
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

SCHEDULE 13D

Under the Securities Exchange Act of 1934

(Amendment No. 3)*

MultiSensor AI Holdings, Inc.

(Name of Issuer)

Common Stock, par value \$0.0001 per share

(Title of Class of Securities)

456948108

(CUSIP Number)

Michael Braner
325 Capital LLC, 757 Third Avenue, 20th Floor
New York, NY, 10017
646-774-2904

Kenneth A. Schlesinger, Esq.
Olshan Frome Wolosky LLP, 1325 Avenue of the Americas
New York, NY, 10019
212-451-2300

(Name, Address and Telephone Number of Person Authorized to Receive Notices and Communications)

10/24/2025

(Date of Event Which Requires Filing of This Statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of §§ 240.13d-1(e), 240.13d-1(f) or 240.13d-1(g), check the following box. ☐

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

SCHEDULE 13D

CUSIP No.	456948108
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1	Name of reporting person 325 Capital Master Fund LP
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2	Check the appropriate box if a member of a Group (See Instructions)	
	<input type="checkbox"/> (a)	<input type="checkbox"/> (b)
3	SEC use only	
4	Source of funds (See Instructions) WC	
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6	Citizenship or place of organization CAYMAN ISLANDS	
Number of Shares Beneficially Owned by Each Reporting Person With:	7	Sole Voting Power 0.00
	8	Shared Voting Power 2,166,407.00
	9	Sole Dispositive Power 0.00
	10	Shared Dispositive Power 2,166,407.00
11	Aggregate amount beneficially owned by each reporting person 2,166,407.00	
12	Check if the aggregate amount in Row (11) excludes certain shares (See Instructions) <input type="checkbox"/>	
13	Percent of class represented by amount in Row (11) 5.2 %	
14	Type of Reporting Person (See Instructions) PN	

SCHEDULE 13D

CUSIP No.	456948108
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1	Name of reporting person 325 Capital GP, LLC
2	Check the appropriate box if a member of a Group (See Instructions)
	<input type="checkbox"/> (a) <input type="checkbox"/> (b)
3	SEC use only
4	Source of funds (See Instructions) AF
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) <input type="checkbox"/>

6	Citizenship or place of organization DELAWARE	
Number of Shares Beneficially Owned by Each Reporting Person With:	7	Sole Voting Power 0.00
	8	Shared Voting Power 2,166,407.00
	9	Sole Dispositive Power 0.00
	10	Shared Dispositive Power 2,166,407.00
11	Aggregate amount beneficially owned by each reporting person 2,166,407.00	
12	Check if the aggregate amount in Row (11) excludes certain shares (See Instructions) <input type="checkbox"/>	
13	Percent of class represented by amount in Row (11) 5.2 %	
14	Type of Reporting Person (See Instructions) OO	

SCHEDULE 13D

CUSIP No.	456948108
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1	Name of reporting person 325 CAPITAL LLC	
2	Check the appropriate box if a member of a Group (See Instructions) <input type="checkbox"/> (a) <input type="checkbox"/> (b)	
3	SEC use only	
4	Source of funds (See Instructions) AF, OO	
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6	Citizenship or place of organization DELAWARE	
Number of Shares Beneficially Owned by Each Reporting Person With:	7	Sole Voting Power 0.00
	8	Shared Voting Power 12,961,653.00
	9	Sole Dispositive Power 0.00

	10	Shared Dispositive Power 12,961,653.00
11	Aggregate amount beneficially owned by each reporting person 12,961,653.00	
12	Check if the aggregate amount in Row (11) excludes certain shares (See Instructions) <input type="checkbox"/>	
13	Percent of class represented by amount in Row (11) 31.2 %	
14	Type of Reporting Person (See Instructions) OO	

SCHEDULE 13D

CUSIP No.	456948108
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1	Name of reporting person Braner Michael David	
2	Check the appropriate box if a member of a Group (See Instructions) <input type="checkbox"/> (a) <input type="checkbox"/> (b)	
3	SEC use only	
4	Source of funds (See Instructions) AF, OO	
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6	Citizenship or place of organization UNITED STATES	
Number of Shares Beneficially Owned by Each Reporting Person With:	7	Sole Voting Power 0.00
	8	Shared Voting Power 12,961,653.00
	9	Sole Dispositive Power 0.00
	10	Shared Dispositive Power 12,961,653.00
11	Aggregate amount beneficially owned by each reporting person 12,961,653.00	
12	Check if the aggregate amount in Row (11) excludes certain shares (See Instructions) <input type="checkbox"/>	

13	Percent of class represented by amount in Row (11) 31.2 %
14	Type of Reporting Person (See Instructions) IN

SCHEDULE 13D

CUSIP No.	456948108
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1	Name of reporting person FRIEDBERG DANIEL M.	
2	Check the appropriate box if a member of a Group (See Instructions) <input type="checkbox"/> (a) <input type="checkbox"/> (b)	
3	SEC use only	
4	Source of funds (See Instructions) AF, OO	
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6	Citizenship or place of organization UNITED STATES	
Number of Shares Beneficially Owned by Each Reporting Person With:	7	Sole Voting Power 0.00
	8	Shared Voting Power 12,961,653.00
	9	Sole Dispositive Power 0.00
	10	Shared Dispositive Power 12,961,653.00
11	Aggregate amount beneficially owned by each reporting person 12,961,653.00	
12	Check if the aggregate amount in Row (11) excludes certain shares (See Instructions) <input type="checkbox"/>	
13	Percent of class represented by amount in Row (11) 31.2 %	
14	Type of Reporting Person (See Instructions) IN	

CUSIP No.

456948108

1	Name of reporting person Shrivastava Anil K	
2	Check the appropriate box if a member of a Group (See Instructions) <input type="checkbox"/> (a) <input type="checkbox"/> (b)	
3	SEC use only	
4	Source of funds (See Instructions) AF, OO	
5	Check if disclosure of legal proceedings is required pursuant to Items 2(d) or 2(e) <input type="checkbox"/>	
6	Citizenship or place of organization UNITED STATES	
Number of Shares Beneficially Owned by Each Reporting Person With:	7	Sole Voting Power 0.00
	8	Shared Voting Power 12,961,653.00
	9	Sole Dispositive Power 0.00
	10	Shared Dispositive Power 12,961,653.00
11	Aggregate amount beneficially owned by each reporting person 12,961,653.00	
12	Check if the aggregate amount in Row (11) excludes certain shares (See Instructions) <input type="checkbox"/>	
13	Percent of class represented by amount in Row (11) 31.2 %	
14	Type of Reporting Person (See Instructions) IN	

SCHEDULE 13D

Item 1. Security and Issuer

(a) Title of Class of Securities:

Common Stock, par value \$0.0001 per share

(b) Name of Issuer:

MultiSensor AI Holdings, Inc.

(c) Address of Issuer's Principal Executive Offices:

2105 WEST CARDINAL DRIVE, BEAUMONT, TEXAS , 77705.

Item 3. Source and Amount of Funds or Other Consideration

Item 3 is hereby amended and restated to read as follows:

The Reporting Persons acquired 9,375,000 of the Shares reported owned herein pursuant to the Purchase Agreement (as defined in the Schedule 13D) in connection with the Private Placement (as defined in the Schedule 13D) and upon the exercise of the Pre-Funded Warrants acquired pursuant to the Purchase Agreement in connection with the Private Placement. The Reporting Persons will acquire 3,485,446 of the Shares reported owned herein in the Initial Closing (as defined in Item 4 below) pursuant to the 2025 Purchase Agreement (as defined in Item 4 below) in connection with the 2025 Private Placement (as defined in Item 4 below). As of the date hereof, the Reporting Persons are deemed to beneficially own the Shares as detailed in Item 5.

The aggregate purchase price of the 438,247 Shares acquired by 325 Master Fund pursuant to the Purchase Agreement is approximately \$701,195 and the aggregate purchase price of the 1,043,621 Shares acquired by 325 Master Fund upon the exercise of the Pre-Funded Warrants previously held by it is approximately \$1,669,794 (inclusive of the price of the Pre-Funded Warrants and exclusive of brokerage commissions and other costs of execution). The aggregate purchase price of the 684,539 Shares and Warrants (as defined in Item 4 below) to purchase 1,369,078 Shares to be acquired by 325 Master Fund in the Initial Closing pursuant to the 2025 Purchase Agreement is approximately \$279,976.

The aggregate purchase price of the 2,334,314 Shares acquired by the SMAs pursuant to the Purchase Agreement is approximately \$3,734,902 and the aggregate purchase price of the 5,558,818 Shares acquired by the SMAs upon the exercise of the Pre-Funded Warrants previously held by them is approximately \$8,894,109 (inclusive of the price of the Pre-Funded Warrants and exclusive of brokerage commissions and other costs of execution). The aggregate purchase price of the 2,800,907 Shares and Warrants to purchase 5,601,814 Shares to be acquired by the SMAs in the Initial Closing pursuant to the 2025 Purchase Agreement is approximately \$1,145,571.

The source of funding for the transactions pursuant to which the Reporting Persons obtained ownership of the Shares referenced above was derived from the working capital of 325 Master Fund and the SMAs (which may, at any given time, include margin loans made by brokerage firms in the ordinary course of business).

101,207 of the Shares reported owned herein were granted to Mr. Friedberg in connection with his service as a director of the Issuer."

Item 4. Purpose of Transaction

Item 4 is hereby amended to add the following:

On October 24, 2025 (the "Subscription Date"), the Issuer entered into a Securities Purchase Agreement (the "2025 Purchase Agreement") with 325 and certain other accredited investors (collectively with 325, the "Investors"), pursuant to which, among other things, certain of the Reporting Persons agreed to purchase (i) 17,114,912 Shares at a purchase price of \$0.409 per Share and (ii) warrants to purchase 34,229,824 Shares (the "Warrants") with an exercise price of \$0.409 per Share as part of a private placement (the "2025 Private Placement"). Pursuant to the 2025 Purchase Agreement, the Issuer agreed to issue to the Investors, and the Investors agreed to purchase, a number of Shares equal to 19.99% of the number of Shares issued and outstanding immediately prior to the Subscription Date (the "Initial Shares") and Warrants to purchase up to a number of Shares equal to 200% of the Initial Shares at an initial closing (the "Initial Closing"), which is expected to occur in the near future. In connection with the Initial Closing, (a) 325 Master Fund will acquire 684,539 Shares and 1,369,078 Warrants, and (b) the SMAs will acquire an aggregate of 2,800,907 Shares and 5,601,814 Warrants. The remaining 13,629,466 Shares and 27,258,932 Warrants will be issued to 325 Master Fund and the SMAs upon the Issuer's receipt of stockholder approval of the 2025 Private Placement (the "Stockholder Approval").

The Warrants are not exercisable unless and until the Issuer obtains the Stockholder Approval. The Warrants are not subject to any redemption provision, and once exercisable, can be exercised for cash or on a cashless basis at the discretion of the holder. The Warrants do not have any voting rights, but do have the right to participate in any dividends or distributions made by the Issuer. The number of Shares underlying, and the exercise price of, the Warrants is subject to full ratchet antidilution protection and standard adjustments in the event of certain events, such as stock splits, combinations, dividends, distributions, reclassifications, mergers or other corporate changes; provided, however, that in no event will the exercise price of the Warrants be equal to less than \$0.14944 per Share.

The 2025 Purchase Agreement and the Warrants provide that each Investor's beneficial ownership of Shares, including after taking into account the full exercise of such Investor's Warrant, shall in no event exceed 49.5% of the issued and outstanding Shares (the "Maximum Ownership Limitation"). Pursuant to the Warrants, in the event that an Investor's Warrant is not exercisable for Shares due to the beneficial ownership of such Investor exceeding the Maximum Ownership Limitation, the applicable Warrant will be exercisable for shares of the Issuer's Series A Convertible Preferred Stock, par value \$0.0001 per share (the "Preferred Stock"), that are convertible into an equivalent number of Shares for which the Warrant is exercisable. The Warrants expire five years from the anniversary of the Initial Closing.

The Preferred Stock is *pari passu* with the Shares, having the same dividend and liquidation rights (on an as-converted basis) as the Shares. The shares of the Preferred Stock are convertible on a one-for-1,000 basis (adjustable for certain recapitalizations and similar events) into Shares (i) at the holder's request as long as the conversion does not cause such holder's beneficial ownership of Shares to exceed the Maximum Ownership Limitation and (ii) automatically upon transfer if such transfer does not cause the transferee's beneficial ownership of Shares to exceed the Maximum Ownership Limitation. Except as otherwise required by law, the Preferred Stock will have no voting rights.

The 2025 Purchase Agreement contains a "most favored nation" provision that allows each Investor to claim any preferable terms from any future securities offering by the Issuer and also provides the Investors with certain participation rights in future financings. In addition, pursuant to the 2025 Purchase Agreement, the Issuer agreed not to increase the size of the Issuer's board of directors to more than seven directors without the prior written consent of 325.

The 2025 Purchase Agreement contains customary representations, warranties and covenants, customary conditions to closing, indemnification obligations of the Issuer, other obligations of the parties, and termination provisions. Among other covenants, the 2025 Purchase Agreement requires the Issuer to file a proxy statement on Schedule 14A with the Securities and Exchange Commission (the "SEC") within fifteen (15) days of the Initial Closing and hold a special meeting of stockholders at the earliest practical date thereafter for purposes of obtaining the Stockholder Approval. In the event that the Issuer fails to obtain the Stockholder Approval by February 28, 2026, the Investors will be refunded all amounts paid into escrow for the remaining Shares and Warrants.

In connection with the Initial Closing, certain of the Reporting Persons will be entering into a registration rights agreement with the Issuer, to be effective upon the Initial Closing (the "2025 Registration Rights Agreement") pursuant to which the Issuer is required to file a registration statement with the SEC to register the resale of the Shares and the Shares and Preferred Stock issuable upon exercise of the Warrants be issued in connection with the 2025 Private Placement.

In connection with the Initial Closing, certain of the Reporting Persons will be entering into a voting agreement with the Issuer, to be effective upon the Initial Closing (the "2025 Voting Agreement"), to support the transactions contemplated by the 2025 Purchase Agreement, including obtaining the Stockholder Approval.

The foregoing descriptions of the 2025 Purchase Agreement, Warrants and Preferred Stock do not purport to be complete and are subject to and are qualified in their entirety by reference to the full text of the Form of 2025 Purchase Agreement, Form of Warrant and Certificate of Designation of the Preferred Stock, copies of which are attached hereto as Exhibits 99.1 and are incorporated by reference herein.

Item 5. Interest in Securities of the Issuer

- (a) Item 5(a) is hereby amended and restated to read as follows:

As of the close of business on October 28, 2025, the Reporting Persons beneficially owned an aggregate of 12,961,653 Shares, including the Shares to be acquired upon the Initial Closing, which represents approximately 31.2% of the outstanding Shares, based upon a denominator that is the sum of (i) 34,574,485 Shares outstanding as of August 8, 2025, as reported in the Issuer's Quarterly Report on Form 10-Q filed with the SEC on August 13, 2025, and (ii) 6,970,891 Shares expected to be issued in connection with the Initial Closing. The number of Shares reported beneficially owned herein by the Reporting Persons excludes (a) 6,970,892 Shares underlying the Warrants currently held by the Reporting Persons and (b) the remaining 13,629,466 Shares and 27,258,932 Shares underlying the Warrants issuable to the Reporting Persons upon the Issuer obtaining the Stockholder Approval.

The aggregate beneficial ownership reflected in the remainder of this Item 5, and in the cover pages, reflect beneficial ownership as of the close of business on October 28, 2025.

- (b) Item 5(b) is hereby amended and restated to read as follows:

Sole power to vote or direct the vote: 0
Shared power to vote or direct the vote: 12,961,653
Sole power to dispose or to direct the disposition: 0
Shared power to dispose or direct the disposition: 12,961,653

The power to vote or to direct the vote or to dispose or direct the disposition of the Shares reported herein is shared among the Reporting Persons, including the 10,694,039 Shares held in the SMAs and the 101,207 Shares granted to Mr. Friedberg in connection with his service as a director of the Issuer.

- (c) Item 5(c) is hereby amended and restated to read as follows:

Other than as set forth in Item 4 above and Item 6 below, the Reporting Persons have not entered into any transactions in the securities of the Issuer during the past sixty days.

Item 6. Contracts, Arrangements, Understandings or Relationships With Respect to Securities of the Issuer

Item 6 is hereby amended to add the following:

The definitions and descriptions of the 2025 Purchase Agreement, Warrants, Preferred Stock, 2025 Registration Rights Agreement and 2025 Voting Agreements as set forth in Item 4 above are incorporated herein by reference.

On June 30, 2025 and September 30, 2025, Mr. Friedberg was granted 36,563 and 31,008 fully vested restricted stock units, respectively, in connection with his service as a director of the Issuer, each representing the right to receive one Share.

Item 7. Material to be Filed as Exhibits.

Item 7 is hereby amended to add the following exhibits:

99.1 - Form of 2025 Purchase Agreement; Form of Warrant; and Certificate of Designations of the Powers, Preferences and Relative, Participating, Optional and Other Special Rights of Preferred Stock and Qualifications, Limitations and Restrictions Thereof of Series A Convertible Preferred Stock

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

325 Capital Master Fund LP

Signature: /s/ Michael Braner
Name/Title: Michael Braner, Managing Member
Date: 10/28/2025

325 Capital GP, LLC

Signature: /s/ Michael Braner
Name/Title: Michael Braner, Managing Member
Date: 10/28/2025

325 CAPITAL LLC

Signature: /s/ Michael Braner
Name/Title: Michael Braner, Managing Member

Date: 10/28/2025

Braner Michael David

Signature: /s/ Michael Braner

Name/Title: Michael Braner

Date: 10/28/2025

FRIEDBERG DANIEL M.

Signature: /s/ Daniel Friedberg

Name/Title: Daniel Friedberg

Date: 10/28/2025

Shrivastava Anil K

Signature: /s/ Anil Shrivastava

Name/Title: Anil Shrivastava

Date: 10/28/2025