationships with our existing customers, including with our government customers;
- our reliance on customers in the public/government sector;
- the market and our customers accepting and adopting our products, including our future new product offerings;
- the impact of health epidemics, including the COVID-19 pandemic, on our business, financial condition, growth, and the actions we may take in response thereto;
- competition in our industry;
- our ability to gain contracts on favorable terms, including with our government customers;
- our ability to successfully compete for and receive task orders and generate revenue under Indefinite Delivery/Indefinite Quantity contracts;
- our ability to grow, maintain and enhance our brand and reputation;
- security and our technology, including cybersecurity;
- our ability to maintain competitive pricing for our products;
- our ability to secure financing necessary to operate and grow our business as planned, including through acquisitions;
- the high degree of uncertainty of the level of demand for, and market utilization of, our solutions and products;
- substantial regulation and the potential for unfavorable changes to, or failure by us to comply with, these regulations, which could substantially harm our business and operating results;
- our dependency upon third-party service providers for certain technologies;

Table of Contents

- increases in costs, disruption of supply or shortage of materials, which could harm our business;
- developments and projections relating to our competitors and industry;
- the unavailability, reduction or elimination of government and economic incentives, which could have a material adverse effect on our business, prospects, financial condition and operating results;
- our existing debt and our ability to refinance it on more favorable terms;
- our management team's limited experience managing a public company;
- our ability to hire, retain, train and motivate qualified personnel and senior management and ability to deploy our personnel and resources to meet customer demand;
- our ability to successfully execute future joint ventures, channel sales relationships, platform partnerships, strategic alliances and subcontracting opportunities;
- our ability to grow through acquisitions and successfully integrate any such acquisitions;
- our ability to successfully maintain, protect, enforce and grow our intellectual property rights;
- our compliance with governmental laws, trade controls, customs requirements and other regulations we are subject to;
- the possibility of our need to defend ourselves against fines, penalties and injunctions if we are determined to be promoting products for unapproved uses or otherwise found to have violated a law or regulation;
- concentration of ownership among our existing executive officers, directors and their respective affiliates, which may prevent new investors from influencing significant corporate decisions;
- the effect of economic downturns, depressions and recessions;
- not obtaining the benefits of the Business Combination expected by investors or securities analysts, and the potential for the market price of our securities to decline;
- disruptions to the plans and operations of our business as a result of the Business Combination and any future acquisitions, mergers, dispositions, joint ventures or investments we make; and
- our significantly increased expenses and administrative burdens as a public company and any resulting adverse effect on our business, financial condition and results of operations.

Should one or more of these risks or uncertainties materialize, or should any of our assumptions prove incorrect, actual results may vary in material respects from those projected in these forward-looking statements. Some of these risks and uncertainties may in the future be amplified by the COVID-19 outbreak and there may be additional risks that we consider immaterial or which are unknown. It is not possible to predict or identify all such risks. Accordingly, undue reliance should not be placed upon the forward-looking statements. We do not undertake any obligation to update or revise any forward-looking statements whether as a result of new information, future events or otherwise, except as may be required under applicable securities laws.

In particular, you should consider the numerous risks described in our Annual Report on Form 10-K for the period ended December 31, 2022, as filed with the SEC on March 31, 2023 and as described or may be described in any subsequent Annual Report on Form 10-K or any Quarterly Report on Form 10-Q under the heading "*Item 1A. Risk Factors*," which are incorporated by reference into this prospectus, and any other documents we file with the SEC that are deemed incorporated by reference into this prospectus and in the "*Risk Factors*" section in the applicable prospectus supplement. See "*Where You Can Find More Information*." Our forward-looking statements do not reflect the potential impact of any future acquisitions, mergers, dispositions, joint ventures or investments we make.

Before any stockholder invests in our securities, such stockholder should be aware that the occurrence of the events described in this section and elsewhere in this prospectus may adversely affect us.

SUMMARY OF THE PROSPECTUS

This summary highlights selected information contained elsewhere or incorporated by reference in this prospectus. The summary may not contain all the information that you should consider before investing in our securities. You should read the entire prospectus carefully, including “Risk Factors” contained in the documents incorporated by reference herein, before making an investment decision.

Company Overview

BigBear.ai Holdings, Inc.’s (“BigBear.ai” or the “Company”) mission is to help deliver clarity for our clients as they face their most complex decisions. BigBear.ai’s AI-powered decision intelligence solutions are leveraged across our Cyber & Engineering and Analytics business segments and in three primary markets—global supply chains & logistics, autonomous systems and cybersecurity. Our Cyber & Engineering segment provides high-end technology and management consulting services to our customers, focusing on cloud engineering and enterprise IT, cybersecurity, computer network operations and wireless, systems engineering, as well as strategy and program planning. Our Analytics segment provides high-end technology and consulting services to our customers, focusing on big data computing and analytical solutions, including predictive and prescriptive analytics solutions. BigBear.ai’s customers, including federal defense and intelligence agencies, manufacturers, third party logistics providers, retailers, healthcare, and life sciences organizations, rely on BigBear.ai’s solutions to empower leaders to decide on the best possible course of action by creating order from complex data, identifying blind spots, and building predictive outcomes. We are a technology-led solutions organization, providing both software and services to our customers

Solutions and Services

BigBear.ai is a leader in the use of Artificial Intelligence (AI) and Machine Learning (ML) for decision support. We provide our customers with a competitive advantage in a world driven by data that is growing exponentially in terms of volume, variety, and velocity. We believe data—when leveraged effectively—can be a strategic asset for any organization.

Through our supply chain & logistics, autonomous systems and cybersecurity solutions, we help our customers make sense of the world in which they operate, understand how known and previously unforeseen forces impact their operations, and determine which decision and course of action will best achieve their objectives. With all of our solutions, as needed by each customer, we offer specialized consulting services to design, customize, deploy, operate, and support our solutions for federal and commercial customers. Due to the breadth and depth of experience and expertise in our team, many of our customers rely on BigBear.ai resources to supplement their technical and operational staff for long-term engagements as well.



Supply Chains & Logistics Solutions

Our supply chain & logistics solutions include our ObserveData-as-a-Service (“DaaS”) solution, our ProModel discrete event simulator and our Dominate forecasting tool.

Observe DaaS—Data Conflation at Scale. Observe is a near-real time data collection and curation tool designed to collect and process enormous volumes of data from multiple domains, including BigBear.ai data collections, customer proprietary data, and third-party data, to create more holistic insights. Observe captures and distills data to identify relevant information, forming a more coherent and continuously updated view of the situations that matter to our customers anywhere across the globe. Our collections cover many subjects, including facilities, locations, news, events, social media, public communications, internet services and more. For situations that require a more customized solution, Observe collections can be used to enrich the customer’s proprietary data and analytics via modern, robust application programming interfaces (APIs). Our Observe DaaS solution is live in production, with over 25 sources, across more than 100 countries, and 140 million records processed daily.

ProModel Discrete Event Simulator—Course of Action Analysis & Digital Twin. ProModel is a robust discrete-event simulation technology that captures the behavior of complex interdependent processes and enables rapid course-of-action analysis through a “what if” user interface that allows customers to alter various parameters without changing the model directly. The ProModel digital twin modeling platform is used to plan, design and improve new or existing manufacturing, logistics, business processes and other operational systems, and has been implemented in multiple vertical use cases including shipyard planning (Shipyard AI), patient flow optimization in hospitals (Future Flow) and complex portfolio management (Enterprise Portfolio Simulator). Because our Discrete Event Simulator is built and deployed as foundational technology, it can be tailored to many use cases for customers based on specific needs and embedded in existing platforms for an optimal user experience.

Dominate—Macroeconomic & Geopolitical Forecasting. Dominate is a decision support engine that provides customers goal-oriented advice to help them determine the right decision or course of action to best achieve their desired results. Using technology derived from our battlefield expertise, Dominate forecasts future outcomes

based on different decision options, assigns a likelihood to each of those outcomes, and allows users to understand potential impacts for each of these decision options. Dominate is based on a resilient analytical architecture specifically designed to make sense of data sets that are periodically dirty, erroneous, or full of gaps. Customers can easily manipulate constraints or modify outcome goals through an interactive interface to quickly reveal the impacts of different decisions. Even in complex environments, Dominate helps customers reveal unexpected insights and develop innovative courses of action.

Cybersecurity Solutions

“BEARCLAW”—AI-Powered, Machine Accelerated Binary Analysis and SpaceCREST—Vulnerability Assessment& Monitoring, Digital Twin

Our cybersecurity offerings include our Binary Extraction Analysis Repository / Customizable Logic Automated Workflow (“*BEARCLAW*”) engine and the Space Cyber Resiliency through Evaluation and Security Testing (“*SpaceCREST*”) laboratory environment. Our BEARCLAW engine is a modular framework that incorporates AI/ML to assess vulnerabilities using automation and our data collections to conduct analysis on binaries and better, more quickly inform analysts to help them rapidly identify and/or respond to threats.

SpaceCREST is a laboratory environment designed to study and evaluate vulnerabilities of space assets in a cyber-physical system, develop cyber resiliency, and provide situational awareness and monitoring of those assets. The SpaceCREST initiative leverages Redwire Corporation’s digital engineering ecosystem, including its Hyperion Operational Space Simulation (“*HOSS*”) Lab and Advanced Configurable Open-system Research Network (“*ACORN*”) capabilities. Using HOSS and the ACORN platform, BigBear.ai develops tools and technologies to perform vulnerability research on space infrastructure hardware components, identify potential vulnerabilities that could compromise space systems, and provide tools and techniques that demonstrate how to mitigate and protect against the potential vulnerabilities identified. SpaceCREST’s digital twin helps operators rapidly identify when an attack or system failure is occurring. SpaceCREST also performs catastrophic testing without physically destroying the space asset or interrupting operations and our team of specialists then develops cyber security to mitigate the risk of cyber-attacks for our customers.

Our specialists also provide ongoing offensive and defensive cybersecurity analysis services to certain key customers and our mission operators often partner with government teams to contribute to missions for the intelligence community and the Department of Defense (the “*DoD*”).

Autonomous Systems Solutions

We are well positioned to address the need for scaled cyber-physical systems for complex customers in the federal government, and in the future, the private sector. Our autonomous systems solutions currently in use by the DoD provide geospatial tracking, anomaly detection, computer vision capabilities, and AI at the edge. By conflating millions of data points using AI/ML, our autonomous systems benefit from increased situational awareness, enable predictive forecasts, and can alert both analysts and decision-makers of potential threats. Analysts can combine data sets, including traditional and nontraditional sources, including social media, traditional news media and event data (e.g., GDELT), SIGINT (e.g., X-band, Lband, AIS), SAR, weather and enterprise data sources, to improve situational awareness. Currently, our algorithms run against a myriad of sensors in a maritime environment to support forces who may be operating in disadvantaged or disconnected environments. We believe that this can be leveraged in ground, space, and air combat force contexts in the future.

Background and Business Combination

The Company was originally known as GigCapital4.

On December 7, 2021, we consummated the Business Combination contemplated by the Merger Agreement, whereby (a) Merger Sub merged with and into BigBear.ai Holdings, LLC (the “*First Merger*”), with BigBear.ai Holdings, LLC as the surviving company in the First Merger and as a wholly owned subsidiary of GigCapital4, and, immediately after the First Merger (b) BigBear.ai Holdings, LLC merged with and into GigCapital4 (the “*Second Merger*”), with GigCapital4 as the surviving entity in the Second Merger. In connection with the closing of the Business Combination, on December 7, 2021, GigCapital4 changed its name from GigCapital4, Inc. to BigBear.ai Holdings, Inc.

Pursuant to the terms of the Merger Agreement, at the time of the First Merger (the “*First Effective Time*”), each unit of limited liability company interest of BigBear.ai Holdings, LLC issued and outstanding immediately prior to the First Effective Time (other than units held in BigBear.ai Holdings, LLC’s treasury or owned by GigCapital4, Merger Sub or BigBear.ai Holdings, LLC immediately prior to the First Effective Time) were cancelled and automatically deemed for all purposes to represent the right to receive, in the aggregate (the “*Aggregate Merger Consideration*”), (i) in book entry, a number of shares of common stock, par value \$0.0001 per share, of GigCapital4 (the “*GigCapital4 Common Stock*”) equal to the result of *dividing* (x) the difference of (A) \$1,125,000,000, *minus* (B) \$75,000,000, by (y) 10.00 (rounded up to the nearest whole number of shares). Ultimate, as the sole member of BigBear.ai Holdings, LLC prior to the Business Combination, was paid the Aggregate Merger Consideration (the “*Equity Merger Consideration*”), and (ii) \$75,000,000, in each case without interest and otherwise in accordance with the terms of the Merger Agreement.

At the time of the Second Merger (the “*Second Effective Time*”), each unit of limited liability company interest of BigBear.ai Holdings, LLC issued and outstanding immediately prior to the Second Effective Time was cancelled and ceased to exist without any conversion thereof or payment therefor, and the capital stock of GigCapital4 outstanding immediately prior to the Second Effective Time remained outstanding as the capital stock of GigCapital4, which, collectively with the \$200,000,000 in aggregate principal amount of 6.00% convertible senior notes due 2026 (the “*2026 Convertible Notes*”) issued at the Second Effective Time (as further described below) and the warrants entitling the holders to purchase one share of GigCapital4 Common Stock per warrant (“*GigCapital4 Warrants*”), constituted one hundred percent (100%) of the outstanding equity securities (and securities convertible into equity securities) of BigBear immediately after the Second Effective Time.

Stock Exchange Listing

BigBear’s Common Stock and Public Warrants are listed on the NYSE under the symbols “*BBAT*” and “*BBAIW*,” respectively.

Corporate Information

BigBear is a Delaware corporation. Our principal executive offices are located at BigBear.ai Holdings, Inc., 6811 Benjamin Franklin Drive, Suite 200, Columbia, Maryland 21046, and our telephone number is (410) 312-0885. Our principal website address is <https://bigbear.ai>. Information contained in, or accessible through, our website is not a part of, and is not incorporated by reference into, this prospectus or the registration statement of which it forms a part.

Emerging Growth Company

The Company is an “emerging growth company,” as defined under the Jumpstart Our Business Startups Act of 2012, as amended (the “*JOBS Act*”). As an emerging growth company, the Company is eligible to take

advantage of certain exemptions from various reporting requirements that are applicable to other public companies that are not emerging growth companies. These include, but are not limited to, not being required to comply with the auditor attestation requirements of Section 404 of the Sarbanes-Oxley Act of 2002, as amended (the “*Sarbanes-Oxley Act*”), reduced disclosure obligations regarding executive compensation in its periodic reports and proxy statements, and exemptions from the requirements of holding a nonbinding advisory vote on executive compensation and the requirement to obtain stockholder approval of any golden parachute payments not previously approved.

In addition, Section 107 of the JOBS Act provides that an emerging growth company can take advantage of an extended transition period provided in Section 7(a)(2)(B) of the Securities Act of 1933, as amended (the “*Securities Act*”) for complying with new or revised accounting standards.

The Company will remain an emerging growth company until the earlier of (i) December 31, 2026 (the last day of the fiscal year following the fifth anniversary of the consummation of the Company’s initial public offering), (ii) the last day of the fiscal year in which the Company has total annual gross revenue of at least \$1.07 billion, (iii) the last day of the fiscal year in which the Company is deemed to be a “large accelerated filer,” as defined in the Securities Exchange Act of 1934, as amended (the “*Exchange Act*”) and (iv) the date on which the Company has issued more than \$1.0 billion in nonconvertible debt during the prior three-year period.

RISK FACTORS

Investing in our securities involves a high degree of risk. See “Part I, Item 1A-Risk Factors” in our Annual Report on Form 10-K for the period ended December 31, 2022, as filed with the SEC on March 31, 2023, and as described or may be described in any Quarterly Report on Form 10-Q or subsequent Annual Report on Form 10-K under the heading “Item 1A. Risk Factors,” as well as in any other documents we file with the SEC that are deemed incorporated by reference into this prospectus and the “Risk Factors” section in the applicable prospectus supplement for a discussion of the factors you should carefully consider before deciding to purchase our securities. Before you invest in our securities, you should carefully consider these risks as well as other information we include or incorporate by reference into this prospectus and the applicable prospectus supplement. The risks and uncertainties we have described are not the only ones facing our company. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also affect our business operations. The occurrence of any of these risks might cause you to lose all or part of your investment in the offered securities. The discussion of risks includes or refers to forward-looking statements; you should read the explanation of the qualifications and limitations on such forward-looking statements discussed elsewhere in this prospectus.

USE OF PROCEEDS

Unless indicated otherwise in any applicable prospectus supplement, we intend to use the net proceeds from the sale of the securities offered by us under this prospectus and any related prospectus supplement for general corporate purposes, which may include, but are not limited to, funding working capital, capital expenditures, operating expenses, repayment or refinancing of debt, repurchases or redemptions of securities, and the selective pursuit of business development opportunities, including to expand our current business through acquisitions of, or investments in, other businesses, products or technologies. We will retain broad discretion over the allocation of net proceeds from the sale of any securities offered by us. Additional information on the use of net proceeds from the sale of the securities that we may offer from time to time by this prospectus may be set forth in the applicable prospectus supplement relating to a particular offering.

DESCRIPTION OF CAPITAL STOCK

The following summary of the material terms of the Company's securities is not intended to be a complete summary of the rights and preferences of such securities. The Certificate of Incorporation is attached as an exhibit to this prospectus. We urge you to read the Certificate of Incorporation in its entirety for a complete description of the rights and preferences of the Company's Common Stock and the Warrant Agreements.

General

The Second Amended and Restated Certificate of Incorporation of the Company (the "*Certificate of Incorporation*") authorizes the issuance of 500,000,000 shares of Common Stock, \$0.0001 par value per share and 1,000,000 shares of preferred stock, par value \$0.0001 per share. As of April 5, 2023, there were 142,834,513 shares of Common Stock outstanding, held of record by approximately 83 holders of Common Stock, no shares of preferred stock outstanding and 12,325,772 warrants outstanding held of record by approximately 20 holders of warrants. Such numbers do not include DTC participants or beneficial owners holding shares through nominee names.

Common Stock

Common stockholders of record are entitled to one vote for each share held on all matters to be voted on by stockholders. Unless specified in the Certificate of Incorporation, or as required by applicable provisions of the General Corporation Law of the State of Delaware (the "*DGCL*") or applicable stock exchange rules, the affirmative vote of a majority of our shares of Common Stock that are voted is required to approve any such matter voted on by our stockholders. Our stockholders are entitled to receive ratable dividends when, as and if declared by the board of directors of the Company (the "*Board*") out of funds legally available therefor.

Our Board is divided into three classes, each of which will generally serve for a term of three years with only one class of directors being elected in each year. There is no cumulative voting with respect to the election of directors, with the result that the holders of more than 50% of the shares eligible to vote for the election of directors can elect all of the directors.

In the event of a liquidation, dissolution or winding up of the Company, our stockholders are entitled to share ratably in all assets remaining available for distribution to them after payment of liabilities and after provision is made for each class of stock, if any, having preference over the Common Stock. Our stockholders have no preemptive or other subscription rights. There are no sinking fund provisions applicable to the Common Stock.

Our stockholders have no conversion, preemptive or other subscription rights. Stockholders of GigCapital4 who sold or converted their stock into their share of the trust account of GigCapital4 still have the right to exercise the warrants that they may hold.

Preferred Stock

There are no shares of preferred stock outstanding. Our Certificate of Incorporation authorizes the issuance of 1,000,000 shares of preferred stock with such designation, rights and preferences as may be determined from time to time by our Board. No shares of preferred stock were issued or registered in connection with the Business Combination. Accordingly, our Board is empowered, without stockholder approval, to issue preferred stock with dividend, liquidation, conversion, voting or other rights which could adversely affect the voting power or other rights of the holders of Common Stock. In addition, the preferred stock could be utilized as a method of discouraging, delaying or preventing a change in control of us. Although the Company does not currently intend to issue any shares of preferred stock, the Company cannot assure you that it will not do so in the future.

Existing Warrants

As of April 5, 2023, there were 12,325,772 warrants outstanding, of which 11,959,239 were the warrants included in the units each consisting of one share of Common Stock and one-third of one warrant to purchase one share of Common Stock (the “*Public Units*”) issued in the initial public offering of GigCapital4, consummated on February 8, 2021 (the “*IPO*”), each of which is exercisable for one share of Common Stock in accordance with its terms (the “*Public Warrants*”) and 366,533 were the warrants included in the units issued to GigAcquisitions4, LLC, Nomura Securities International, Inc. and Oppenheimer & Co. Inc. (the “*Initial Stockholders*”), in a private placement that closed prior to the IPO, each of which is exercisable for one share of Common Stock, in accordance with its terms (the “*Private Placement Warrants*”). Each warrant entitles the registered holder to purchase one share of Common Stock at a price of \$11.50 per share, subject to adjustment as discussed below, at any time. Only whole warrants are exercisable. The Public Warrants will expire at 5:00 p.m., New York City time, on December 7, 2026, the fifth anniversary of our completion of an initial business combination, or earlier upon redemption.

No Public Warrants will be exercisable for cash unless the Company has an effective and current prospectus covering the shares of Common Stock issuable upon exercise of the warrants and a current prospectus relating to such shares of Common Stock. Notwithstanding the foregoing, if a prospectus covering the issuance of the shares of Common Stock issuable upon exercise of the Public Warrants is not effective within 90 days from the closing of the Business Combination, warrant holders may, until such time as there is an effective prospectus and during any period when the Company shall have failed to maintain an effective prospectus, exercise warrants on a cashless basis pursuant to an available exemption from registration under the Securities Act. If an exemption from registration is not available, holders will not be able to exercise their warrants on a cashless basis.

The Private Placement Warrants are identical to the Public Warrants except that such Private Placement Warrants will be exercisable for cash (even if a prospectus covering the issuance of the warrant shares issuable upon exercise of such warrants is not effective) or on a cashless basis, at the holder’s option, and will not be redeemable by us, in each case so long as they are still held by the Initial Stockholders or their affiliates.

Once the warrants become exercisable, the Company may redeem the outstanding warrants (excluding the Private Placement Warrants):

- in whole and not in part;
- at a price of \$0.01 per warrant;
- upon a minimum of 30 days’ prior written notice of redemption, which the Company refers to as the 30-day redemption period; and
- if, and only if, the last reported sale price of the Common Stock equals or exceeds \$18.00 per share (as adjusted for stock splits, stock dividends, reorganizations, recapitalizations and the like) for any 20 trading days within a 30-trading day period ending on the third trading day prior to the date on which the Company sends the notice of redemption to the warrant holders.

The Company will not redeem the warrants unless a prospectus under the Securities Act covering the issuance of the warrant shares underlying the warrants to be so redeemed is then effective and a current prospectus relating to those warrant shares is available throughout the 30-day redemption period, except if the warrants may be exercised on a cashless basis and such cashless exercise is exempt from registration under the Securities Act. If and when the warrants become redeemable by the Company, it may exercise our redemption right even if it is unable to register or qualify the underlying securities for sale under all applicable state securities laws.

If the foregoing conditions are satisfied and the Company issues a notice of redemption, each warrant holder may exercise his, her or its warrants prior to the scheduled redemption date. However, the price of the shares of Common Stock may fall below the \$18.00 trigger price (as adjusted) as well as the \$11.50 exercise price (as adjusted) after the redemption notice is issued.

Table of Contents

The redemption criteria for our warrants have been established at a price which is intended to provide warrant holders a reasonable premium to the initial exercise price and provide a sufficient differential between the then-prevailing share price and the exercise price so that if the share price declines as a result of our redemption call, the redemption will not cause the share price to drop below the exercise price of the warrants.

If the Company calls the warrants for redemption as described above, our management will have the option to require all holders that wish to exercise warrants to do so on a “cashless basis.” In making such determination, our management will consider, among other factors, our cash position, the number of warrants that are outstanding and the dilutive effect on our stockholders of issuing the maximum number of warrant shares issuable upon exercise of outstanding warrants. In such event, the holder would pay the exercise price by surrendering the warrants for that number of shares of Common Stock equal to the quotient obtained by dividing (x) the product of the number of shares of Common Stock underlying the warrants to be so exercised, and the difference between the exercise price of the warrants and the fair market value by (y) the fair market value.

A holder of a warrant may notify the Company in writing in the event it elects to be subject to a requirement that such holder will not have the right to exercise such warrant, to the extent that after giving effect to such exercise, such person (together with such person’s affiliates), to the warrant agent’s actual knowledge, would beneficially own in excess of 9.8% (or such other amount as a holder may specify) of the shares of Common Stock outstanding immediately after giving effect to such exercise.

If the number of outstanding shares of Common Stock is increased by a stock dividend payable in shares of Common Stock, or by a split-up of shares of Common Stock or other similar event, then, on the effective date of such stock dividend, split-up or similar event, the number of shares of Common Stock issuable on exercise of each warrant will be increased in proportion to such increase in the outstanding shares of Common Stock. A rights offering to holders of Common Stock entitling holders to purchase shares of Common Stock at a price less than the fair market value will be deemed a stock dividend of a number of shares of Common Stock equal to the product of (i) the number of shares of Common Stock actually sold in such rights offering (or issuable under any other equity securities sold in such rights offering that are convertible into or exercisable for Common Stock) *multiplied by* (ii) one (1), *minus* the quotient of (x) the price per share of Common Stock paid in such rights offering *divided by* (y) the fair market value of such share. For these purposes (i) if the rights offering is for securities convertible into or exercisable for Common Stock, in determining the price payable for Common Stock, there will be taken into account any consideration received for such rights, as well as any additional amount payable upon exercise or conversion and (ii) fair market value means the volume-weighted average price of Common Stock as reported during the 10-trading-day period ending on the trading day prior to the first date on which the shares of Common Stock trade on the applicable exchange or in the applicable market, regular way, without the right to receive such rights.

In addition, if the Company, at any time while the warrants are outstanding and unexpired, pays a dividend or makes a distribution in cash, securities or other assets to the holders of Common Stock on account of such shares of Common Stock (or other shares of our capital stock into which the warrants are convertible), other than (a) as described above, (b) certain ordinary cash dividends, (c) to satisfy the redemption rights of the holders of Common Stock in connection with the Business Combination, (d) as a result of the repurchase of shares of Company Stock if the Business Combination is presented to the stockholders of the Company for approval, or (e) in connection with the redemption of our shares of Common Stock included in the units issued in the IPO upon our failure to complete the Business Combination, then the warrant exercise price will be decreased, effective immediately after the effective date of such event, by the amount of cash and/or the fair market value of any securities or other assets paid on each share of Common Stock in respect of such event.

If the number of outstanding shares of Common Stock is decreased by a consolidation, combination, reverse stock split or reclassification of shares of Common Stock or other similar event, then, on the effective date of such consolidation, combination, reverse stock split, reclassification or similar event, the number of shares of Common Stock issuable on exercise of each warrant will be decreased in proportion to such decrease in outstanding shares of Common Stock.

Table of Contents

Whenever the number of shares of Common Stock purchasable upon the exercise of the warrants is adjusted, as described above, the warrant exercise price will be adjusted by *multiplying* the warrant exercise price immediately prior to such adjustment by a fraction (x) the numerator of which will be the number of shares of Common Stock purchasable upon the exercise of the warrants immediately prior to such adjustment, and (y) the denominator of which will be the number of shares of Common Stock so purchasable immediately thereafter.

In case of any reclassification or reorganization of the outstanding shares of Common Stock (other than those described above or that solely affects the par value of such shares of Common Stock), or in the case of any merger or consolidation of us with or into another corporation (other than a consolidation or merger in which the Company is the continuing corporation and that does not result in any reclassification or reorganization of our outstanding shares of Common Stock), or in the case of any sale or conveyance to another corporation or entity of the assets or other property of us as an entirety or substantially as an entirety in connection with which the Company is dissolved, the holders of the warrants will thereafter have the right to purchase and receive, upon the basis and upon the terms and conditions specified in the warrants and in lieu of the shares of Common Stock immediately theretofore purchasable and receivable upon the exercise of the rights represented thereby, the kind and amount of shares of stock or other securities or property (including cash) receivable upon such reclassification, reorganization, merger or consolidation, or upon a dissolution following any such sale or transfer, that the holder of the warrants would have received if such holder had exercised their warrants immediately prior to such event. However, if such holders were entitled to exercise a right of election as to the kind or amount of securities, cash or other assets receivable upon such consolidation or merger, then the kind and amount of securities, cash or other assets for which each warrant will become exercisable will be deemed to be the weighted average of the kind and amount received per share by such holders in such consolidation or merger that affirmatively make such election, and if a tender, exchange or redemption offer has been made to and accepted by such holders (other than a tender, exchange or redemption offer made by the Company in connection with redemption rights held by Company stockholders as provided for in the proposed Certificate of Incorporation or as a result of the repurchase of shares of Common Stock by us if the Business Combination is presented to the stockholders of the Company for approval) under circumstances in which, upon completion of such tender or exchange offer, the maker thereof, together with members of any group (within the meaning of Rule 13d-5(b)(1) under the Exchange Act) of which such maker is a part, and together with any affiliate or associate of such maker (within the meaning of Rule 12b-2 under the Exchange Act) and any members of any such group of which any such affiliate or associate is a part, own beneficially (within the meaning of Rule 13d-3 under the Exchange Act) more than 50% of the outstanding shares of Common Stock, the holder of a warrant will be entitled to receive the highest amount of cash, securities or other property to which such holder would actually have been entitled as a stockholder if such warrant holder had exercised the warrant prior to the expiration of such tender or exchange offer, accepted such offer and all of the Common Stock held by such holder had been purchased pursuant to such tender or exchange offer, subject to adjustments (from and after the consummation of such tender or exchange offer) as nearly equivalent as possible to the adjustments provided for in the warrant agreement. Additionally, if less than 70% of the consideration receivable by the holders of Common Stock in such a transaction is payable in the form of Common Stock in the successor entity that is listed for trading on a national securities exchange or is quoted in an established over-the-counter market, or is to be so listed for trading or quoted immediately following such event, and if the registered holder of the warrant properly exercises the warrant within 30 days following public disclosure of such transaction, the warrant exercise price will be reduced as specified in the warrant agreement based on the per share consideration *minus* the Black-Scholes Warrant Value (as defined in the warrant agreement) of the warrant in order to determine and realize the option value component of the warrant. This formula is to compensate the warrant holder for the loss of the option value portion of the warrant due to the requirement that the warrant holder exercise the warrant within 30 days of the event. The Black-Scholes model is an accepted pricing model for estimating fair market value where no quoted market price for an instrument is available.

The warrants were issued in registered form under a warrant agreement between Continental Stock Transfer & Trust Company, as warrant agent, and us. The warrant agreement provides that the terms of the warrants may be amended without the consent of any holder to cure any ambiguity or correct any defective

provision, but requires the approval by the holders of at least 65% of the then outstanding Public Warrants to make any change that adversely affects the interests of the registered holders of Public Warrants.

Dividends

The Company has not paid any cash dividends on our Common Stock to date. The payment of cash dividends in the future will be dependent upon our revenues and earnings, if any, capital requirements and general financial condition. The payment of any cash is within the discretion of our Board at such time. In addition, our Board is not currently contemplating and does not anticipate declaring any stock dividends in the foreseeable future. Further, if the Company incurs any indebtedness, our ability to declare dividends may be limited by restrictive covenants the Company may agree to in connection therewith.

Election of Directors

The Board is divided into three classes, Class I, Class II and Class III, with only one class of directors being elected in each year and each class serving a three-year term, except with respect to the election of directors at the special meeting of the stockholders of GigCapital4 held on December 3, 2021 (the “*Special Meeting*”), Class I directors were elected to an initial one-year term (and three-year terms subsequently), the Class II directors were elected to an initial two-year term (and three-year terms subsequently) and the Class III directors were elected to an initial three-year term (and three-year terms subsequently). There is no cumulative voting with respect to the election of directors, with the result that the holders of more than 50% of the shares voted for the election of directors can elect all of the directors.

Our Transfer Agent and Warrant Agent

The Transfer Agent for our Common Stock and warrant agent for our warrants is Continental Stock Transfer & Trust Company. The Company has agreed to indemnify Continental Stock Transfer & Trust Company in its roles as transfer agent and warrant agent, its agents and each of its stockholders, directors, officers and employees against all liabilities, including judgments, costs and reasonable counsel fees that may arise out of acts performed or omitted for its activities in that capacity, except for any liability due to any gross negligence, willful misconduct or bad faith of the indemnified person or entity.

Certain Anti-Takeover Provisions of Delaware Law, the Company’s Certificate of Incorporation and Bylaws

Our Certificate of Incorporation provides that the Board is classified into three classes of directors of approximately equal size. As a result, in most circumstances, a person can gain control of the board only by successfully engaging in a proxy contest at three or more annual meetings. Furthermore, because the Board is classified, directors may be removed only with cause by a majority of our outstanding shares.

In addition, the Certificate of Incorporation does not provide for cumulative voting in the election of directors. Our authorized but unissued Common Stock and preferred stock are available for future issuances without stockholder approval and could be utilized for a variety of corporate purposes, including future offerings to raise additional capital, acquisitions and employee benefit plans. The existence of authorized but unissued and unreserved Common Stock and preferred stock could render more difficult or discourage an attempt to obtain control of us by means of a proxy contest, tender offer, merger or otherwise.

Special Meeting of Stockholders

The Certificate of Incorporation provides that special meetings of our stockholders may be called only by the Chairman of the Board or the Board pursuant to a resolution adopted by a majority of the Board. Stockholders of BigBear will not be eligible and has no right to call a special meeting.

Advance Notice Requirements for Stockholder Proposals and Director Nominations

Our Bylaws, dated as of December 7, 2021 (the “*Bylaws*”), provide that stockholders seeking to bring business before our annual meeting of stockholders, or to nominate candidates for election as directors at our annual meeting of stockholders, must provide timely notice of their intent in writing. To be timely, a stockholder’s notice will need to be received by the Company’s Secretary at our principal executive offices not later than the close of business on the 90th day nor earlier than the open of business on the 120th day prior to the anniversary date of the immediately preceding annual meeting of stockholders. Pursuant to Rule 14a-8 of the Exchange Act, proposals seeking inclusion in our annual proxy statement must comply with the notice periods contained in the annual proxy statement. The Certificate of Incorporation specifies certain requirements as to the form and content of a stockholders’ meeting. These provisions may preclude our stockholders from bringing matters before our annual meeting of stockholders or from making nominations for directors at our annual meeting of stockholders. Our Bylaws also specify certain requirements as to the form and content of a stockholder’s notice for an annual meeting. Specifically, a stockholder’s notice must include: (i) a brief description of the business desired to be brought before the annual meeting, the text of the proposal or business (including the text of any resolutions proposed for consideration and in the event such business includes a proposal to amend the Bylaws, the language of the proposed amendment) and the reasons for conducting such business at the annual meeting, (ii) the name and record address of such stockholder and the name and address of the beneficial owner, if any, on whose behalf the proposal is made, (iii) the class or series and number of shares of our capital stock that are owned beneficially and of record by such stockholder and by the beneficial owner, if any, on whose behalf the proposal is made, (iv) a description of all arrangements or understandings between such stockholder and the beneficial owner, if any, on whose behalf the proposal is made and any other person or persons (including their names) in connection with the proposal of such business by such stockholder, (v) any material interest of such stockholder and the beneficial owner, if any, on whose behalf the proposal is made in such business and (vi) a representation that such stockholder (or a qualified representative of such stockholder) intends to appear in person or by proxy at the annual meeting to bring such business before the meeting. These notice requirements will be deemed satisfied by a stockholder as to any proposal (other than nominations) if the stockholder has notified the Company of such stockholder’s intention to present such proposal at an annual meeting in compliance with Rule 14a-8 (or any successor thereof) of the Exchange Act, and such stockholder has complied with the requirements of such rule for inclusion of such proposal in a proxy statement prepared by us to solicit proxies for such annual meeting. The foregoing provisions may limit our stockholders’ ability to bring matters before our annual meeting of stockholders or from making nominations for directors at our annual meeting of stockholders.

Investor Rights Agreement

Pursuant to the Amended and Restated Investor Rights Agreement, dated as of December 6, 2021, (the “*Investor Rights Agreement*”) certain parties are entitled to customary piggyback rights on registered offerings of equity securities of BigBear and certain other registration rights, including unlimited shelf take-downs and, in the case of Ultimate, together with any of its permitted transferees that have executed a joinder to the Investor Rights Agreement (collectively, the “*Partner*”), demand registration rights following the expiration of the Lock-Up Period (as defined below). Any underwritten offering of BigBear’s equity securities will be subject to customary cut-back provisions. Pursuant to the Investor Rights Agreement, BigBear has agreed to cooperate and use commercially reasonable efforts to consummate the applicable registered offerings initiated by the parties and will pay the fees and expenses of such offerings (including reasonable and documented fees of one counsel for the parties participating in such offering).

The Investor Rights Agreement replaced and by its terms, at the closing of the Business Combination, terminated the Registration Rights Agreement, dated as of February 8, 2021, by and among GigCapital4, the Initial Stockholders, and Dorothy D. Hayes and Brad Weightman (the “*Registration Rights Agreement*”).

DESCRIPTION OF NEW WARRANTS

This summary, together with the additional information we include in any applicable prospectus supplements, summarizes the material terms and provisions of the warrants that we may offer under this prospectus, which consist of warrants to purchase our Common Stock and/or Preferred Stock. Warrants may be offered independently or together with our Common Stock, Preferred Stock and/or rights offered by any prospectus supplement and may be attached to or separate from those securities. While the terms we have summarized below will generally apply to any future warrants we may offer under this prospectus, we will describe the particular terms of any warrants that we may offer in more detail in the applicable prospectus supplement. The terms of any warrants we offer under a prospectus supplement may differ from the terms we describe below.

We will issue the warrants directly or under a warrant agreement which we will enter into with a warrant agent to be selected by us. Each series of warrants will be issued under a separate warrant agreement to be entered into between us and a bank or trust company, as warrant agent, all as set forth in the prospectus supplement relating to the particular issue of offered warrants. We use the term “warrant agreement” to refer to any of these warrant agreements. We use the term “warrant agent” to refer to the warrant agent under any of these warrant agreements. The warrant agent will act solely as an agent of ours in connection with the warrants and will not act as an agent for the holders or beneficial owners of the warrants.

The following summary of material provisions of the warrants and the warrant agreements are subject to, and qualified in their entirety by reference to, all of the provisions of the warrant agreement applicable to a particular series of warrants. We urge you to read the applicable prospectus supplements related to the warrants that we sell pursuant to this prospectus, as well as the complete warrant agreements that contain the terms of the warrants.

General

We will describe in the applicable prospectus supplements the terms relating to a series of warrants.

If warrants for the purchase of our Common Stock or Preferred Stock are offered, the prospectus supplements will describe the following terms, to the extent applicable:

- the offering price and the aggregate number of warrants offered;
- the total number of shares that can be purchased if a holder of the warrants exercises them and, in the case of warrants for Preferred Stock, the designation, total number and terms of the series of Preferred Stock that can be purchased upon exercise;
- the designation and terms of any series of Preferred Stock with which the warrants are being offered and the number of warrants being offered with each share of Common Stock or Preferred Stock;
- the date on and after which the holder of the warrants can transfer them separately from the related Common Stock or series of Preferred Stock;
- the number of shares of Common Stock or Preferred Stock that can be purchased if a holder exercises the warrant and the price at which such Common Stock or Preferred Stock may be purchased upon exercise, including, if applicable, any provisions for changes to or adjustments in the exercise price and in the securities or other property receivable upon exercise;
- the terms of any rights to redeem or call, or accelerate the expiration of, the warrants;
- the date on which the right to exercise the warrants begins and the date on which that right expires;
- the number of warrants outstanding, if any;
- a discussion of any material U.S. federal income tax considerations applicable to the warrants;

Table of Contents

- the terms, if any, on which we may accelerate the date by which the warrants must be exercised;
- whether the warrants are issued pursuant to a warrant agreement with a warrant agent or issued directly by us; and
- any other specific terms, preferences, rights or limitations of, or restrictions on, the warrants.

Warrants for the purchase of Common Stock or Preferred Stock will be in registered form only.

A holder of warrant certificates may exchange them for new certificates of different denominations, present them for registration of transfer and exercise them at the corporate trust office of the warrant agent or any other office indicated in the applicable prospectus supplement. Until any warrants to purchase Common Stock or Preferred Stock are exercised, holders of the warrants will not have any rights of holders of the underlying Common Stock or Preferred Stock, including any rights to receive dividends or to exercise any voting rights, except to the extent set forth under “Warrant Adjustments” below.

Exercise of Warrants

Each holder of a warrant is entitled to purchase the number of shares of Common Stock or Preferred Stock, as the case may be, at the exercise price described in the applicable prospectus supplements. After the close of business on the day when the right to exercise terminates (or a later date if we extend the time for exercise), unexercised warrants will become void.

A holder of warrants may exercise them by following the general procedure outlined below:

- delivering to us or to the warrant agent the payment required by the applicable prospectus supplements to purchase the underlying security;
- properly completing and signing the reverse side of the warrant certificate representing the warrants; and
- delivering the warrant certificate representing the warrants to us or to the warrant agent within five business days of receipt of payment of the exercise price.

If the holder complies with the procedures described above, the warrants will be considered to have been exercised when we receive or the warrant agent receives, as applicable, payment of the exercise price, subject to the transfer books for the securities issuable upon exercise of the warrant not being closed on such date. After the holder has completed those procedures and subject to the foregoing, we will, as soon as practicable, issue and deliver to such holder the Common Stock or Preferred Stock that such holder purchased upon exercise. If the holder exercises fewer than all of the warrants represented by a warrant certificate, a new warrant certificate will be issued to such holder for the unexercised amount of warrants. Holders of warrants will be required to pay any tax or governmental charge that may be imposed in connection with transferring the underlying securities in connection with the exercise of the warrants.

Amendments and Supplements to the Warrant Agreements

We may amend or supplement a warrant agreement without the consent of the holders of the applicable warrants to cure ambiguities in the warrant agreement, to cure, correct or supplement a defective provision in the warrant agreement, or to provide for other matters under the warrant agreement that we and the warrant agent deem necessary or desirable, so long as, in each case, such amendments or supplements do not materially adversely affect the interests of the holders of the warrants.

Warrant Adjustments

Unless the applicable prospectus supplements state otherwise, the exercise price of, and the number of securities covered by, a Common Stock Warrant or Preferred Stock warrant will be adjusted proportionately if we subdivide or combine our Common Stock or Preferred Stock, as applicable.

In addition, unless the prospectus supplements state otherwise, if we, without payment therefor:

- issue capital stock or other securities convertible into or exchangeable for Common Stock or Preferred Stock, or any rights to subscribe for, purchase or otherwise acquire any of the foregoing, as a dividend or distribution to holders of our Common Stock or Preferred Stock;
- pay any cash to holders of our Common Stock or Preferred Stock other than a cash dividend paid out of our current or retained earnings or other than in accordance with the terms of the Preferred Stock;
- issue any evidence of our indebtedness or rights to subscribe for or purchase our indebtedness to holders of our Common Stock or Preferred Stock; or
- issue Common Stock or Preferred Stock or additional stock or other securities or property to holders of our Common Stock or Preferred Stock by way of spinoff, split-up, reclassification, combination of shares or similar corporate rearrangement;

then the holders of Common Stock warrants and Preferred Stock warrants, as applicable, will be entitled to receive upon exercise of the warrants, in addition to the securities otherwise receivable upon exercise of the warrants and without paying any additional consideration, the amount of stock and other securities and property such holders would have been entitled to receive had they held the Common Stock or Preferred Stock, as applicable, issuable under the warrants on the dates on which holders of those securities received or became entitled to receive such additional stock and other securities and property.

Except as stated above, the exercise price and number of securities covered by a Common Stock warrant or Preferred Stock warrant, and the amounts of other securities or property to be received, if any, upon exercise of those warrants, will not be adjusted or provided for if we issue those securities or any securities convertible into or exchangeable for those securities, or securities carrying the right to purchase those securities or securities convertible into or exchangeable for those securities.

Holders of Common Stock warrants and Preferred Stock warrants may have additional rights under the following circumstances:

- certain reclassifications, capital reorganizations or changes of the Common Stock or Preferred Stock, as applicable;
- certain share exchanges, mergers, or similar transactions involving us and which result in changes of the Common Stock or Preferred Stock, as applicable; or
- certain sales or dispositions to another entity of all or substantially all of our property and assets.

If one of the above transactions occurs and holders of our Common Stock or Preferred Stock are entitled to receive stock, securities or other property with respect to or in exchange for their securities, the holders of the Common Stock warrants and Preferred Stock warrants then outstanding, as applicable, will be entitled to receive upon exercise of their warrants the kind and amount of shares of stock and other securities or property that they would have received upon the applicable transaction if they had exercised their warrants immediately before the transaction.

DESCRIPTION OF RIGHTS

This summary, together with the additional information we include in any applicable prospectus supplements, summarizes the material terms and provisions of the rights that we may offer under this prospectus, which consist of rights to purchase our Common Stock and or Preferred Stock in one or more series. Rights may be offered independently or together with our Common Stock, Preferred Stock and/or warrants offered by any prospectus supplement and may be attached to or separate from those securities. While the terms we have summarized below will generally apply to any future rights we may offer pursuant to this prospectus, we will describe the particular terms of any rights that we may offer in more detail in the applicable prospectus supplements. The terms of any rights we offer under a prospectus supplement may differ from the terms we describe below

The applicable prospectus supplements relating to any rights that we offer will include specific terms of any offering of rights for which this prospectus is being delivered, including the following, to the extent applicable:

- the date for determining the persons entitled to participate in the rights distribution;
- the price, if any, per right;
- the exercise price payable for each share of Common Stock or share of Preferred Stock upon the exercise of the rights;
- the number of rights issued or to be issued to each holder;
- the number and terms of the shares of Common Stock or shares of Preferred Stock that may be purchased per each right;
- the extent to which the rights are transferable;
- any other terms of the rights, including the terms, procedures and limitations relating to the exchange and exercise of the rights;
- the respective dates on which the holder's ability to exercise the rights will commence and will expire;
- the number of rights outstanding, if any;
- a discussion of any material U.S. federal income tax considerations applicable to the rights;
- the extent to which the rights may include an over-subscription privilege with respect to unsubscribed securities; and
- if applicable, the material terms of any standby underwriting or purchase arrangement entered into by us in connection with the offering of such rights.

The description in the applicable prospectus supplements of any rights that we may offer will not necessarily be complete and will be qualified in its entirety by reference to the applicable rights agreement and/or rights certificate, which will be filed with the SEC in connection therewith.

DESCRIPTION OF UNITS

We may issue units comprising one or more of the other securities described in this prospectus in any combination. Each unit will be issued so that the holder of the unit is also the holder of each security included in the unit. Thus, the holder of a unit will have the rights and obligations of a holder of each included security. The unit agreement under which a unit is issued may provide that the securities included in the unit may not be held or transferred separately, at any time or at any time before a specified date. The applicable prospectus supplement will describe:

- the designation and terms of the units and of the other securities comprising the units, including whether and under what circumstances those securities may be traded separately;
- the terms of the unit agreement governing the units;
- any provisions for the issuance, payment, settlement, transfer or exchange of the units or the securities comprising the units;
- the U.S. federal income tax considerations relevant to the units; and
- whether the units will be issued in fully registered global form.

This summary of certain general terms of units and any summary description of units in the applicable prospectus supplement do not purport to be complete and are qualified in their entirety by reference to all provisions of the applicable unit agreement and, if applicable, collateral arrangements and depositary arrangements relating to such units. The forms of the unit agreements and other documents relating to a particular issue of units will be filed with the SEC as an exhibit to the registration statement of which this prospectus is a part or a document that is incorporated or deemed to be incorporated by reference in this prospectus each time we issue units, and you should read those documents for provisions that may be important to you.

PLAN OF DISTRIBUTION

We may offer and sell the securities being offered hereby in one or more of the following ways from time to time:

- to or through underwriters, brokers or dealers;
- on any national securities exchange or quotation service on which the securities may be listed or quoted at the time of sale;
- in the over-the-counter market;
- in transactions other than on these exchanges or systems or in the over-the-counter market;
- in “at the market offerings,” within the meaning of Rule 415(a)(4) of the Securities Act, to or through market makers or into an existing market for the securities;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- an accelerated securities repurchase program;
- a combination of any of these methods of sale; and
- any other method permitted pursuant to applicable law.

We will identify the specific plan of distribution, including any underwriters, dealers, agents or other purchasers, persons or entities, and any applicable compensation, in a prospectus supplement, in an amendment to the registration statement of which this prospectus is a part, or in other filings we make with the SEC under the Exchange Act, which are incorporated by reference.

Additionally, the Company may enter into derivative transactions with third parties, or sell securities not covered by this prospectus to third parties in privately negotiated transactions. If the applicable prospectus supplement indicates, in connection with those derivatives, the third parties may sell securities covered by this prospectus and the applicable prospectus supplement, including in short sale transactions. If so, the third party may use securities pledged by the Company or borrowed from the Company or others to settle those sales or to close out any related open borrowings of stock, and may use securities received from the Company in settlement of those derivatives to close out any related open borrowings of stock. The third party in such sale transactions will be an underwriter and, if not identified in this prospectus, will be identified in the applicable prospectus supplement (or a post-effective amendment).

Some underwriters, dealers or agents used by us in any offering of securities under this prospectus may be customers of, engage in transactions with, and perform services for us or affiliates of ours in the ordinary course of business. Underwriters, dealers, agents and other persons may be entitled under agreements which may be entered into with us to indemnification against the contribution toward certain civil liabilities, including liabilities under the Securities Act, and to be reimbursed by us for certain expenses.

Table of Contents

There is currently no market for any of the offered securities, other than the shares of Common Stock, which are listed on NYSE. Any underwriters to which offered securities are sold by us for public offering and sale may make a market in such securities, but those underwriters will not be obligated to do so and may discontinue any market making at any time.

The anticipated date of delivery of the securities offered by this prospectus will be described in the applicable prospectus supplement relating to the offering.

If underwriters or dealers are used in the sale of securities, until the distribution of the securities is completed, rules of the SEC may limit the ability of any underwriters to bid for and purchase our securities. As an exception to these rules, representatives of any underwriters are permitted to engage in transactions that stabilize the price of our securities. These transactions may consist of bids or purchases for the purpose of pegging, fixing or maintaining the price of such securities. If the underwriters create a short position in our securities in connection with an offering (that is, if they sell more securities than are set forth on the cover page of this prospectus), the representatives of the underwriters may reduce that short position by purchasing such securities in the open market. We make no representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of our securities. In addition, we make no representation that the representatives of any underwriters will engage in these transactions or that these transactions, once commenced, will not be discontinued without notice.

To comply with the securities laws of some states, if applicable, the securities may be sold in these jurisdictions only through registered or licensed brokers or dealers. In addition, in some states the securities may not be sold unless they have been registered or qualified for sale or an exemption from registration or qualification requirements is available and is complied with.

LEGAL MATTERS

Unless the applicable prospectus supplement indicates otherwise, the validity of the securities being offered by this prospectus will be passed upon by Kirkland & Ellis LLP, New York, New York. Additional legal matters may be passed upon for us or any underwriters, dealers or agents by counsel that we will name in the applicable prospectus supplement.

EXPERTS

The financial statements incorporated by reference in this prospectus and elsewhere in the registration statement have been so incorporated by reference in reliance of the report of Grant Thornton LLP, independent registered public accountants, upon the authority of said firm as experts in accounting and auditing.

Up to \$150,000,000 Shares of Common Stock

BigBear.ai Holdings, Inc.

PROSPECTUS SUPPLEMENT

Cantor

June 2, 2025
