UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-3 REGISTRATION STATEMENT UNDER

THE SECURITIES ACT OF 1933

BIGBEAR.AI HOLDINGS, INC.

(Exact name of registrant as specified in its charter)

Delaware (State or other jurisdiction of incorporation or organization) 85-4164597 (I.R.S. Employer Identification No.)

6811 Benjamin Franklin Drive, Suite 200 Columbia, Maryland 21046 (410) 312-0885

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

Julie Peffer Chief Financial Officer 6811 Benjamin Franklin Drive, Suite 200 Columbia, Maryland 21046

(410) 312-0885

(Name, address, including zip code, and telephone number, including area code, of agent for service)

Copy to:

A. Peter Harwich, Esq. Reza K. Mojtabaee-Zamani, Esq. Latham & Watkins LLP 1271 Avenue of the Americas New York, New York 10020 (212) 906-1200

Approximate date of commencement of proposed sale to the public: From time to time after this Registration Statement becomes effective.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box: If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box:

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering:

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering: \Box

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box:

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box:

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or emerging growth company. See the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer \Box

Non-accelerated filer

Accelerated filer

Smaller reporting company \Box

Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 7(a)(2)(B) of the Securities Act.

The registrant (the "Registrant") hereby amends this registration statement (the "Registration Statement") on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933 or until this Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

The information in this preliminary prospectus is not complete and may be changed. These securities may not be issued until the registration statement filed with the U.S. Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell these securities and does not constitute the solicitation of an offer to buy these securities in any jurisdiction where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED JANUARY 15, 2025

PRELIMINARY PROSPECTUS

BIGBEAR.AI HOLDINGS, INC.

Up to 161,676,020 Shares of Common Stock

This prospectus relates solely to the resale from time to time of up to an aggregate of 161,676,020 shares of our common stock, par value \$0.0001 per share ("*Common Stock*"), by the selling stockholders identified in this prospectus and the selling stockholders to be named in a prospectus supplement (the "*Selling Stockholders*," which term as used in this prospectus includes assignees).

On December 19, 2024, we entered into privately negotiated exchange agreements (each, an *Exchange Agreement*") with certain of the Selling Stockholders, pursuant to which we issued to certain of the Selling Stockholders approximately \$182.3 million principal amount of our new 6.00% Convertible Senior Secured Notes due 2029 (the *"2029 Notes"*) and paid approximately \$0.4 million in cash, with such cash payment representing the accrued and unpaid interest on the Selling Stockholders' existing 6.00% Convertible Senior Notes due 2026 (the *"2026 Notes"*) in exchange for approximately \$182.3 million principal amount of the 2026 Notes. The shares of Common Stock that may be offered under this prospectus consist of (i) up to 65,711,809 shares of Common Stock that are issuable upon the conversion of the 2029 Notes that the Company may elect to settle in shares of Common Stock, and (ii) up to 95,964,211 shares of Common Stock that we may issue from time to time in lieu of cash to pay interest on the 2029 Notes.

We are registering the shares of Common Stock for resale pursuant to the Exchange Agreements. We will not receive any proceeds from the sale of the shares of Common Stock by the Selling Stockholders pursuant to this prospectus. However, any shares of Common Stock issued upon conversion of the 2029 Notes or to pay interest on the 2029 Notes will reduce the amount of cash that we would otherwise have been required to pay to satisfy our obligations under the 2029 Notes. In addition, we will pay certain expenses associated with the registration of the shares of Common Stock covered by this prospectus, as described in the section entitled "*Plan of Distribution*." The Selling Stockholders will bear all commissions and discounts, if any, attributable to their sales of the shares of Common Stock.

The Selling Stockholders may offer such shares from time to time as it may determine through public or private transactions or through other means described in the section entitled "*Plan of Distribution*" at prevailing market prices, at prices related to prevailing market prices or at privately negotiated prices. This prospectus does not necessarily mean that the Selling Stockholders will offer or sell the shares. We cannot predict when or in what amounts the Selling Stockholders may sell any of the shares offered by this prospectus.

Because all of the shares offered under this prospectus are being offered by the Selling Stockholders, we cannot currently determine the price or prices at which our shares may be sold under this prospectus.

You should read this prospectus and any prospectus supplement or amendment carefully before you invest in our securities. Our Common Stock is listed on The New York Stock Exchange ("*NYSE*") under the symbol "*BBA1*." On January 14, 2025, the closing sale price of our Common Stock was \$3.18.

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 risks. See "<u>Risk Factors</u>" on page 4, and any applicable prospectus supplement, and under similar headings in the other documents that are incorporated by reference into this prospectus.

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

The date of this prospectus is , 2025.

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You should rely only on the information contained in this prospectus. No one has been authorized to provide you with information that is different from that contained in this prospectus. We take no responsibility for, and can provide no assurances as to the reliability of, any other information that others may give you. This prospectus is dated as of the date set forth on the cover hereof. You should not assume that the information contained in this prospectus is accurate as of any date other than that date.

For investors outside the United States: We have not done anything that would permit this offering or possession or distribution of this prospectus in any jurisdiction where action for that purpose is required, other than in the United States. You are required to inform yourselves about and to observe any restrictions relating to this offering and the distribution of this prospectus.

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ABOUT THIS PROSPECTUS

This prospectus is a 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 shelf registration process, the Selling Stockholders may, from time to time, sell the shares of Common Stock offered by them described in this prospectus. We will not receive any proceeds from the sale by such Selling Stockholders of the Common Stock pursuant to this prospectus.

This prospectus does not include all of the information that is in the registration statement. We omitted certain parts of the registration statement from this prospectus as permitted by the SEC. We refer you to the registration statement and its exhibits for additional information about us and the securities that may be sold under this prospectus.

Neither we nor the Selling Stockholders have authorized anyone to provide you with any information or to make any representations other than those contained in this prospectus or any applicable prospectus supplement or any free writing prospectus prepared by or on behalf of us or to which we have referred you. Neither we nor the Selling Stockholders take responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. Neither we nor the Selling Stockholders will make an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should not assume that the information contained in or incorporated by reference in this prospectus is accurate as of any date other than the respective dates of such document. Our business, financial condition, results of operations and prospects may have changed since those dates.

We may also provide a prospectus supplement or post-effective amendment to the registration statement to add information to, or update or change information contained in, this prospectus. You should read both this prospectus and any applicable prospectus supplement or post-effective amendment to the registration statement together with the additional information to which we refer you in the section of this prospectus entitled "*Where You Can Find More Information; Incorporation by Reference.*"

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

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

Certain statements included in this prospectus and the exhibits hereto 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," "seek," "future," "outlook," and similar expressions that predict or indicate future events 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 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 our 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;
- · changes in domestic and foreign business, market financial, political and legal conditions;
- 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;
- 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;
- 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 and epidemics, such as the coronavirus outbreak;
- increased or unexpected costs or unanticipated delays caused by other factors outside of our control, such as performance failures of our subcontractors;
- 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;

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- 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;
- 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;
- our ability to integrate and realize the expected synergies on the recent acquisition of Pangiam Intermediate Holdings, LLC (Pangiam"); 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. 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 Form10-K for the period ended December 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; Incorporation by Reference.*" 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.

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WHERE YOU CAN FIND MORE INFORMATION; INCORPORATION BY REFERENCE

Available Information

We file reports, proxy statements and other information with the SEC. The SEC maintains a web site that contains reports, proxy and information statements and other information about issuers, such as us, who file electronically with the SEC. The address of that website is *http://www.sec.gov*.

Our web site address is ir.bigbear.ai. The information on our web site, however, is not, and should not be deemed to be, a part of this prospectus.

This prospectus and any prospectus supplement are part of a registration statement that we filed with the SEC and do not contain all of the information in the registration statement. The full registration statement may be obtained from the SEC or us, as provided below. Other documents establishing the terms of the offered securities are or may be filed as exhibits to the registration statement or documents incorporated by reference in the registration statement. Statements in this prospectus or any prospectus supplement about these documents are summaries and each statement is qualified in all respects by reference to the document to which it refers. You should refer to the actual documents for a more complete description of the relevant matters. You may inspect a copy of the registration statement through the SEC's website, as provided above.

Incorporation by Reference

The SEC's rules allow us to "incorporate by reference" information into this prospectus, which means that we can disclose important information to you by referring you to another document filed separately with the SEC. The information incorporated by reference is deemed to be part of this prospectus, and subsequent information that we file with the SEC will automatically update and supersede that information. Any statement contained in this prospectus or a previously filed document incorporated by reference will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or a subsequently filed document incorporated by reference modifies or replaces that statement.

This prospectus and any accompanying prospectus supplement incorporate by reference the documents set forth below that have previously been filed with the SEC:

- our Annual Report on Form 10-K for the year ended December 31, 2023, as filed with the SEC on March 15, 2024;
- the information specifically incorporated by reference into the Annual Report on Form10-K for the year ended December 31, 2023 from the Definitive Proxy Statement on <u>Schedule 14A</u>, filed with the SEC on March 26, 2024;
- our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2024, June 30, 2024 and September 30, 2024, as filed with the SEC on May 10, 2024, August 9, 2024 and November 7, 2024, respectively;
- our Current Reports on Form 8-K filed with the SEC on <u>February 22, 2024</u> (File/Film No. 001-40031 24662532), <u>February 22, 2024</u> (File/Film No. 001-40031 24665014), <u>February 27, 2024</u>, <u>February 28, 2024</u>, <u>March 1, 2024</u>, <u>March 5, 2024</u>, <u>March 27, 2024</u>, <u>March 28, 2024</u>, <u>June 3, 2024</u>, <u>October 4, 2024</u>, <u>December 19, 2024</u>, <u>December 30, 2024</u> and <u>January 15, 2025</u> (in each case excluding any information furnished but not filed in such reports);
- the description of our securities contained in our Annual Report on Form 10-K for the year ended December 31, 2021, as filed with the SEC on March 31, 2022, including any amendment or report filed for the purpose of updating such description.

All reports and other documents we subsequently file pursuant to Section 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), prior to the termination of this offering,

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including all such documents we may file with the SEC after the date of the initial registration statement and prior to the effectiveness of the registration statement, but excluding any information furnished to, rather than filed with, the SEC, will also be incorporated by reference into this prospectus and deemed to be part of this prospectus from the date of the filing of such reports and documents.

You may request a free copy of any of the documents incorporated by reference in this prospectus 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

Exhibits to the filings will not be sent, however, unless those exhibits have specifically been incorporated by reference in this prospectus or any accompanying prospectus supplement.

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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

Our mission is to help deliver clarity for the world's most complex decisions. We are a leading provider of EdgeAI-powered decision intelligence solutions for national security, supply chain management, and digital identity. Customers and partners rely on our predictive analytics capabilities in highly complex, distributed, mission-based operating environments. We are a technology-led solutions organization, providing both software and services to our customers.

Business Overview

We are a leader in the use of Artificial Intelligence and Machine Learning 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 our resources to supplement their technical and operational staff for long-term engagements as well.

With the addition of Pangiam, we accelerate and evolved in three markets: national security, supply chain management, and digital identity. Each of these markets are expected to experience double digit growth in the coming years as they embrace and operationalize advanced technologies like artificial intelligence in highly distributed environments.

Stock Exchange Listing

Our Common Stock is listed on the NYSE under the symbol "BBAI."

Corporate Information

We are 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 <u>https://bigbear.ai</u>. 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

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
Issuer	BigBear.ai Holdings, Inc.
Shares of Common Stock offered and sold from time to time by the Selling Stockholders	Up to 161,676,020 shares of Common Stock consisting of (i) up to 65,711,809 shares of Common Stock that are issuable upon the conversion of the 2029 Notes held by the Selling Stockholders, including shares of Common Stock issuable with respect to make-whole amounts due upon conversion of the 2029 Notes that the Company may elect to settle in shares of Common Stock, and (ii) up to 95,964,211 shares of Common Stock that we may issue from time to time in lieu of cash to pay interest on the 2029 Notes.
Use of proceeds	While any shares of Common Stock issued upon conversion of the 2029 Notes or to pay interest on the 2029 Notes will reduce the amount of cash that we would otherwise have been required to pay to satisfy our obligations under the 2029 Notes, we will not receive any proceeds from the sale of shares of Common Stock by the Selling Stockholders. See "Use of Proceeds."
Stock Exchange listing	Our Common Stock is listed on the NYSE under the symbol "BBAI."
Risk factors	Investment in any shares of Common Stock offered by this prospectus and any applicable prospectus supplement involves risks. Before deciding whether to invest in our Common Stock, you should carefully consider the risk factors incorporated by reference to our most recent Annual Report on Form 10-K and any subsequent Quarterly Reports on Form 10-Q or Current Reports on Form 8-K, and all other information contained or incorporated by reference into this prospectus, as updated by our subsequent filings under the Exchange Act, and the risk factors and other information contained in the applicable prospectus supplement and any applicable free writing prospectus. The occurrence of any of these risks might cause you to lose all or part of your investment in our Common Stock. There may be other unknown or unpredictable economic, business, competitive, regulatory or other factors that could have material adverse effects on our future results. Past financial performance may not be a reliable indicator of future periods. If any of these risks actually occurs, our business, financial condition, results of operations or cash flow could be seriously harmed. This could cause the trading price of our Common Stock to decline, resulting in a loss of all or part of your investment. Please also carefully read the section entitled "Cautionary Note Regarding Forward-Looking Statements" included in our most recent Annual Report on Form 10-K and any subsequent Quarterly Reports on Form 10-Q or Current Reports on Form 8-K.

RISK FACTORS

Investment in any shares of Common Stock offered by this prospectus and any applicable prospectus supplement involves risks. Before deciding whether to invest in our Common Stock, you should carefully consider the risk factors incorporated by reference to our most recent Annual Report on Form 10-K and any subsequent Quarterly Reports on Form 10-Q or Current Reports on Form 8-K, and all other information contained or incorporated by reference into this prospectus, as updated by our subsequent filings under the Exchange Act, and the risk factors and other information contained in the applicable prospectus supplement and any applicable free writing prospectus. The occurrence of any of these risks might cause you to lose all or part of your investment in our Common Stock. There may be other unknown or unpredictable economic, business, competitive, regulatory or other factors that could have material adverse effects on our future results. Past financial performance may not be a reliable indicator of future performance, and historical trends should not be used to anticipate results or trends in future periods. If any of these risks actually occurs, our business, financial condition, results of operations or cash flow could be seriously harmed. This could cause the trading price of our Common Stock to decline, resulting in a loss of all or part of your investment. Please also carefully read the section entitled "Cautionary Note Regarding Forward-Looking Statements" included in our most recent Annual Report on Form 8-K.

USE OF PROCEEDS

All of the Common Stock offered by the Selling Stockholders pursuant to this prospectus will be sold by the Selling Stockholders for its own account. While any shares of Common Stock issued upon conversion of the 2029 Notes or to pay interest on the 2029 Notes will reduce the amount of cash that we would otherwise have been required to pay to satisfy our obligations under the 2029 Notes, we will not receive any of the proceeds from these sales.

The Selling Stockholders will pay any underwriting fees, discounts, selling commissions, stock transfer taxes and certain legal expenses incurred by such Selling Stockholders in disposing of its shares of Common Stock, and we will bear all other costs, fees and expenses incurred in effecting the registration of the shares of Common Stock offered by this prospectus, including, without limitation, all registration and filing fees, NYSE listing fees and fees and expenses of our counsel and our independent registered public accountants.

SELLING STOCKHOLDERS

This prospectus relates to the resale by the Selling Stockholders from time to time of up to 161,676,020 shares of Common Stock held by the Selling Stockholders, which shares consist of (i) up to 65,711,809 shares of Common Stock that are issuable upon the conversion of the 2029 Notes held by the Selling Stockholders, including shares of Common Stock issuable with respect to make-whole amounts due upon conversion of the 2029 Notes that the Company may elect to settle in shares of Common Stock, and (ii) up to 95,964,211 shares of Common Stock that we may issue from time to time in lieu of cash to pay interest on the 2029 Notes.

The Selling Stockholders may from time to time offer and sell any or all of the Common Stock set forth below pursuant to this prospectus and any accompanying prospectus supplement. When we refer to the "Selling Stockholders" in this prospectus, we mean the person listed in the table below and the selling stockholders to be named in a prospectus supplement, and the assignees who later come to hold any of the Selling Stockholders' interest in the Common Stock other than through a public sale.

The following table sets forth, as of the date of this prospectus, the name of certain of the Selling Stockholders, the aggregate number of shares of Common Stock beneficially owned, the aggregate number of shares of Common Stock that certain of the Selling Stockholders may offer pursuant to this prospectus and the number of shares of Common Stock beneficially owned by certain of the Selling Stockholders after the sale of the shares of Common Stock offered by this prospectus. We have based percentage ownership on 251,554,378 shares of Common Stock outstanding as of December 31, 2024.

We have determined beneficial ownership in accordance with the rules of the SEC and the information is not necessarily indicative of beneficial ownership for any other purpose. Unless otherwise indicated below, to our knowledge, the persons and entities named in the table have sole voting and sole investment power with respect to all securities that they beneficially own, subject to community property laws where applicable.

We cannot advise you as to whether the Selling Stockholders will in fact receive or sell any or all of such Common Stock. The number of shares of our Common Stock issuable to the Selling Stockholders may be subject to certain limitations under the indenture governing the 2029 Notes, including for purposes of our compliance with the listing standards of the NYSE and for purposes of a Selling Stockholder limiting their beneficial ownership of our Common Stock to certain specified thresholds. In addition, the Selling Stockholders may sell, transfer or otherwise dispose of, at any time and from time to time, the Common Stock in transactions exempt from the registration requirements of the Securities Act after the date of this prospectus. For purposes of this table, we have assumed that the Selling Stockholders will have sold all of the shares of Common Stock covered by this prospectus upon the completion of the offering.

Selling Stockholder information for each additional Selling Stockholder, if any, will be set forth by prospectus supplement to the extent required prior to the time of any offer or sale of such Selling Stockholder's shares pursuant to this prospectus. Any prospectus supplement may add, update, substitute, or change the information contained in this prospectus, including the identity of each Selling Stockholder and the number of shares registered on its behalf. A Selling Stockholder may sell or otherwise transfer all, some or none of such shares in this offering. See "*Plan of Distribution*."

	Shares Beneficially Owned Prior to the Offering		Shares Being	Shares Beneficially Own After the Offering	
Name of Selling Stockholders	Shares(1)	% (1)	Offered ⁽²⁾	Shares(1)(2)	% (1)(2)
1992 Master Fund Co - Invest SPC - Series 4 Segregated Portfolio ⁽³⁾	2,839,255	1.12%	2,837,479	1,776	*
Acasta Global Master Fund ⁽⁴⁾	9,884,182	3.78%	9,884,182		
DBSO TRG Fund (A) L.P. ⁽⁵⁾	105,864	*	105,864		
Drawbridge DSO Securities LLC ⁽⁶⁾	3,095,383	1.22%	3,095,383		
Drawbridge OSO Securities LLC ⁽⁷⁾	483,959	*	483,959	—	—

	Shares Beneficially Owned Prior to the Offering		Shares Being	Shares Beneficially Owned After the Offering	
Name of Selling Stockholders	Shares(1)	% (1)	Offered ⁽²⁾	Shares(1)(2)	%(1)(2)
Fortress Vintage Securities Fund L.P. ⁽⁸⁾	185,294	*	185,294		
Highbridge Tactical Credit Institutional Fund, Ltd. ⁽⁹⁾	5,421,920	2.11%	5,408,945	12,975	*
Highbridge Tactical Credit Master Fund, L.P. ⁽¹⁰⁾	31,102,033	11.0%	31,083,698	18,335	*
LMR CCSA Master Fund ⁽¹¹⁾	4,433,561	1.73%	4,433,561	_	—
LMR Multi-Strategy Master Fund ⁽¹¹⁾	4,433,561	1.73%	4,433,561	_	—
Marathon Bluegrass Credit Fund LP ⁽¹²⁾	2,744,374	1.08%	2,744,374	_	—
Marathon Centre Street Partnership LP ⁽¹²⁾	7,003,253	2.71%	7,003,253	_	—
Osterweis Growth and Income Fund ⁽¹³⁾	576,363	*	576,363	_	—
Osterweis Strategic Income Fund ⁽¹³⁾	25,138,293	9.09%	25,138,293	_	—
TRS Credit Fund LP ⁽¹²⁾	2,666,344	1.05%	2,666,344	—	—

* Less than 1%

- (1) For purposes of this table, we have assumed a conversion rate of 281.4491 shares of Common Stock for each \$1,000 in principal amount of the 2029 Notes; however, this conversion rate is subject to adjustment upon the occurrence of certain specified events as set forth in the indenture governing the 2029 Notes. In addition, we have assumed that all conversions of the 2029 Notes are settled in shares of our Common Stock, and that all future interest payments on the Convertible Secured Notes due 2029 are paid in-kind with shares of our Common Stock at the minimum share price set forth in the indenture governing the 2029 Notes, with the maximum possible make-whole amount due upon conversion of any 2029 Notes settled in shares of our Common Stock. If any of the foregoing assumptions is incorrect, the number of shares of Common Stock issuable upon conversion of the 2029 Notes may decrease. For purposes of this table, we have also displayed numbers without giving effect to any beneficial ownership or other limitations contained in the documents governing the 2026 Notes or the 2029 Notes.
- (2) The Selling Stockholders have not informed us, and we do not know, when or in what amounts the Selling Stockholders may offer or sell pursuant to this prospectus the shares of Common Stock, if any, that they may receive pursuant to conversion of the 2029 Notes, including with respect to makewhole amounts due upon conversion, or as payment of interest on the 2029 Notes. Assumes all such shares of Common Stock are sold by each applicable Selling Stockholder.
- (3) Includes 1,776 shares issuable upon the conversion of 2026 Notes. For purposes of calculating such shares, we have assumed a conversion rate of 94.223 shares of Common Stock for each \$1,000 in principal amount of the 2026 Notes; however, this conversion rate is subject to adjustment upon the occurrence of certain specified events as set forth in the indenture governing the 2026 Notes. The shares are held by 1992 Master Fund Co— Invest SPC—Series 4 Segregated Portfolio (the "1992 Fund"). Highbridge Capital Management, LLC ("HCM"), a Delaware LLC, is the trading manager of the 1992 Fund. Jonathan Segal and Jason Hempel are responsible for the investment and voting decisions made by HCM with respect to these shares held by the 1992 Fund. The 1992 Fund and the foregoing individuals disclaim beneficial ownership over these shares. The business address of HCM is 277 Park Avenue, 23rd Floor, New York, NY 10172, and the address of the 1992 Fund is c/o Maples Corporate Services Limited #309 Ugland House, South Church Street, George Town, Grand Cayman KY1-1104, Cayman Islands.
- (4) Consists of 10,354,778 shares of Common Stock which would be received upon conversion of the 2029 Notes or as payment of interest on the 2029 Notes. The Shares of Common Stock listed above are held directly by Acasta Global Master Fund. Pursuant to an Investment Management Agreement and a Sub-Investment Management Agreement, respectively, Acasta Partners US and Acasta Partners UK have voting and dispositive power over the Shares of Common Stock held by Acasta Global Master Fund. TFG Asset Management US LP is registered to do business as Acasta Partners US and Acasta Partners UK is part of TFG Asset Management UK LLP, which is authorized and regulated by the Financial Conduct Authority of the United Kingdom. Michael J. Humphries is the Chief Investment Officer of Acasta Partners US and Acasta Partners UK with respect to Acasta Global Master Fund. He thereby exercises voting and dispositive

power over the Shares of Common Stock by Acasta Global Master Fund. Acasta Partners US and Acasta Partners UK are part of TFG Asset Management L.P., a subsidiary of Tetragon Financial Group Limited. TFG Asset Management US LP, TFG Asset Management UK LLP, TFG Asset Management L.P. and Tetragon Financial Group Limited are ultimately controlled by Reade Griffith and Patrick Dear. The address of Acasta Global Master Fund is c/o Maples Corporate Services Limited, PO Box 309, Ugland House, Grand Cayman, KY1-1104 Cayman Islands.

- (5) DBSO TRG Fund (A) Advisors LLC ("TRG Advisors"), is the investment manager of DBSO TRG Fund (A) L.P. ("TRG") and TRG's general partner is DBSO TRG Fund (A) GP LLC ("TRG GP"). As the Co-Chief Investment Officers of TRG Advisors and TRG GP, each of Peter L. Briger, Jr., Dean Dakolias, Drew McKnight and Joshua Pack participates in the voting and investment decisions with respect to the 2029 Notes held by TRG, but each of them disclaims beneficial ownership thereof. The business address of each of the foregoing entities and persons is 1345 Avenue of the Americas, 46th Floor, New York, New York 10105.
- (6) Drawbridge Special Opportunities Advisors LLC ("DSO Advisors"), is the investment manager of Drawbridge Special Opportunities Fund LP, which owns Drawbridge DSO Securities LLC ("DSO"). As the Co-Chief Investment Officers of DSO Advisors, each of Peter L. Briger, Jr., Dean Dakolias, Drew McKnight and Joshua Pack participates in the voting and investment decisions with respect to the 2029 Notes held by DSO, but each of them disclaims beneficial ownership thereof. The business address of each of the foregoing entities and persons is 1345 Avenue of the Americas, 46th Floor, New York, New York 10105.
- (7) Drawbridge Special Opportunities Advisors LLC ("OSO Advisors"), is the investment manager of Drawbridge Special Opportunities Fund LP, which owns Drawbridge OSO Securities LLC ("OSO"). As the Co-Chief Investment Officers of OSO Advisors, each of Peter L. Briger, Jr., Dean Dakolias, Drew McKnight and Joshua Pack participates in the voting and investment decisions with respect to the 2029 Notes held by OSO, but each of them disclaims beneficial ownership thereof. The business address of each of the foregoing entities and persons is 1345 Avenue of the Americas, 46th Floor, New York, New York 10105.
- (8) Fortress Vintage Securities Fund Advisors LLC ("Vintage Advisors"), is the investment manager of Fortress Vintage Securities Fund LP ("Vintage") and Fortress Vintage Securities Fund GP LLC ("Vintage GP") is the general partner of Vintage. As the Co-Chief Investment Officers of Vintage Advisors and Vintage GP, each of Peter L. Briger, Jr., Dean Dakolias, Drew McKnight and Joshua Pack participates in the voting and investment decisions with respect to the 2029 Notes held by Vintage, but each of them disclaims beneficial ownership thereof. The business address of each of the foregoing entities and persons is 1345 Avenue of the Americas, 46th Floor, New York, New York 10105.
- (9) Includes 12,975 shares issuable upon the conversion of 2026 Notes. For purposes of calculating such shares, we have assumed a conversion rate of 94.223 shares of Common Stock for each \$1,000 in principal amount of the 2026 Notes; however, this conversion rate is subject to adjustment upon the occurrence of certain specified events as set forth in the indenture governing the 2026 Notes. The shares are held by Highbridge Tactical Credit Institutional Fund, Ltd. (the "Institutional Fund"). Highbridge Capital Management, LLC ("HCM"), a Delaware LLC, is the trading manager of the Institutional Fund. Jonathan Segal and Jason Hempel are responsible for the investment and voting decisions made by HCM with respect to these shares held by the Institutional Fund. The Institutional Fund and the foregoing individuals disclaim beneficial ownership over these shares. The business address of HCM is 277 Park Avenue, 23rd Floor, New York, NY 10172, and the address of the Institutional Fund is c/o Maples Corporate Services Limited, #309 Ugland House, South Church Street, George Town, Grand Cayman KY1-1104, Cayman Islands.
- (10) Includes 18,335 shares issuable upon the conversion of 2026 Notes. For purposes of calculating such shares, we have assumed a conversion rate of 94.223 shares of Common Stock for each \$1,000 in principal amount of the 2026 Notes; however, this conversion rate is subject to adjustment upon the occurrence of certain specified events as set forth in the indenture governing the 2026 Notes. The shares are held by Highbridge Tactical Credit Master Fund, L.P. (the "Tactical Credit Fund"). Highbridge Capital Management, LLC ("HCM"), a Delaware LLC, is the trading manager of the Tactical Credit Fund. Jonathan Segal and Jason Hempel are responsible for the investment and voting decisions made by HCM with respect to these shares

held by the Tactical Credit Fund. The Tactical Credit Fund and the foregoing individuals disclaim beneficial ownership over these shares. The business address of HCM is 277 Park Avenue, 23rd Floor, New York, NY 10172, and the address of the Tactical Credit Fund is c/o Maples Corporate Services Limited, #309 Ugland House, South Church Street, George Town, Grand Cayman KY1-1104, Cayman Islands.

- (11) LMR Partners LLP ("LMR Partners") is the investment manager of LMR CCSA Master Fund Limited and LMR Master Fund Limited (together, the "LMR Securityholders"). Vincent Olekhnovitch is a portfolio manager of LMR Partners, and Pearse Griffith, Benjamin Levine, Torsten de Santos and Mark Eberle are directors of the LMR Securityholders, and, accordingly, they have shared voting and dispositive power of the 2029 Notes held by the LMR Securityholders. The address of LMR Partners is 9th Floor, Devonshire House, 1 Mayfair Place, London W1J 8AJ, United Kingdom. The address of the LMR Securityholders is P.O. Box 309, Ugland House, George Town, Grand Cayman KY1-1104, Cayman Islands.
- (12) Marathon Asset Management, L.P. is the manager of Marathon Blue Grass Credit Fund LP, Marathon Centre Street Partnership LP and TRS Credit Fund LP. The general partner of Marathon Asset Management, L.P. is Marathon Asset Management GP, L.L.C. Bruce Richards and Louis Hanover are the managing members of Marathon Asset Management GP, L.L.C.; however, this shall not be deemed to be an admission that any of the foregoing entities nor Messrs. Richards or Hanover are the beneficial owners of the 2029 Notes reported herein for purposes of Section 13 of the Securities Exchange Act of 1934, or for any other purpose. The business address of the foregoing persons and entities is One Bryant Park, 38th Floor, New York, New York 10036.
- (13) The 603,804 shares of Common Stock reflected above with respect to The Osterweis Growth are issuable upon the conversion of \$650,000 principal amount of the 2029 Notes (assuming a conversion rate of 281.4491 shares of Common Stock for each \$1,000 in principal amount of the 2029 Notes) and up to 342,105 shares of Common Stock that may be issued by the Company from time to time in lieu of cash to pay interest on the 2029 Notes. The 26,335,153 shares of Common Stock reflected above with respect to The Osterweis Strategic Income Fund are issuable upon the conversion of \$28,350,000 principal amount of the 2029 Notes (assuming a conversion rate of 281.4491 shares of Common Stock for each \$1,000 in principal amount of the 2029 Notes (assuming a conversion rate of 281.4491 shares of Common Stock for each \$1,000 in principal amount of the 2029 Notes (assuming a conversion rate of 281.4491 shares of Common Stock for each \$1,000 in principal amount of the 2029 Notes (assuming a conversion rate of 281.4491 shares of Common Stock for each \$1,000 in principal amount of the 2029 Notes (assuming a conversion rate of 281.4491 shares of Common Stock for each \$1,000 in principal amount of the 2029 Notes (assuming a conversion rate of 281.4491 shares of Common Stock for each \$1,000 in principal amount of the 2029 Notes. Such 26,938,957 shares are covered by the registration statement of which this prospectus is a part and, based on the relative holdings of The Osterweis Growth and Income Fund and The Osterweis Strategic Income Fund, would be apportioned as follows: 2.2% (603,804 shares) to The Osterweis Strategic Income Fund and 97.8% (26,335,153 shares) to The Osterweis Strategic Investment Fund.

PLAN OF DISTRIBUTION

The Selling Stockholders and any of its transferees, pledgees, assignees and successors-in-interest may, from time to time, sell, transfer or otherwise dispose of any or all of their shares of Common Stock covered by this prospectus on the NYSE or any other stock exchange, market or trading facility on which our Common Stock is traded or in private transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale or at negotiated prices.

The Selling Stockholders may use any one or more of the following methods when disposing of their shares of our Common Stock:

- 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;
- settlement of short sales;
- in transactions through broker-dealers that agree with the Selling Stockholders to sell a specified number of such shares at a stipulated price per security;
- through the writing or settlement of options or other hedging transactions, whether through an options exchange or otherwise;
- distribution to members, limited partners or stockholders of Selling Stockholders;
- "at the market" or through market makers or into an existing market for the shares;
- a combination of any such methods of sale; and
- any other method permitted pursuant to applicable law.

The Selling Stockholders may also sell shares of Common Stock under Rule 144 or any other exemption from registration under the Securities Act, if available, rather than under this prospectus. Broker-dealers engaged by the Selling Stockholders may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the Selling Stockholders (or, if any broker-dealer acts as agents for the purchaser of shares of Common Stock, from the purchaser) in amounts to be negotiated, but, except as set forth in a supplement to this prospectus, in the case of an agency transaction not in excess of a customary brokerage commission in compliance with the Financial Industry Regulatory Authority's ("*FINRA*") Rule 2121; and in the case of a principal transaction a markup or markdown in compliance with FINRA Rule 2121.

The Selling Stockholders may pledge or grant a security interest in some or all of the shares of Common Stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell their shares under this prospectus, or under an amendment to this prospectus under Rule 424(b) or other applicable provision of the Securities Act amending the list of Selling Stockholders to include the pledgee, transferee or other successors in interest as Selling Stockholders under this prospectus. The Selling Stockholders also may transfer their securities in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

In connection with the sale of the shares of Common Stock or interests therein, the Selling Stockholders may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage

in short sales of Common Stock in the course of hedging the positions they assume. The Selling Stockholders may also sell their shares of Common Stock short and deliver their shares of Common Stock to close out their short positions, or loan or pledge the shares of Common Stock to broker-dealers that in turn may sell these shares of Common Stock. The Selling Stockholders may also enter into option or other transactions with broker-dealers or other financial institutions or create one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares of Common Stock offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The Selling Stockholders and any broker-dealers or agents that are involved in selling the shares of Common Stock may be deemed to be "underwriters" within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the shares of Common Stock purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. Each Selling Stockholders has informed us that it does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the shares.

To the extent required, our Common Stock to be sold, the respective purchase prices and public offering prices, the names of any agent, dealer or underwriter, and any applicable discounts, commissions, concessions or other compensation with respect to a particular offer will be set forth in an accompanying prospectus supplement or, if appropriate, a post-effective amendment to the prospectus that includes this prospectus.

To facilitate an offering of the securities, certain persons participating in the offering may engage in transactions that stabilize, maintain, or otherwise affect the price of the securities. This may include over-allotments or short sales of the securities, which involves the sale by persons participating in the offering of more securities than we sold to them. In these circumstances, these persons would cover the over-allotments or short positions by making purchases in the open market or by exercising their over-allotment option. In addition, these persons may stabilize or maintain the price of the securities by bidding for or purchasing securities in the open market or by imposing penalty bids, whereby selling concessions allowed to dealers participating in the offering may be reclaimed if securities sold by them are repurchased in connection with stabilization transactions. The effect of these transactions may be to stabilize or maintain the market price of the securities at a level above that which might otherwise prevail in the open market. These transactions may be discontinued at any time.

A Selling Stockholder that is an entity may elect to make anin-kind distribution of Common Stock to its members, partners or stockholders pursuant to the registration statement of which this prospectus is a part by delivering a prospectus. To the extent that such members, partners or stockholders are not affiliates of ours, such members, partners or stockholders would thereby receive freely tradable Common Stock pursuant to the distribution through a registration statement.

We are required to pay certain fees and expenses incurred by us incident to the registration of the shares of Common Stock offered by this prospectus. We have agreed to indemnify the Selling Stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

We agreed to use reasonable best efforts to keep the registration statement of which this prospectus forms a part effective until the date on which all of the shares of Common Stock have been sold pursuant to this prospectus or Rule 144 under the Securities Act or any other rule of similar effect. The shares of Common Stock offered by this prospectus will be sold only through registered or licensed brokers or dealers if required under applicable state securities laws. In addition, in certain states, the shares of Common Stock offered by this prospectus may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

Under applicable rules and regulations under the Exchange Act, any person engaged in the distribution of the shares of Common Stock offered by this prospectus may not simultaneously engage in market making activities with respect to the Common Stock for the applicable restricted period, as defined in Regulation M,

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prior to the commencement of the distribution. In addition, the Selling Stockholders will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of the Common Stock by the Selling Stockholders or any other person. We will make copies of this prospectus available to the Selling Stockholders and have informed them of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale (including by compliance with Rule 172 under the Securities Act).

LEGAL MATTERS

The validity of the securities offered hereby will be passed upon for us by Latham & Watkins LLP, New York, New York.

EXPERTS

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

The audited historical financial statements of Pangiam Ultimate Holding, LLC included as Exhibit 99.1 in BigBear.AI Holdings, Inc.'s Current Report on Form 8-K dated March 27, 2024 have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, independent accountants, given on the authority of said firm as experts in auditing and accounting.

PART II INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution.

The following table sets forth an itemized statement of the amounts of all expenses (excluding underwriting discounts and commissions) payable by us in connection with the registration of the Common Stock offered hereby. With the exception of the SEC registration fee, the amounts set forth below are estimates.

Securities and Exchange Commission registration fee	\$ 74,010
Accounting fees and expenses	50,000
Legal fees and expenses	125,000
Financial printing and miscellaneous expenses	12,000
Total	\$ 261,010

Item 15. Indemnification of Directors and Officers.

We are incorporated under the laws of the State of Delaware. Section 145 of the General Corporation Law of the State of Delaware (the 'DGCL'') authorizes a court to award, or a corporation's board of directors to grant, indemnity to directors and officers in terms sufficiently broad to permit such indemnification under certain circumstances for liabilities, including reimbursement for expenses incurred, arising under the Securities Act.

Our charter provides that our directors shall not be liable to us or our stockholders for monetary damages for breach of fiduciary duty as a director, except to the extent such exemption from liability or limitation thereof is not permitted under the DGCL, as amended. Our bylaws provide for indemnification of our directors and officers to the maximum extent permitted by the DGCL.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers or persons controlling us pursuant to the foregoing provisions, we have been informed that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is theretofore unenforceable.

Item 16. Exhibits and Financial Statement Schedules.

The following exhibits are filed as part of this registration statement, including those exhibits incorporated herein by reference to a prior filing of the registrant under the Securities Act or the Exchange Act as indicated in parentheses:

Exhibit	Description
4.1**	Indenture, dated as of December 27, 2024, among BigBear.ai Holdings, Inc., BigBear.ai Intermediate Holdings, LLC, BigBear.ai, LLC,
	BigBear ai Federal, LLC (f/k/a NuWave Solutions, L.L.C.), ProModel, LLC, Pangiam Purchaser, LLC, Pangiam Intermediate II Holdings,
	LLC, Pangiam Holdings, LLC, Pangiam Labs, LLC, Linkware, LLC, Pre, LLC, veriScan LLC, 214 Technologies, Inc. d/b/a Trueface and
	Wilmington Trust, National Association, as trustee and collateral agent. (incorporated by reference to Exhibit 4.2 filed on the Company's
	Current Report on Form 8-K, filed on December 30, 2024).
4.2**	Form of certificate representing the 6.00% Convertible Senior Secured Notes due 2029 (included as Exhibit A to Exhibit 4.1) (incorporated by reference to Exhibit 4.3 filed on the Company's Current Report on Form 8-K, filed on December 30, 2024).
	by reference to Exhibit 4.5 fired on the company's current Report on Form 5-R, fired on December 50, 2024).

5.1* Opinion of Latham & Watkins LLP.

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Exhibit	Description					
23.1*	Consent of Grant Thornton LLP, Independent Registered Public Accounting Firm.					
23.2*	Consent of PricewaterhouseCoopers LLP, Independent Accountants.					
23.3*	Consent of Latham & Watkins LLP (included in Exhibit 5.1).					
24.1*	Power of Attorney (included on signature page).					
107*	Filing Fee Table.					
<u> </u>						

† The annexes, schedules, and certain exhibits to this Exhibit have been omitted pursuant to Item 601(b)(2) of RegulationS-K. The Registrant hereby agrees to furnish supplementally a copy of any omitted annex, schedule or exhibit to the SEC upon request.

* Filed herewith.

** Previously filed.

Item 17. Undertakings.

The undersigned registrant, hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933, as amended;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the SEC pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act to any purchaser, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. *Provided, however*, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or prospectus that was part of the registration statement or prospectus that was part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or prospectus that was part of the registration statement or prospectus that was part of the registration statement or prospectus that was part of the registration statement or prospectus that was part of the registration statement or prospectus that was part of the registration statement or prospectus that was part of the registration statement or prospectus that was part of the registration statement or prospectus that was part of the registration statement or prospectus that was part of the registration statement or prospectus that was part of the registration statement or prospectus that was part of the registration statement or prospectus that was part of the registration statement or prospectus that was part of the registration statement or prospect

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(5) That, for the purpose of determining liability of the registrant under the Securities Act to any purchaser in the initial distribution of the securities, the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

(6) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the SEC such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

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SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in Columbia, Maryland, on the 15th day of January, 2025.

BIGBEAR.AI HOLDINGS, INC.

By: /s/ Sean Ricker

Name: Sean Ricker Title: Chief Accounting Officer

POWER OF ATTORNEY

KNOW ALL BY THESE PRESENTS, that each person whose signature appears below constitutes and appoints Amanda Long, Julie Peffer, Carolyn Blankenship and Sean Ricker or any of them, severally, as his or her attorney-in-fact and agent, with full power of substitution and resubstitution, for such person and in such person's name, place, and stead, in any and all capacities, to sign any and all amendments to this registration statement, and to file the same with all exhibits hereto, and all other documents in connection herewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and any of them, full power and authority to do and perform each and every act and thing requisite or necessary to be done in and about the premises, as fully to all intents and purposes as he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, or their substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this Registration Statement has been signed below by the following persons in the capacities and on the dates indicated.

Name	Title	Date
/s/ Amanda Long Amanda Long	Chief Executive Officer and Director (Principal Executive Officer)	January 15, 2025
/s/ Julie Peffer Julie Peffer	Chief Financial Officer (Principal Financial Officer)	January 15, 2025
/s/ Sean Ricker Sean Ricker	Chief Accounting Officer (Principal Accounting Officer)	January 15, 2025
/s/ Sean Battle Sean Battle	Director	January 15, 2025
/s/ Pamela Braden Pamela Braden	Director	January 15, 2025
/s/ Peter Cannito Peter Cannito	Director, Chair of the Board	January 15, 2025
/s/ Paul Fulchino Paul Fulchino	Director	January 15, 2025

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Name	Title	Date
/s/ Jeffrey Hart Jeffrey Hart	Director	January 15, 2025
/s/ Dorothy D. Hayes Dorothy D. Hayes	Director	January 15, 2025
/s/ Kirk Konert Kirk Konert	Director	January 15, 2025

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LATHAM&WATKINS

January 15, 2025

BigBear.ai Holdings, Inc. 6811 Benjamin Franklin Drive, Suite 200 Columbia, MD 21046

Re: Registration Statement on Form S-3

To the addressee set forth above:

We have acted as special counsel to BigBear.ai Holdings, Inc., a Delaware corporation (the "*Company*"), in connection with the offer and sale from time to time by the selling stockholders named in the Registration Statement (as defined below) of an aggregate of up to 161,676,020 shares of common stock, \$0.0001 par value per share ("*Common Stock*"), consisting of (i) up to 65,711,809 Shares shares of Common Stock that are issuable upon the conversion of the Company's 6.00% Convertible Senior Secured Notes due 2029 held by the selling stockholders (the "*Notes*"), including Common Stock issuable with respect to make-whole amounts due upon conversion of the Notes that the Company may elect to settle in shares of Common Stock (the "*Conversion Shares*") in accordance with the indenture, dated December 27, 2024, among the Company, BigBear.ai Intermediate Holdings, LLC, BigBear.ai, LLC, BigBear.ai Federal, LLC (f/k/a NuWave Solutions, L.L.C.), ProModel, LLC, Pangiam Purchaser, LLC, Pangiam Intermediate II Holdings, LLC, Pangiam Holdings, LLC, Pangiam Labs, LLC, Linkware, LLC, Pre, LLC, veriScan LLC, 214 Technologies, Inc. d/b/a Trueface and Wilmington Trust, National Association, as trustee and collateral agent (the "*Notes Indenture*") and (ii) up to 95,964,211 shares of Common Stock that the Company may size from time to time in lieu of cash to pay interest on the Notes in accordance with the Notes Indenture (the "*Shares*"). The Shares are included in a registration statement on Form S-3 under the Securities Act of 1933, as amended (the "*Act*"), filed with the Securities and Exchange Commission (the "*Commission*") on January 15, 2025 (the "*Registration Statement*").

This opinion is being furnished in connection with the requirements of Item 601(b)(5) of Regulation S-K under the Act, and no opinion is expressed herein as to any matter pertaining to the contents of the Registration Statement or related applicable prospectus (the "*Prospectus*"), other than as expressly stated herein with respect to the issue of the Shares.

As such counsel, we have examined such matters of fact and questions of law as we have considered appropriate for purposes of this letter. With your consent, we have relied upon certificates and other assurances of officers of the Company and others as to factual matters without having independently verified such factual matters. We are opining herein as to the General Corporation Law of the State of Delaware (the "*DGCL*"), and we express no opinion with respect to any other laws.

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LATHAM®WATKINS

Subject to the foregoing and the other matters set forth herein, it is our opinion that, as of the date hereof the Shares issuable in accordance with the Notes Indenture have been duly authorized and, when issued upon conversion of the Notes in accordance with the Notes Indenture, the Conversion Shares will be validly issued, fully paid and non-assessable, and when the Interest Shares shall have been issued to holders of the Notes in accordance with the Notes Indenture, the Interest Shares will be validly issued, fully paid and non-assessable, fully paid and nonassessable. In rendering the foregoing opinion, we have assumed that the Company will comply with all applicable notice requirements regarding uncertificated shares provided in the DGCL.

This opinion is for your benefit in connection with the Registration Statement and may be relied upon by you and by persons entitled to rely upon it pursuant to the applicable provisions of the Act. We consent to your filing this opinion as an exhibit to the Registration Statement and to the reference to our firm in the Prospectus under the heading "Legal Matters." In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Act or the rules and regulations of the Commission thereunder.

Sincerely, /s/ Latham & Watkins LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We have issued our report dated March 15, 2024 with respect to the consolidated financial statements of BigBear.ai Holdings, Inc. included in the Annual Report on Form 10-K for the year ended December 31, 2023, which is incorporated by reference in the Registration Statement. We consent to the use of the aforementioned report in the Registration Statement, and to the use of our name as it appears under the caption "Experts."

/s/ Grant Thornton LLP

Arlington, Virginia January 15, 2025

CONSENT OF INDEPENDENT ACCOUNTANTS

We hereby consent to the incorporation by reference in this Registration Statementon Form S-3 of BigBear.ai Holdings, Inc. of our report dated March 26, 2024 relating to the financial statements of Pangiam Ultimate Holdings, LLC, which appears in BigBear.ai Holdings Inc.'s Current Report on Form 8-K dated March 27, 2024. We also consent to the reference to us under the heading "Experts" in this Registration Statement.

/s/ PricewaterhouseCoopers LLP

Washington, DC

January 15, 2025

Calculation of Filing Fee Tables

FORM S-3

(Form Type)

BigBear.ai Holdings, Inc. (Exact Name of Registrant as Specified in its Charter)

Table 1: Newly Registered and Carry Forward Securities

	Security Type	Security Class Title	Fee Calculation or Carry Forward Rule	Amount Registered (1) Newly Regist	Proposed Maximum Offering Price Per Unit ered Securit	Maximum Aggregate Offering Price	Fee Rate	Amount of Registration Fee	Carry Forward Form Type	File	effective	1
Fees to Be Paid	F ''	Common Stock, par value \$0.0001	Aggregate Offering Amount x	161,676,020			0.0001521	£74.010.27				Γ
Fees Previously Paid	Equity	per share(2) \$0.00	Fee Rate	101,070,020	\$2.99(3)	\$483,411,299.80	0.0001531	\$74,010.27				F
	Total Offering Amounts	\$74,010.27										
	Total Fees Previously Paid	\$0.00										
	Total Fee Offsets:	\$0.00										
	Net Fee Due	\$74,010.27										L

(1) Pursuant to Rule 416(a) under the Securities Act of 1933, as amended (the <u>Securities Act</u>"), there are also being registered an indeterminable number of additional securities as may be issued to prevent dilution resulting from share splits, share dividends or similar transactions.

(2) Represents shares of common stock, par value \$0.0001 per share (<u>Common Stock</u>"), registered for resale by the Selling Stockholders consisting of (i) up to 65,711,809 shares of Common Stock that are issuable upon the conversion of the Registrant's 6.00% Convertible Senior Secured Notes due 2029 (the "2029 Notes") held by the Selling Stockholders, including shares of Common Stock issuable with respect to make-whole amounts due upon conversion of the 2029 Notes that the Company may elect to settle in shares of Common Stock, and (ii) up to 95,964,211 shares of Common Stock that we may issue from time to time in lieu of cash to pay interest on the 2029 Notes

(3) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(c) of the Securities Act. The proposed maximum offering price per share is estimated to be \$2.89, based on the average of the high and low sales prices of the Common Stock as reported by The New York Stock Exchange on January 13, 2025.