Deep Dive: AI in B2B SaaS

Harlem Capital

By: Megha Agarwal & Brandon Bryant

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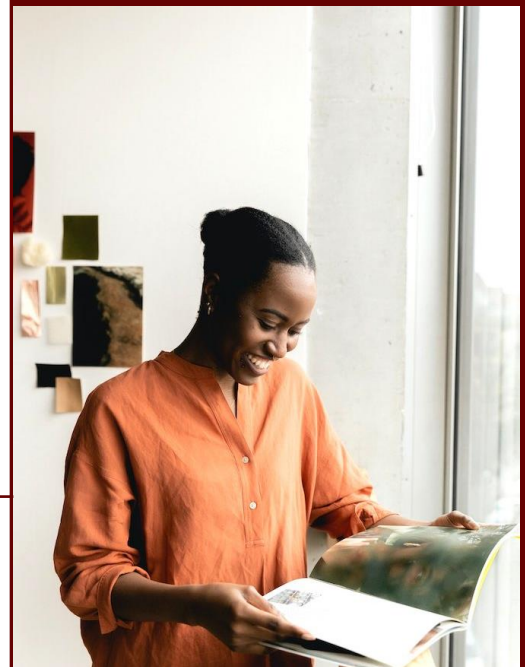


Harlem Capital's Founder Movement in B2B AI

4Degrees	AllieHealth	TrashLab	stuf	TestParty	Kipsi
Financial Services	Healthcare	Logistics	Self-Storage	Compliance	Accounting Services

Ablorde Ashigbi	Jessie Lucci	Neil Chaudhary	Katharine Lau	Michael Bervell and Jason Tan	Claire Tsukuda

B2B SaaS AI Integration | Why It Interests Us

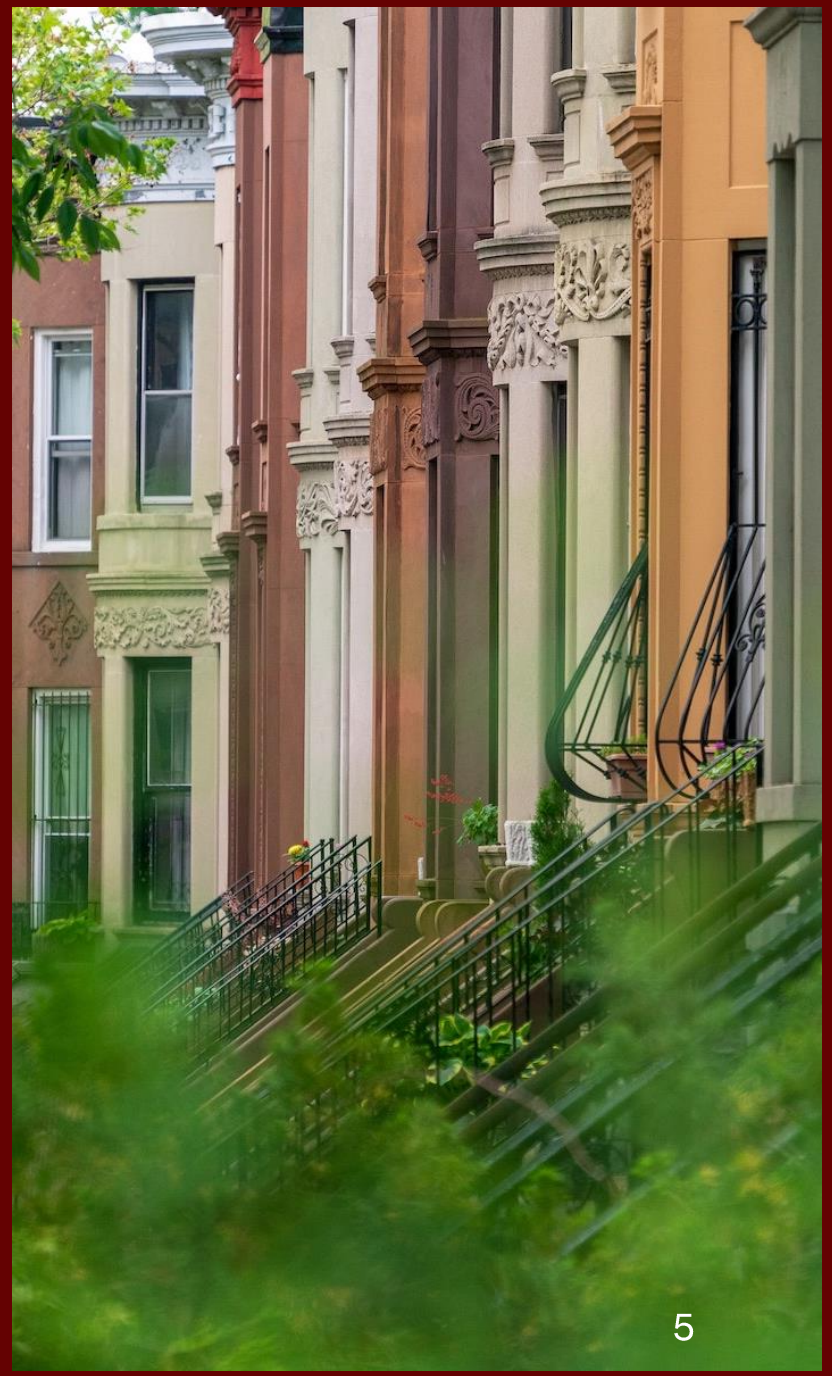
As AI technology continues to evolve, it is revolutionizing how businesses operate and deliver value.

We believe that AI-driven solutions will become indispensable across all sectors of B2B SaaS, enhancing both internal efficiency and external product offerings.

To highlight the potential, we explored how AI is being leveraged to streamline internal processes and elevate customer-facing products, seeking out use cases that demonstrate significant impact and innovation:

1. **Operational Efficiency and Cost Reduction** (e.g., streamline internal processes, automate repetitive tasks, and optimize resource allocation)
2. **Enhanced Customer Experience and Personalization** (e.g., offer personalized and responsive customer experiences, enhance satisfaction and loyalty through tailoring services and products)
3. **Data-Driven Decision Making and Insights** (e.g., provide actionable insights, improve decision-making processes, and uncover new business opportunities)
4. **Innovation and Competitive Advantage** (e.g., enabling the development of new products and services, differentiate through advanced capabilities and unique offerings)

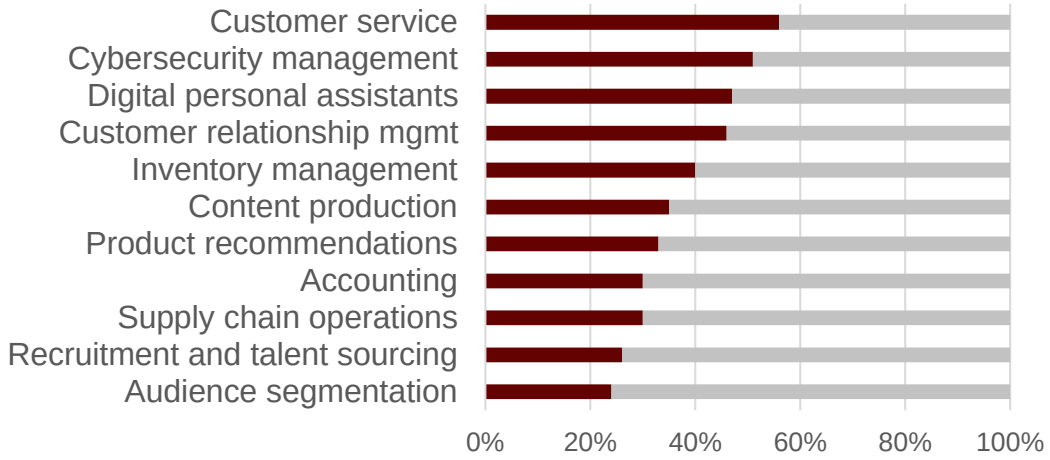
Industry Analyses



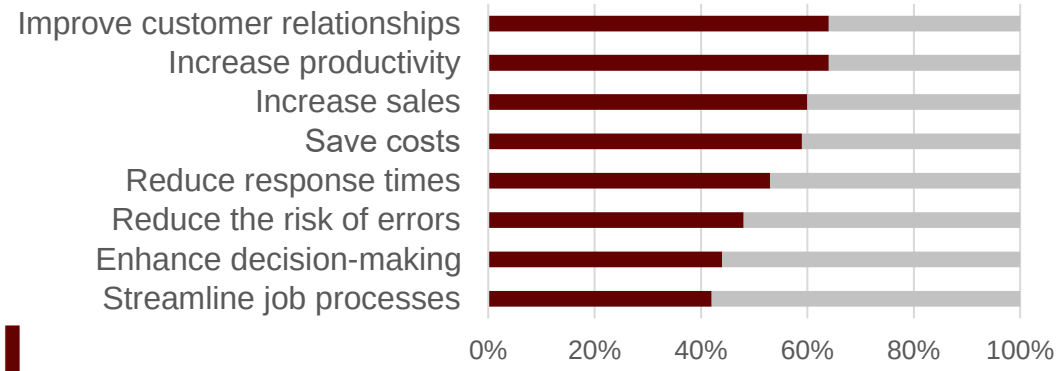
Deep Dive | Horizontal Opportunities with AI

Businesses are turning to AI to a greater degree **to improve and perfect their overall operations...**

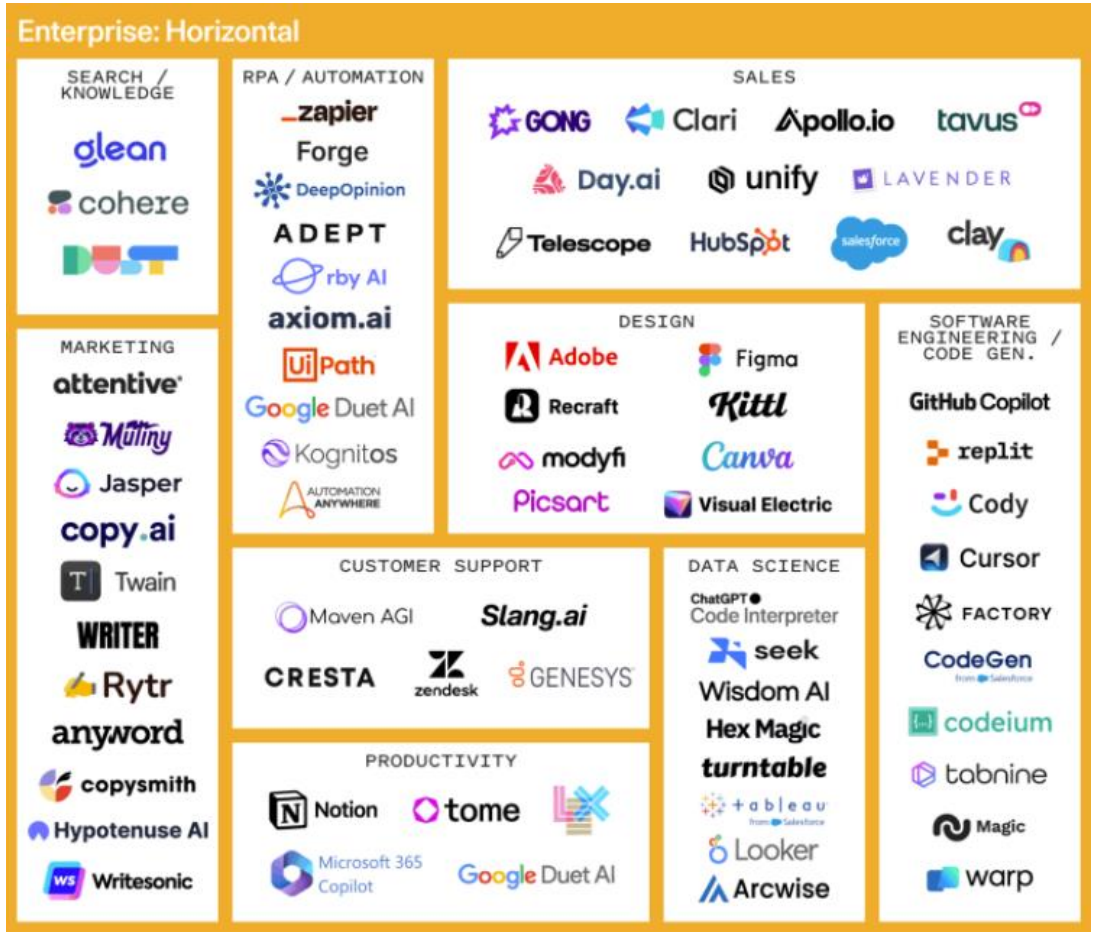
Top ways founders are using AI:



...particularly with **horizontal opportunities** and use cases...



...and the solution set and **startup space is growing** to match.



Source: Forbes Advisor, Sequoia Capital

Deep Dive | Industry Opportunities with AI

While AI will likely affect most opportunities over the longer term, in the short term, **our research suggests that industry opportunities are strongest for those with specific promising features and a low level of challenging features.** For example, compared to industries such as traditional education and healthcare and life sciences, **media and entertainment, logistics, and tech & software companies are ripe for opportunity with AI enablement.**

	Promising features			Challenging features		
Industry	Large volumes of data	Automatable repetitive tasks	Need for personalization	High stakes decision-making	Reliance on creativity	Heavy regulation & compliance
Media and entertainment	✓	✓			✗	✗
Tech & software companies (SaaS)	✓	✓	✓	✗		
Banking and financial services	✓	✓	✓	✗		✗
Retail and e-commerce			✓		✗	
Logistics	✓	✓		✗		
Telecommunications	✓	✓	✓	✗		✗
Education			✓		✗	
Healthcare and life sciences	✓			✗		✗

Deep Dive | Investment Landscape for AI in B2B SaaS

Investing in B2B SaaS AI has emerged as a significant focus for venture, driven by its transformative potential across industries. The sector has witnessed substantial growth...

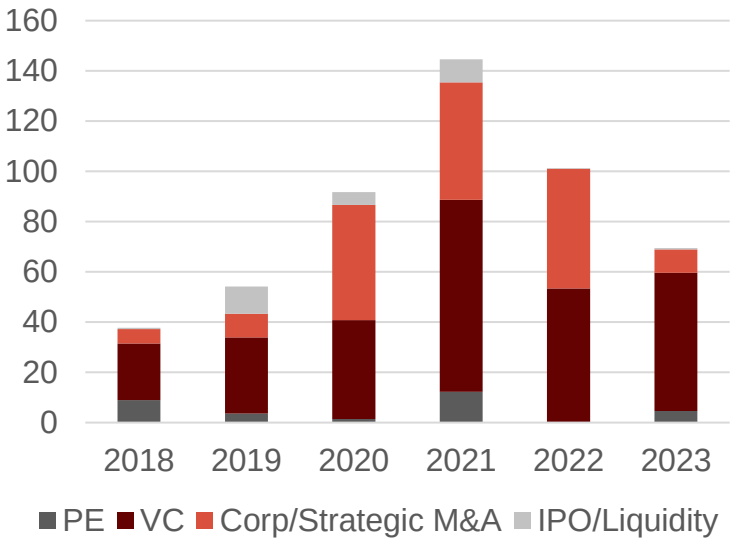
...with a notable spike in 2021, fueled by the accelerated digital transformation from the COVID-19 pandemic. While investment levels have moderated since the peak...

...deal flow remains robust, indicating sustained confidence in the sector and the enduring appeal of AI-powered B2B SaaS solutions.

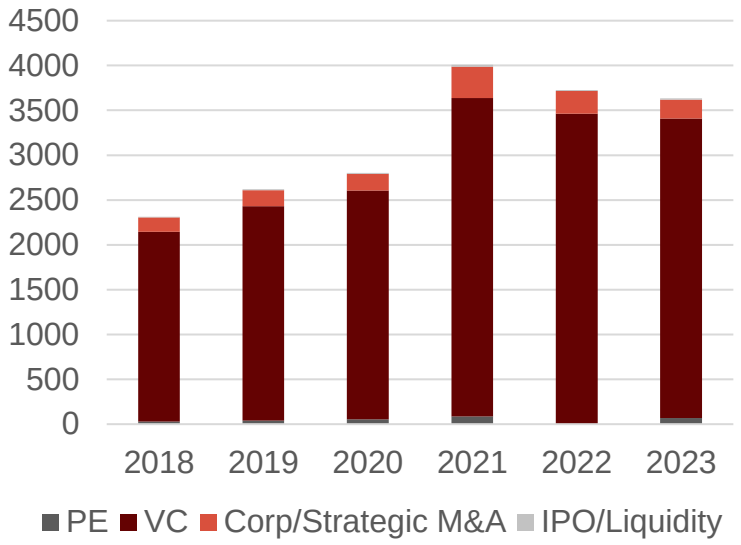
Leading investors in B2B SaaS AI

SEQUOIA
Accel
andreessen horowitz
Bessemer Venture Partners
EMERGENCE
TIGERGLOBAL
Lightspeed
INSIGHT PARTNERS

B2B SaaS AI Deals ($B)

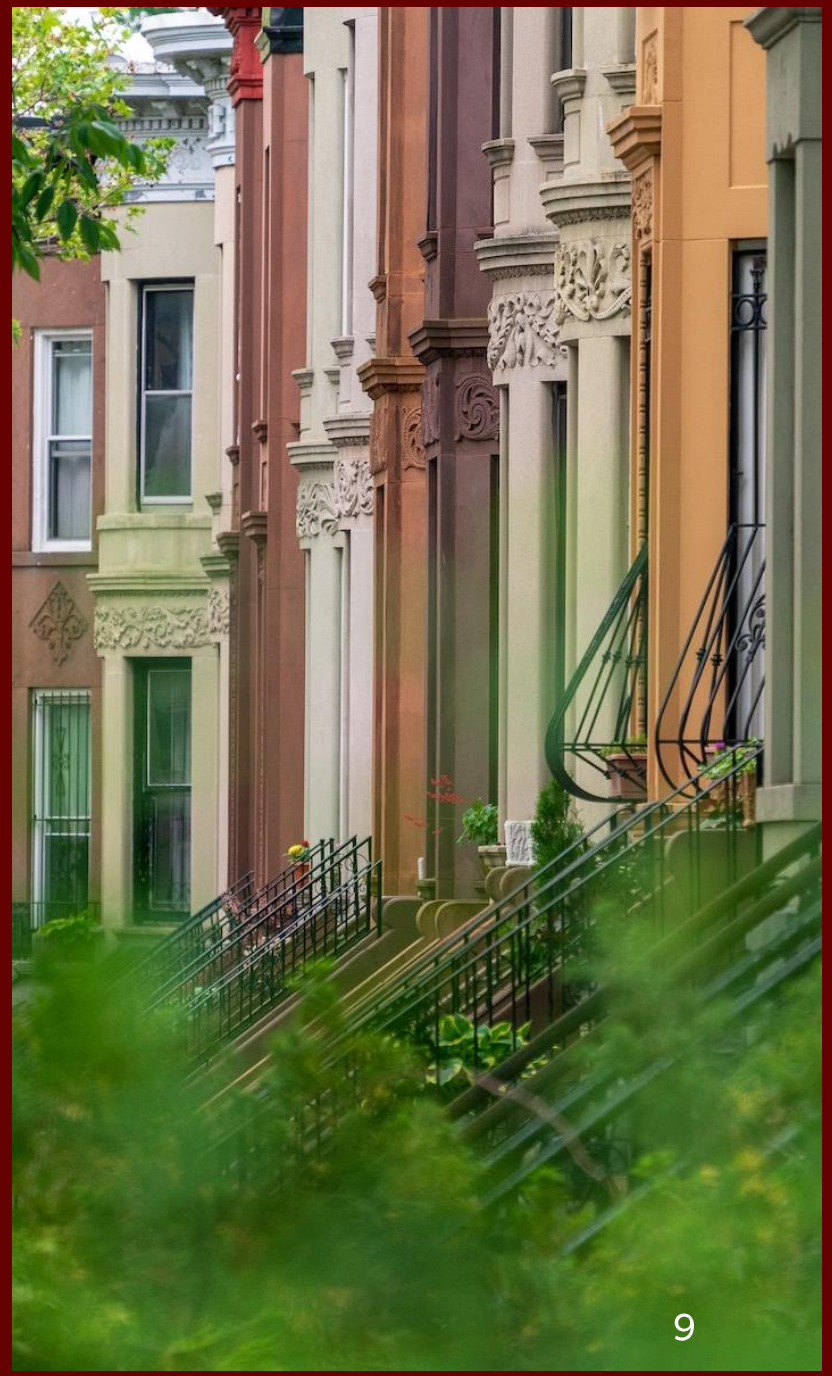


B2B SaaS AI Deals (#)



Source: Pitchbook (US HQ, Software/SaaS AND B2B AND Artificial Intelligence)

B2B SaaS AI Startups



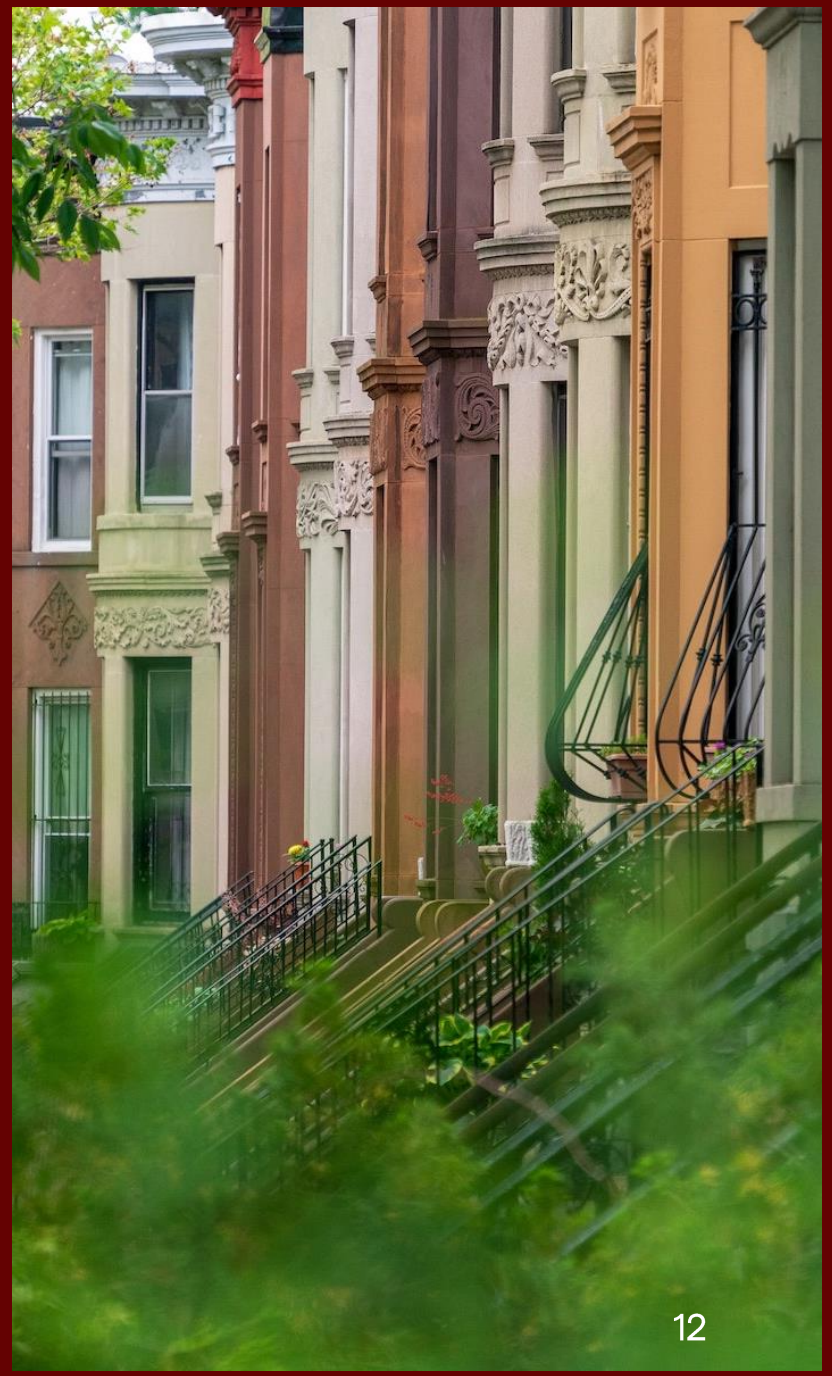
B2B SaaS AI Startups | Late-Stage (Series B-D)

AISERA	glean	Harvey.	Scribe
HQ: Palo Alto, CA	HQ: Palo Alto, CA	HQ: San Francisco, CA	HQ: San Francisco, CA
Year Founded: 2017	Year Founded: 2019	Year Founded: 2022	Year Founded: 2019
DIVERSE FOUNDER	DIVERSE FOUNDER	DIVERSE FOUNDER	FEMALE FOUNDER
BUSINESS OVERVIEW			
Aisera leverages AI to revolutionize customer service and IT operations. Their platform offers AI-powered chatbots and virtual agents that automate service requests and provide instant support. By seamlessly integrating with existing systems, Aisera helps organizations improve efficiency, reduce costs, and enhance user experience in customer interactions.	Glean is an AI-powered knowledge management platform designed to enhance workplace productivity. It helps teams quickly find and access information across various tools and applications, streamlining workflows and reducing time spent searching for data. By leveraging natural language processing, Glean enables users to ask questions and receive relevant answers.	Harvey is an AI-powered platform designed specifically for the legal industry, helping law firms automate and streamline their workflows. By leveraging advanced natural language processing, Harvey enables legal professionals to generate documents, conduct legal research, and manage case-related tasks more efficiently.	Scribe is an AI-powered documentation platform that simplifies the process of creating and managing internal documentation. By automatically capturing workflows and generating step-by-step guides, Scribe helps teams streamline knowledge sharing and onboarding processes, ensuring that critical information is easily accessible and up-to-date for all users.
INVESTORS			
Total Raised: $164.5M ($90M Series D in Aug 2022) NORWEST VENTURE PARTNERS, WEBB INVESTMENT NETWORK, First Round	Total Raised: $358.2 ($203.2M Series D in Feb 2024) KLEINER PERKINS, GENERAL CATALYST, Lightspeed	Total Raised: $206.0M ($100M Series C in July 2024) Google ventures, SEQUOIA, KLEINER PERKINS	Total Raised: $55M ($25M Series B in Feb 2024) xyz, Amplify, TIGERGLOBAL
KEY MILESTONES			
Not Available	Integrated with popular workplace applications like Slack, Google Workspace, and Microsoft 365	Works with 520 users who have made 5,523 queries and processed 34,000 documents Reached valuation of $1.50Bn	Reached >10K+ active users within the first year of launch

B2B SaaS AI Startups | Early-Stage (Pre-Seed-Series A)

	PAXTON LEGAL AI	siena	Ema	HockeyStack
	HQ: Portland, Oregon	HQ: San Francisco, CA	HQ: Mountain View, CA	HQ: Philadelphia, PA
	Year Founded: 2023	Year Founded: 2022	Year Founded: 2023	Year Founded: 2011
	DIVERSE FOUNDER	FEMALE FOUNDER	DIVERSE FOUNDER	DIVERSE FOUNDER
BUSINESS OVERVIEW	Paxton AI is a legal technology startup that utilizes advanced generative AI to assist legal professionals in their work. Paxton helps lawyers quickly draft and compare documents, conduct legal research, and deepen discovery processes. The platform is trained on 60+ million legal documents, including federal and state case law, enabling it to provide accurate insights and citations.	Siena AI is an advanced customer service platform that uses AI to provide human-like interactions across multiple channels. It specializes in resolving customer issues, handling complex tasks, and personalizing responses according to brand voice. Siena AI can manage aspects of customer service including order tracking, returns, refunds, and subscription management, while integrating with existing tools.	Ema is an AI-driven platform that enhances productivity by automating tasks across various organizational roles, including customer support, sales, and HR. It features specialized personas for industries streamlining processes like ticket resolution, report generation, and regulatory compliance, ultimately improving efficiency and performance.	HockeyStack is an analytics platform designed specifically for SaaS businesses, enabling them to track user behavior and optimize their marketing strategies. By integrating data from various sources, HockeyStack provides actionable insights into customer journeys, helping companies improve conversion rates and enhance user engagement through data-driven decision-making.
INVESTORS				
	Total Raised: $6.0M ($6.0M seed round in Sept 2023)	Total Raised: $4.7M ($4.7M seed round in Nov 2023)	Total Raised: $25M ($25M seed round in March 2024)	Total Raised: $4.8M ($4.8M seed round in Nov 2023)
	25m, KYBER KNIGHT	SIERRA VENTURES, PARI PASSU	Accel, prosus ventures	Y, GENERAL CATALYST
KEY MILESTONES				
	Achieved a 94% accuracy rate in its evaluation against the Stanford Casehold dataset of 2,400 examples	Not Available	Not Available	Analyzed 8,500+ self-reported attribution answers from 36 B2B SaaS companies Helped a customer achieve a 3.5x paid ROI in the pipeline

Founder & Investor Spotlights



What Investors and Founders are Saying

Operational Efficiency

Investors and founders emphasize the **integration of AI to enhance internal processes and improve operational efficiency.** Founders are actively embedding AI into their workflows, aiming to automate tasks and reduce costs.

Consumer-Facing AI Solutions

Investors and founders are increasingly **prioritizing AI-powered tools to enhance customer interactions.** There is a growing trend of leveraging AI for automated communication systems that streamline customer service, improve response times, and generate leads, fostering better customer engagement and satisfaction.

Challenges in Implementation

Founders identify **a lack of in-house expertise and resources** as significant barriers to effective AI implementation. Many companies struggle to adopt advanced technologies due to limited technical capabilities, which can impede their innovation and competitiveness. This sentiment reflects a broader concern about the need for organizations to invest in training and develop a clearer understanding of AI's transformative potential.

Katharine Lau

Founder and CEO, Stuf

Self-Storage

NEW YORK	LOGISTICS	SERIES A	2020
Location	Industry	Funding Round	Year Founded

1 How are you using AI to either enhance internal workflows or your customer-facing solution? What has been the more significant impact AI has had for you so far?

Stuf is focusing on integrating AI into internal processes to primarily reduce costs and improve efficiency. We are testing an early opportunity for product enhancement, but imagine opportunities will only grow and strengthen with time.

To get to a strong understanding of internal opportunities for AI enhancement, we conducted a company-wide brainstorming session to identify automation opportunities. Outside of research and communication tools, this led us to mostly embed AI in product and engineering.

In the customer-facing world, we are exploring AI-powered chatbots and sales enablement tools to answer consistently asked product questions, generate more leads, and improve conversion rates. We have also begun integrating security management enhancements using AI technology and are excited about the opportunity it provides.

2 What are the main reasons you wouldn't have implemented AI in your company? Are there specific barriers or concerns that have prevented you from exploring AI solutions in the past or may come up in the future?

The main barriers to implementation and integration of more AI technology and use cases has been the lack of in-house capabilities, namely around both AI expertise and a dedicated special projects, innovation, or research & development team. Without the technical expertise to fully realize an ambitious AI-enabled vision and the time to spend in exploration stages, it's challenging to take advantage of the technology that you know exists.

Additionally, many AI products want larger Fortune 500 companies as early targets as customers. Stuf either gets priced out of new and known technology products or has to consider less established startups, which raises concerns about not only maturity, but also long-term viability, sustainability, and support from smaller AI applications and startups.

3 Imagine the future of your company – what is your long-term vision for AI in this? How do you plan to evolve or expand your AI capabilities in the future?

I envision running a business where 90% of operational tasks and responsibilities are handled by AI. I don't know if that's in 1 year or that's in 10 years from now, but the question really is how do we properly deploy these tools or build them in-house so that we can reach this vision of the future.

Ideally it gets to the point where we can think about scaling our customer base and revenue efficiently without needing to proportionally increase staff. That's when we will know that AI has done its job.

Neil Chaudhary

Founder & CEO, TrashLab

Trash Hauling

SAN FRANCISCO	LOGISTICS	SEED	2022
Location	Industry	Funding Round	Year Founded

1 How are you using AI to either enhance internal workflows or your customer-facing solution? What has been the more significant impact AI has had for you so far?

TrashLab is a vertical SaaS solution for waste haulers, providing routing, billing, and tracking of dumpster assets. When it comes to AI, we've primarily integrated A product assistance internally into their engineering processes, resulting in a 20-25% increase in productivity. Our CTO is generally bullish and optimistic about generating entire components and code pieces through AI. We've also been experimenting with AI for product requirement documents, using it as a thought partner for generating creative ideas on features, needs, and pain points.

We're also well-positioned to embed AI capabilities into their product, particularly in their communications center. We envision AI handling close to 99% of customer inquiries through voice agents and text bots, and additionally have been exploring AI vision capabilities for trucks to monitor contamination and compliance. In the future, we could see AI significantly influencing our marketing and differentiation strategies as we build out our product.

2 What are the main reasons you wouldn't have implemented AI in your company? Are there specific barriers or concerns that have prevented you from exploring AI solutions in the past or may come up in the future?

The main barrier to AI implementation for TrashLab is trust - the reluctance to hand over control to AI systems. For example, I can imagine a world where even when implementing route optimization software, dispatchers push back against letting the software determine the most efficient routes. Some view AI as hype or a gimmick, leading to resistance in adoption.

Internally, while they are on the tech adopter side and see the potential for increased productivity, there's still hesitation about fully embracing AI solutions. The challenge lies in balancing the efficiency gains of AI with the human element, particularly in an industry where personal relationships and traditional practices are deeply ingrained.

3 Imagine the future of your company – what is your long-term vision for AI in this? How do you plan to evolve or expand your AI capabilities in the future?

My CTO envisions a future where AI eliminates the need for waste haul employers. In this scenario, consumers would simply request a dumpster at a location, and AI would interface with all haulers in the area to book everything seamlessly. This vision represents almost 100% automation, with AI running and managing the business, requiring only physical equipment.

Internally, we anticipate AI automating various functions, including customer service requests and potentially replacing account executives. On the engineering side, they foresee continued productivity boosts, potentially leading to fully autonomous engineers.

Investor Spotlights

Sequoia Capital

San Francisco, Founded: 1972

Funding Round: SEED EARLY GROWTH

1 What are the different acts of generative AI, and why are they important?

Sequoia Capital describes two distinct "acts" in the development of generative AI, where "Act One" is characterized as coming from the "technology-out." This initial phase saw the emergence of foundation models, leading to a "wave of novelty apps that were lightweight demonstrations of cool new technology." This act was important because it introduced the capabilities of generative AI to the public and sparked widespread interest and experimentation.

"Act Two" is focused on solving "human problems end-to-end." The importance of Act Two lies in its potential to create more practical, comprehensive solutions that integrate GenAI into broader applications, often using foundation models as a piece of a more comprehensive solution rather than the entire solution.

The transition between these acts is crucial as it marks the evolution of generative AI from a novel technology to a tool for solving real-world problems and creating tangible value for businesses and users.

2 What are current limitations of generative AI?

The second act of generative AI is expected to take us towards more sophisticated, customer-focused applications of generative AI that are "different in nature than the first apps out of the gate", with a focus on solving end-to-end human problems.

However, generative AI still faces several limitations, including: the "value problem" (many generative AI apps struggle with user retention and engagement. The median DAU/MAU for generative AI apps is 14%, indicating a challenge in maintaining consistent user interest), accuracy and reliability (models can produce inaccurate or "hallucinated" information, a significant concern for enterprises), contextual understanding (AI models still struggle with fully grasping complex contexts and nuances in human communication), ethical and legal concerns (issues around copyright, privacy, and potential misuse of AI-generated content remain unresolved), resource intensity (running advanced AI models requires significant, costly, and energy-intensive computational resources).

To address these limitations, companies are focusing on developing more robust and specialized models, improving data quality and retrieval methods, and creating better user interfaces and experiences. The transition to Act Two represents an effort to create more practical, reliable, and valuable AI applications.

3 What are emerging use cases for generative AI applications? What does the market map for generative AI look like, and where is there the most excitement?

Emerging product blueprints for generative AI applications include generative interfaces (moving beyond text-based conversational UIs to newer form factors), new editing experiences (developing interfaces that make workflows "stickier and the outputs better"), agentic systems (creating AI applications that can "problem-solve, access external tools and solve problems end-to-end on our behalf"), and system-wide optimization (focusing on optimizing entire systems rather than just individual workflows).

The market map for GenAI has evolved to be organized by use case rather than model modality. This reflects the "evolution from technology hammer to actual use cases and value, and the increasingly multimodal nature of GenAI applications". The most excitement seems to be around applications that solve real-world problems end-to-end. Examples like Harvey (building custom LLMs for law firms), Glean (making generative AI more relevant at work), and Character and Ava (creating digital companions) represent the transition to Act Two, where generative AI is being integrated into comprehensive solutions that address specific customer needs and industry challenges.

Source: Sequoia Capital "Generative Ai's Act Two"

Insight Partners

New York, Founded: 1995

Funding Round: EARLY GROWTH LATE

1 What makes the current wave of generative AI so exciting for investors and companies?

The current wave of generative AI is exciting due to the rapid advancements in foundational models like GPT-4, which enable faster and more efficient data training and automation. George Mathew from Insight Partners notes, "We are at a huge platform shift due to recent innovations in AI, particularly generative AI. Almost 40% of people in our network are already using generative AI often, indicating its significant impact on how people live and work." This widespread adoption underscores the transformative potential of generative AI across various industries.

2 What are the key factors investors look for in identifying durable AI companies? Which verticals and applications are most promising for generative AI?

Investors are focused on identifying companies that can leverage generative AI to build sustainable and competitive advantages. Ganesh Bell from Insight Partners highlights, "Investors focus on companies that can effectively integrate AI into their core operations and product offerings. Durability is seen in those that leverage AI to build sustainable and competitive advantages." This means that companies must not only adopt AI but also embed it deeply into their business models to ensure long-term relevance and growth.

Specific verticals such as healthcare, finance, and customer service are particularly promising for generative AI disruption. The panelists note, "Applications that enhance internal efficiency and improve customer experience are of high interest, providing immediate and tangible benefits." These sectors offer numerous opportunities for AI to streamline operations, enhance decision-making, and improve customer interactions, making them attractive areas for investment and innovation.

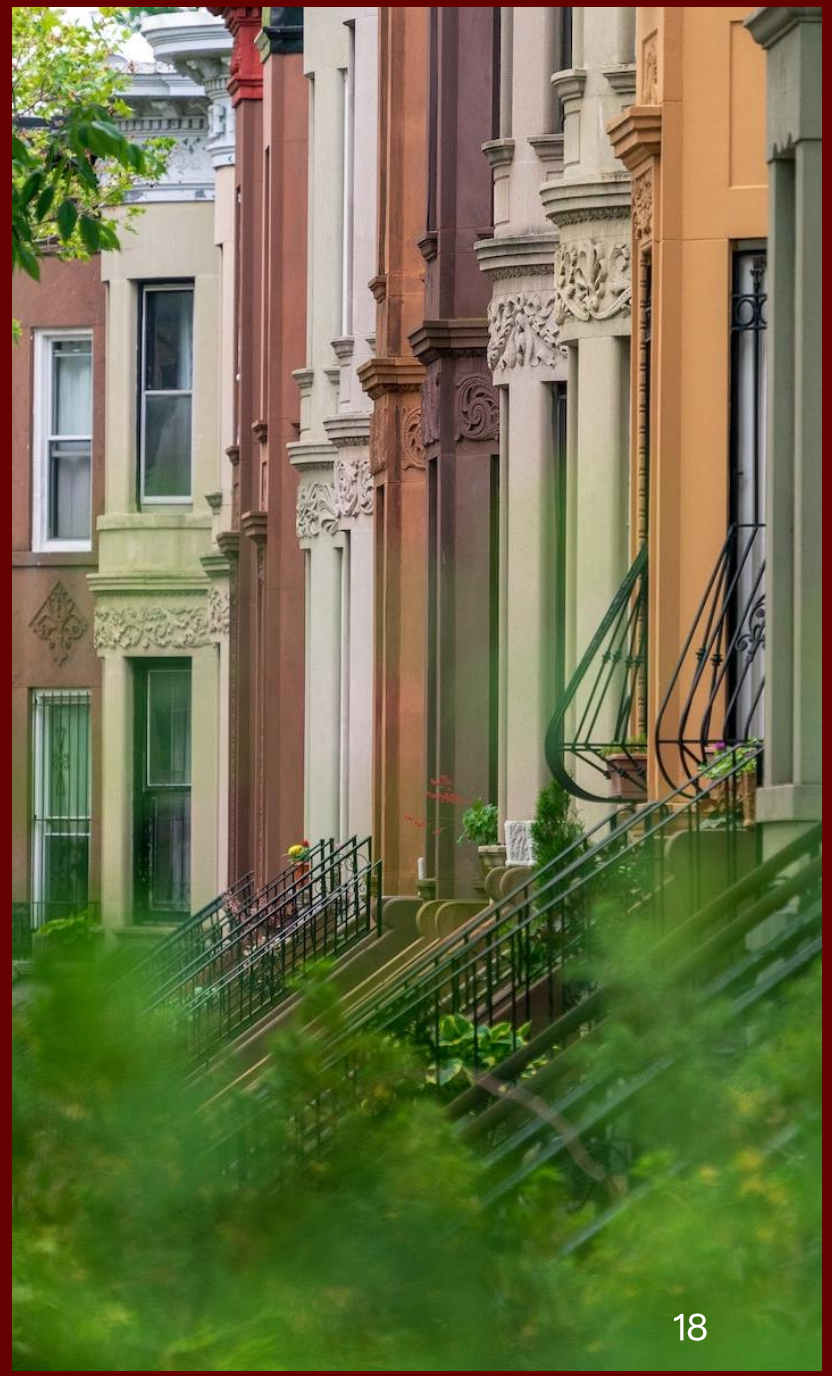
3 What strategic advice do investors have for founders implementing generative AI?

Founders are advised to thoughtfully integrate generative AI into their product roadmaps, balancing internal efficiencies with customer-facing features. The panelists advise, "Founders should thoughtfully integrate generative AI into their product roadmaps, balancing internal efficiencies with customer-facing features. It's crucial to focus on solving customer problems rather than merely introducing AI for its own sake." This approach ensures that AI implementations are both practical and aligned with business goals, ultimately driving better outcomes for the company and its customers.

Additionally, they emphasize the importance of ethical considerations in AI implementation. They advise, "Companies need to establish clear guidelines and governance frameworks to address potential biases, privacy concerns, and ethical implications of AI use." This includes regularly assessing and mitigating risks associated with AI deployment to ensure fairness, transparency, and accountability. The panelists also stress the importance of ongoing monitoring and evaluation of AI systems to maintain their reliability and accuracy, stating, "It's crucial to have rigorous testing and verification procedures in place to ensure the AI outputs remain trustworthy and aligned with ethical standards."

Source: Insight Partners "The Impact of Generative AI on the Future of SaaS

Key Takeaways



Executive Summary

- AI technology is revolutionizing how businesses operate and deliver value, enhancing both internal efficiency and external product offerings
- Investing in B2B SaaS AI has emerged as a significant focus for venture, driven by its transformative potential across industries
    - Investment post-COVID led to a spike in 2021
    - While investment levels have moderated, deal flow remains robust indicating sustained confidence in the sector
- Companies that…
    - **HAVE** large volumes of data, automatable repetitive tasks, and have a need for personalization, and
    - **DO NOT HAVE** a reliance on high stakes decision-making, creativity, and heavy regulation
    - …will have the largest opportunity for AI advancement in the short-term
    - Compared to industries such as traditional education and healthcare & life sciences, media & entertainment, logistics, and tech & software companies are ripe for opportunity
- Investors and founders both emphasize the power of AI to enhance internal activities and improve operational efficiency, and are increasingly prioritizing AI tools to enhance consumer-facing processes
    - However, **a lack of in-house expertise and resources** is a significant barrier for early-stage B2B SaaS companies with effective AI implementation

Key Takeaways for Founders: AI Adoption

The Why

- **Scalability and Flexibility:** AI solutions offer scalability that traditional software cannot match, which allows B2B SaaS companies to adapt quickly to market changes and customer needs and makes it essential for companies to prioritize AI integration in their growth strategies
- **Market Differentiation:** Companies that effectively integrate AI into their offerings can differentiate themselves in a crowded market through personalization and the targeting of specific customer pain points

The How

- Key areas where AI can provide early advancement:
  - **Improved Customer Relationship Management:** Personalized and responsive customer experiences, personalization, and predictive analytics, thereby increasing customer satisfaction and loyalty
  - **Data-Driven Decision-Making:** Advanced analytics capabilities, real-time data analysis, and actionable insights from vast amounts of data, improving decision-making processes
  - **Risk Mitigation:** Risk identification and compliance automation, bolstering risk management frameworks, reducing error likelihood, and enhancing security measures
- As AI technologies evolve, so does **the need for skilled and available talent:** companies should invest in training, development, and capacity that equip their teams with the necessary skills to leverage AI effectively

Let’s change the face of entrepreneurship, together.

Harlem Capital