

**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
(IRS Employer
Identification No.)

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

Julie Peffer
Chief Financial Officer
7950 Jones Branch Drive
McLean, Virginia 22102
(410) 312-0885

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

Copy to:

A. Peter Harwich, Esq.
Keith L. Halverstan, 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:

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	<input type="checkbox"/>	Accelerated filer	<input checked="" type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input checked="" type="checkbox"/>
		Emerging growth company	<input checked="" type="checkbox"/>

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.

PROSPECTUS

BIGBEAR.AI HOLDINGS, INC.

3,770,000 Shares of Common Stock

This prospectus relates solely to the resale from time to time of up to an aggregate of 3,770,000 shares of our common stock, par value \$0.0001 per share (“*Common Stock*”) by the selling stockholder identified in this prospectus (the “*Selling Stockholder*,” which term as used in this prospectus includes assignees). Such shares consist of 3,770,000 shares of Common Stock (the “*Warrant Shares*”) that are issuable upon the exercise of the common stock purchase warrant acquired by the Selling Stockholder pursuant to the Warrant Exercise Agreements (as defined below).

On February 5, 2025, we entered into a warrant exercise agreement (the “*Warrant Exercise Agreement*”), pursuant to which the Company issued to the Selling Stockholder a common stock purchase warrant to purchase up to an aggregate of 3,770,000 Warrant Shares (the “*Warrant*”) in exchange for the Selling Stockholder exercising an outstanding common stock purchase warrant to purchase up to an aggregate of 5,800,000 shares of Common Stock.

We are registering the Warrant Shares for resale pursuant to the aforementioned Warrant Exercise Agreement. We will not receive any proceeds from the sale of the Warrant Shares by the Selling Stockholder pursuant to this prospectus. However, we will receive proceeds from the exercise of the Warrant *provided* that the Warrant are exercised for cash. We intend to use those proceeds, if any, for general corporate purposes. In addition, we will pay certain expenses associated with the registration of the securities covered by this prospectus, as described in the section entitled “*Plan of Distribution*.” The Selling Stockholder will bear all commissions and discounts, if any, attributable to their sales of the Warrant Shares.

The Selling Stockholder 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 Stockholder will offer or sell the shares. We cannot predict when or in what amounts the Selling Stockholder may sell any of the shares offered by this prospectus. Any shares of Common Stock subject to resale hereunder will have been issued by us and acquired by the Selling Stockholder prior to any resale of such shares pursuant to this prospectus.

Because all of the shares offered under this prospectus are being offered by the Selling Stockholder, 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 “*BBAI*.” On March 26, 2025, the closing sale price of our Common Stock was \$3.19.

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 “[Risk Factors](#)” on page 3, 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 March 27, 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.

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”), as a “well-known seasoned issuer” as defined in Rule 405 under the Securities Act of 1933, as amended, using a “shelf” registration process. Under this shelf registration process, the Selling Stockholder 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 Stockholder of the Warrant Shares pursuant to this prospectus, except with respect to amounts received by us upon the exercise of the Warrant for cash.

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 Stockholder 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 Stockholder 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 Stockholder 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.*”

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 contain forward-looking statements within the meaning of the Securities Act of 1933, as amended (the “Securities Act”), the Securities Exchange Act of 1934, as amended (the “Exchange Act”), and the Private Securities Litigation Reform Act of 1995. All statements contained in this prospectus and the exhibits 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 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 and the respective exhibits. There can be no assurance that future developments affecting us will be those that we have anticipated. 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;
- 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; budgetary constraints, 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;
- 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;
- 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;
- increased or unexpected costs or unanticipated delays caused by other factors outside of our control, such as performance failures of our subcontractors;
- the rollout of the business and the timing of expected business milestones;
- the effects of competition on our future business;
- our ability to obtain and access financing in the future;
- our ability to integrate and realize the expected synergies on the acquisition of Pangiam; 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.*”

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. 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

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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.

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.

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, 2024, as filed with the SEC on March 25, 2025;
- our Current Reports on Form 8-K filed with the SEC on [January 15, 2025](#), [January 16, 2025](#), [February 6, 2025](#), [March 6, 2025](#), [March 18, 2025](#) and [March 27, 2025](#) (in each case excluding any information furnished but not filed in such reports);
- the description of our securities contained in our Registration Statement on [Form 10-K](#), 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, 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.
7950 Jones Branch Drive
McLean, Virginia 22102
(410) 312-0885

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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.

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

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 symbol “BBAI.”

Corporate Information

BigBear.ai is a Delaware corporation. Our principal executive offices are located at BigBear.ai Holdings, Inc., 7950 Jones Branch Drive, 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 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 Stockholder	Up to 3,770,000 shares of Common Stock issuable upon the exercise of the Warrant held by the Selling Stockholder.
Use of proceeds	We will not receive any proceeds from the sale of shares of Common Stock by the Selling Stockholder, except with respect to the amounts received by us upon the exercise of the Warrant to the extent the Warrant is exercised for cash. We intend to use any such proceeds from warrant exercise for general corporate purposes. We do not believe it is likely that the Selling Stockholder would elect to exercise any portion of the Warrant when our Common Stock is trading below \$9.00. See “ <i>Use of Proceeds</i> .”
Market for Common Stock	Our Common Stock is currently traded 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 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 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 10-K and any subsequent Quarterly Reports on Form 10-Q or Current Reports on Form 8-K.

USE OF PROCEEDS

All of the shares of Common Stock offered by the Selling Stockholder pursuant to this prospectus will be sold by the Selling Stockholder for its own account. We will not receive any of the proceeds from these sales except with respect to amounts received by us upon the exercise of the Warrant to the extent the Warrant is exercised for cash. We intend to use any such proceeds for general corporate purposes.

We do not believe it is likely that the Selling Stockholder would elect to exercise the Warrant when our Common Stock is trading below \$9.00. Any cash proceeds that would be received by the Company is dependent on the trading price of the Common Stock underlying the Warrant. We do not believe that the Selling Stockholder's failure to exercise the Warrant for cash would have a material impact on our liquidity, financial position or results of operations.

The Selling Stockholder will pay any underwriting fees, discounts, selling commissions, stock transfer taxes and certain legal expenses incurred by such Selling Stockholder 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 securities covered 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 STOCKHOLDER

This prospectus relates to the resale by the Selling Stockholder from time to time of up to 3,770,000 shares of Common Stock held by the Selling Stockholder, which shares are issuable upon the exercise of the Warrant held by the Selling Stockholder.

The Selling Stockholder 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 Stockholder” in this prospectus, we mean the person listed in the table below, and the assignees who later come to hold any of the Selling Stockholder’s 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 the Selling Stockholder, the aggregate number of shares of Common Stock beneficially owned, the aggregate number of shares of Common Stock that the Selling Stockholder may offer pursuant to this prospectus and the number of shares of Common Stock beneficially owned by the Selling Stockholder after the sale of the shares offered hereby. We have based percentage ownership on 289,006,948 shares of Common Stock outstanding as of March 21, 2025.

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 Stockholder will in fact sell any or all of such Common Stock. In addition, the Selling Stockholder 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 Stockholder will have sold all of the securities 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*.”

Name of Selling Stockholder	Shares Beneficially Owned Prior to the Offering		Shares Being Offered	Shares Beneficially Owned After to the Offering	
	Shares	% ⁽¹⁾		Shares	%
Armistice Capital, LLC(2)	3,770,000	1.3%	3,770,000	—	—

- (1) We have based percentage ownership assuming full exercise of the Warrant and based on 289,006,948 shares of Common Stock outstanding as of March 21, 2025.
- (2) The Common Stock to be sold pursuant to this prospectus is issuable upon the exercise of the Warrant. The securities are directly held by Armistice Capital Master Fund Ltd., a Cayman Islands exempted company (the “Master Fund”), and may be deemed to be beneficially owned by:
 - (i) Armistice Capital, LLC (“Armistice Capital”), as the investment manager of the Master Fund; and
 - (ii) Steven Boyd, as the Managing Member of Armistice Capital. The Warrant is subject to a beneficial ownership limitation of 4.99%, which such limitation restricts the Selling Stockholder from exercising that portion of the Warrant that would result in the Selling Stockholder and its affiliates owning, after exercise, a number of shares of common stock in excess of the beneficial ownership limitation. The address of Armistice Capital Master Fund Ltd. is c/o Armistice Capital, LLC, 510 Madison Avenue, 7th Floor, New York, NY 10022.

PLAN OF DISTRIBUTION

The Selling Stockholder 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 its 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 Stockholder may use any one or more of the following methods when disposing of its 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 Stockholder 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 Stockholder;
- “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 Stockholder 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 Stockholder may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the Selling Stockholder (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 Stockholder 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 its 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 Stockholder to include the pledgee, transferee or other successors in interest as Selling Stockholder under this prospectus. The Selling Stockholder 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 Stockholder may enter into hedging transactions with broker-dealers or other financial institutions, which may in turn engage in short

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sales of Common Stock in the course of hedging the positions they assume. The Selling Stockholder may also sell its shares of Common Stock short and deliver its 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 Stockholder 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 Stockholder 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 Stockholder 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 an in-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 Stockholder 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

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with respect to the Common Stock for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition, the Selling Stockholder 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 Stockholder or any other person. We will make copies of this prospectus available to the Selling Stockholder 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.

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	\$ 1,905
Accounting fees and expenses	26,250
Legal fees and expenses	125,000
Financial printing and miscellaneous expenses	12,000
Total	<u>\$ 165,155</u>

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.

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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:

<u>Exhibit</u>	<u>Description</u>
4.1**	Form of New Warrant (incorporated by reference to Exhibit 4.1 filed on the Company's Current Report on Form 8-K, filed on February 6, 2025).
5.1*	Opinion of Latham & Watkins LLP.
10.1**	Warrant Exercise Agreement, dated as of February 6, 2025, by and between BigBear.ai and the Investor (incorporated by reference to Exhibit 10.1 filed on the Company's Current Report on Form 8-K, filed on February 6, 2025).
23.1*	Consent of Grant Thornton LLP
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.

† The annexes, schedules, and certain exhibits to this Exhibit have been omitted pursuant to Item 601(b)(2) of Regulation S-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.

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- (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 made in any such document immediately prior to such date of first use.
- (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.

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 McLean, Virginia, on the 27th day of March, 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 Kevin McAleenan, 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.

<u>Signatures</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Kevin McAleenan</u> Kevin McAleenan	Chief Executive Officer and Director (Principal Executive Officer)	March 27, 2025
<u>/s/ Julie Peffer</u> Julie Peffer	Chief Financial Officer (Principal Financial Officer)	March 27, 2025
<u>/s/ Sean Ricker</u> Sean Ricker	Chief Accounting Officer (Principal Accounting Officer)	March 27, 2025
<u>/s/ Sean Battle</u> Sean Battle	Director	March 27, 2025
<u>/s/ Pamela Braden</u> Pamela Braden	Director	March 27, 2025
<u>/s/ Peter Cannito</u> Peter Cannito	Director, Chair of the Board	March 27, 2025
<u>/s/ Paul Fulchino</u> Paul Fulchino	Director	March 27, 2025

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<u>Signatures</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Jeffrey Hart</u> Jeffrey Hart	Director	March 27, 2025
<u>/s/ Dorothy D. Hayes</u> Dorothy D. Hayes	Director	March 27, 2025
<u>/s/ Kirk Konert</u> Kirk Konert	Director	March 27, 2025

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LATHAM & WATKINS LLP

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Los Angeles	Washington, D.C.
Madrid	

March 27, 2025

BigBear.ai Holdings, Inc.
 7950 Jones Branch Drive, 1st Floor North Tower
 McLean, VA 22102

Re: Registration Statement on Form S-3: 3,770,000 shares of Common Stock, par value \$0.0001 per share

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 resale from time to time by the selling securityholder named in the Registration Statement (as defined below) of 3,770,000 shares (the “*Shares*”) of the Company’s common stock, \$0.0001 par value per share (“*Common Stock*”), issuable upon exercise of a warrant to purchase Common Stock (the “*Warrant*”). The resale of the Shares is registered pursuant to 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 March 27, 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 the related 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.

Subject to the foregoing and the other matters set forth herein, it is our opinion that, as of the date hereof, when the Shares issuable upon exercise of the Warrant (the “*Warrant Shares*”) shall have been duly registered on the books of the transfer agent and registrar therefor in the name of or on behalf of the Warrant holder, and have been issued by the Company against payment therefor (not less than par value) in the circumstances contemplated by the Warrant, such Warrant Shares will have been duly authorized by all necessary corporate action of the Company, and will be validly issued, 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.

LATHAM & WATKINS LLP

With your consent, we have assumed (a) that the Warrant has been or will be duly authorized, executed and delivered by the parties thereto other than the Company and (b) that the status of the Warrant as legally valid and binding obligations of the parties will not be affected by any (i) breaches of, or defaults under, agreements or instruments, (ii) violations of statutes, rules, regulations or court or governmental orders or (iii) failures to obtain required consents, approvals or authorizations from, or to make required registrations, declarations or filings with, governmental authorities.

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 25, 2025 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, 2024, which is incorporated by reference in this Registration Statement. We consent to the incorporation by reference of the aforementioned report in this Registration Statement, and to the use of our name as it appears under the caption "Experts."

/s/ Grant Thornton LLP

Arlington, Virginia
March 27, 2025

Calculation of Filing Fee Table

Registration Statement on 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	Proposed Maximum Offering Price Per Unit ⁽²⁾	Maximum Aggregate Offering Price ⁽²⁾	Fee Rate	Amount of Registration Fee
Fees to Be Paid	Equity	Common Stock, par value \$0.0001 per share	457(c)	3,770,000 ⁽¹⁾	\$2.92	\$12,441,000	0.00015310	\$1,624.84
		Total Offering Amounts				\$12,441,000		\$1,624.84
		Total Fees Previously Paid						—
		Total Fee Offsets						—
		Net Fee Due						\$1,904.72

- (1) Consists of 3,770,000 shares of our common stock issuable to the selling securityholders upon exercise of warrants to purchase our common stock. Pursuant to Rule 416 under the Securities Act of 1933, as amended, the shares of common stock being registered hereunder include such indeterminate number of shares of common stock as may be issuable with respect to the shares of common stock being registered hereunder as a result of stock splits, stock dividends or similar transactions.
- (2) Estimated solely for the purpose of calculating the amount of the registration fee pursuant to Rule 457(c) of the Securities Act, on the basis of the average of the high and low prices for a share of the registrant's common stock as reported on The New York Stock Exchange on March 21, 2025, which date is a date within five business days prior to the filing of this registration statement.