

Why top startups choose AWS for generative AI

How your startup can innovate freely, scale affordably, and build artificial intelligence you can trust with generative AI on AWS

 startups



Table of contents

Driving the next phase of startup success with generative AI	3	How AWS can help you succeed with generative AI	11
Understanding the impact of generative AI	5	Why startups build with AWS	12
Making data your differentiator	6	AWS generative AI services	13
Business capabilities of generative AI	7	Startups are proving what's possible with generative AI	14
Choosing the right FMs and infrastructure	8	Get started with generative AI	15
Solutions for each layer of the AI foundation	9		
Building with secure, private responsible AI	10		

Driving the next phase of startup success with generative AI

Generative artificial intelligence (gen AI) has emerged as a high-impact tool that is actively redefining how startups innovate, operate, and secure funding. Today's startups are realizing the promise of the technology through existing use cases and new ideas, scaling beyond pilot projects to realize transformative business value, and driving urgency that has evolved gen AI into a strategic imperative for startups at every stage of growth.

In other words, startups that want to remain competitive must develop, execute, and regularly adapt an effective gen AI strategy.

Startups that make intelligent, strategic use of gen AI stand to achieve a host of benefits. Gen AI can help them optimize processes, enter diverse markets, boost investor confidence, and deliver differentiating customer experiences. It's time to join the 92 percent of companies planning to increase their gen AI investments over the next three years.¹

Scaling generative AI success

Startups are entering a new phase of gen AI innovation, with many moving beyond exploratory phases—forging ahead toward execution, scalability, and differentiation. From answering support calls to automating emails to hyper-personalizing marketing content, today's startups are continually discovering new ways to deploy gen AI.

These use cases can not only improve productivity and accelerate growth—but also conserve financial resources, reducing reliance on investors and giving startups more freedom to chart their own path.

Generative AI, by the numbers

15-20%

higher valuations for AI-focused startups, on average²

20-50%

increase in product-market fit³

370%


average return on investment (ROI)⁴

¹ Mayer, H., et al., "Superagency in the workplace: Empowering people to unlock AI's full potential," McKinsey & Company, January 2025

² "How Generative AI is Transforming Startups in 2025," Venture Crowd, 2025

³ Berteletti, E., et al., "Using AI to supercharge R&D: Takeaways from the R&D Leaders Forum," McKinsey & Company, July 2024

⁴ Jyoti, R., et al., "2024 Business Opportunity of AI," IDC, November 2024



Whether you deploy gen AI for a handful of targeted use cases, adopt it across every part of your business, or anything in between, advancing to the next phase of your gen AI journey now will give your startup a critical competitive advantage

Understanding the impact of generative AI

No longer an emerging breakthrough, gen AI has evolved into an essential infrastructure component for virtually all businesses—including startups at every stage of growth. Powered by large foundation models (FMs) trained on vast amounts of data, gen AI enables startups to automate, accelerate, and elevate everything from product development to investor relations.

Understanding the potential impact of gen AI use cases can help you make smarter decisions—and deploy a gen AI strategy that makes the best use of your data to fit your startup's unique business needs.

Deliver experiences that set you apart

Gen AI enables you to deliver new and differentiated customer experiences by personalizing interactions at scale, responding in real time, and adapting to individual preferences across channels. With gen AI, you can engage customers in more relevant, meaningful ways—helping you stand out, build loyalty, and achieve competitive advantage.

Enhance creativity

Gen AI augments your creativity by accelerating ideation, facilitating rapid prototyping, enabling experimentation at scale, and serving as a virtual partner for brainstorming sessions. This helps you generate fresh ideas and explore a broader range of audiences and themes—for everything from marketing content to new feature designs.

Drive productivity

Gen AI empowers your team to complete work faster, saving workers an average of one hour per day⁵ and enabling them to grow 33 percent more productive with each hour of use.⁶ This also allows them to spend more on higher-value tasks, like serving your customers. In only seconds, gen AI can produce rough drafts of spec sheets, UI designs, marketing copy, sales follow-up materials, and so much more. It can also automate routine processes like data entry and responding to customer support requests, putting even more time back into your workforce's day.

Improve work quality

Gen AI powers intelligent chatbot tools that suggest the next-best actions from natural language prompts. These services can equip your workforce with quick answers and accurate guidance that can improve work quality—helping them work both faster and smarter to drive your startup's growth.

Streamline operations

Many startups deploy gen AI to streamline operations, boost efficiency, and reduce costs. By automating processes, accelerating decisions, and reducing costly and time-consuming errors, gen AI gives your startup the power to do more with less.

⁵ "AI Saves Workers an Average of One Hour Each Day," The Adecco Group, October 2024

⁶ Bick, A., et al., "The Impact of Generative AI on Work Productivity," Federal Reserve Bank of St. Louis, February 2025

Making data your differentiator

Your unique data is a key strategic asset for your startup—and leveraging its value is key to achieving the best and most differentiating results with gen AI.

By training an FM on your proprietary data, you can produce a gen AI solution that is more tailored to your unique business needs. Using your data also helps the model produce outputs that are more accurate and contextually relevant to your startup and your mission, teams, products, strengths, and challenges.

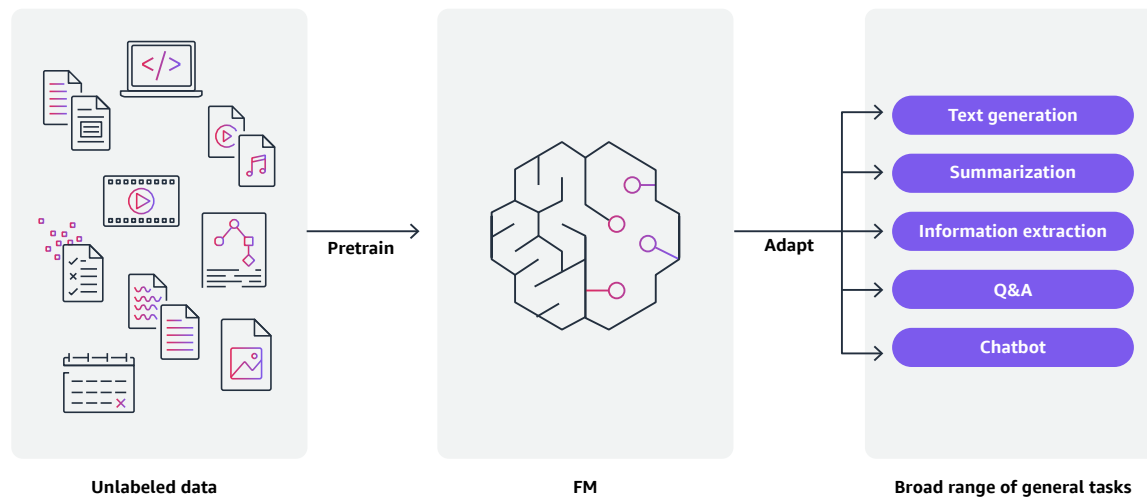
While building a gen AI service or tool using an unmodified FM is at least a step forward, keep in mind that other companies, including your competitors, can leverage the same FM for their purposes. Customizing the model with your data is the most effective way to build gen AI solutions that set your startup apart. By offering benefits, insights, or results that customers simply can't get anywhere else, you can ramp up your startup's growth—and become more attractive to investors.

Other benefits of using gen AI tools customized with your data include:

Quickly and cost-effectively scaling content delivery. Customized gen AI tools can use your product and customer data to guide the tone of marketing material. This can help you develop more impactful messages with variations tailored to virtually infinite audiences—while retaining your brand voice throughout.

Overcoming resource limitations. Tailoring a gen AI tool with your data can help your startup identify and prioritize its best opportunities and leads that are most likely to convert—allowing a small team to attain results previously requiring many more people to achieve.

Personalizing customer experiences. By using your behavioral and purchase history data, you can build smarter recommendation engines, implement hyper-personalized and ultra-targeted features, and deliver differentiated experiences.



“From a startup founder’s perspective, in my opinion, AI tools open an incredible window of opportunities for creating new products that will outperform all existing ones through (Gen) AI technologies, while not requiring significant resources and investments at the start.”

Dima Maslennikov, Founder, PitchBob.io

Business capabilities of generative AI

Startups at all stages use gen AI to enhance productivity and create business value in many ways, including:

Innovation and creativity

Get suggestions, generate prototypes, and explore innovative concepts

Code generation

Improve developer productivity by 57 percent with AI coding companion [Amazon Q Developer](#)⁷

Contact center analytics

Summarize and extract insights from customer calls

Personalization

Improve personalized recommendations and generate tailored content

Virtual assistants

Enhance customer experience with human-like responses

Conversational search

Extract insights from all your corporate information

Content generation

Create text, images, videos, and music

Document processing

Automatically extract and summarize data and insights from documents

Generative AI, by the numbers

According to a 2025 study by the Journal of Business Research, startups that use gen AI are achieving:⁸

- ✓ Improved product development, sales, and operations
- ✓ Product-led growth through technical and non-technical content creation
- ✓ Sales-led growth through content repurposing and customer personalization
- ✓ Superior operational efficiency in market entry and customer engagement



Choosing the right foundation models and infrastructure

As you work to identify the capabilities of gen AI that are most useful to your startup—and develop a strategy for implementing them into your business processes—you will need to determine which FMs best work for your gen AI use cases.

You should also carefully consider the infrastructure you will be using to support your FMs. Your models will benefit from a cost-efficient infrastructure that meets your requirements for performance.

Speed, flexibility, and confidence in vendor and solution choices are your top priorities when building for gen AI. The FMs and infrastructure you choose today will shape how quickly you can scale, how cost-effectively you can operate, and many more down-the-line concerns.

Many of the world's largest enterprises and most successful startups rely on Amazon Web Services (AWS) for their gen AI needs, knowing that AWS can deliver:

1 Freedom to invent

2 Value

3 AI you can trust



Solutions for each layer of the artificial intelligence foundation

TOP LAYER: APPLICATIONS TO BOOST PRODUCTIVITY

Amazon Q Business

The no-code gen AI assistant built for lean startups. Secure by default, [Amazon Q Business](#) lets any team member request data, insights, or simple automations in plain language. Draft investor decks, pull customer metrics, or spin up basic workflow apps.

MIDDLE LAYER: FOUNDATION AND PLATFORMS TO BUILD AI APPS AND SERVICES

Amazon Bedrock

A fully managed, serverless FM platform built for startups that need choice and speed. With one simple API, [Amazon Bedrock](#) gives you:

Broad model selection – Swap in the best FM for each use case, from Anthropic, AI21 Labs, and more, to [Amazon Nova foundation models](#) (frontier performance at up to 75 percent less cost).

Instant customization – Privately fine-tune or use Retrieval Augmented Generation (RAG) on your data in minutes; no cluster provisioning required.

Built-in RAG and agents – Launch chatbots, document search, or workflow automation agents that tap into your enterprise systems via configuration.

Zero ops, transparent scaling – Pay only for what you use. Amazon Bedrock autoscales on demand, keeping your FM costs lean and predictable as you grow.

BOTTOM LAYER: INFRASTRUCTURE TO BUILD AND TRAIN AI MODELS

Amazon SageMaker

Build, train, and deploy machine learning (ML) models. [Amazon SageMaker](#) provides lean teams with a single, hosted workspace to explore data and prototype and deploy models to production—no need to manage custom DevOps or juggle multiple services. Move from “I have an idea” to “I have a live model” in hours instead of weeks.

AWS Graviton and AWS Trainium

Our advanced chips are designed to deliver faster performance and significantly more memory capacity than previous versions.

Amazon EC2 GPU Instances

Provide startups with high-performance GPU-based instances for graphics-intensive applications and ML inference.

Building with secure, private responsible AI

Instilling responsible AI practices can help your startup fulfill promises of social impact, reduce risk, create differentiation, and develop trust with customers, partners, and investors. Leveraging responsible AI can even increase your investment and funding opportunities.

Venture capital (VC) funds and investors, including Salesforce Ventures, are directing more focus and funding to innovative and ethical startups.

Following responsible AI practices can also help you qualify for funding from multilateral organizations and donors, such as the Gates Foundation's equitable AI and large language model (LLM) initiatives and USAID's Equitable AI Challenge project.

Common responsible AI practices

Redacting personal info from training data. Excluding your customers' names, addresses, or other protected data helps protect their privacy.

Bias testing and mitigation. AI systems should be regularly tested to determine if they are producing unfair results based on race, gender, or other protected characteristics.

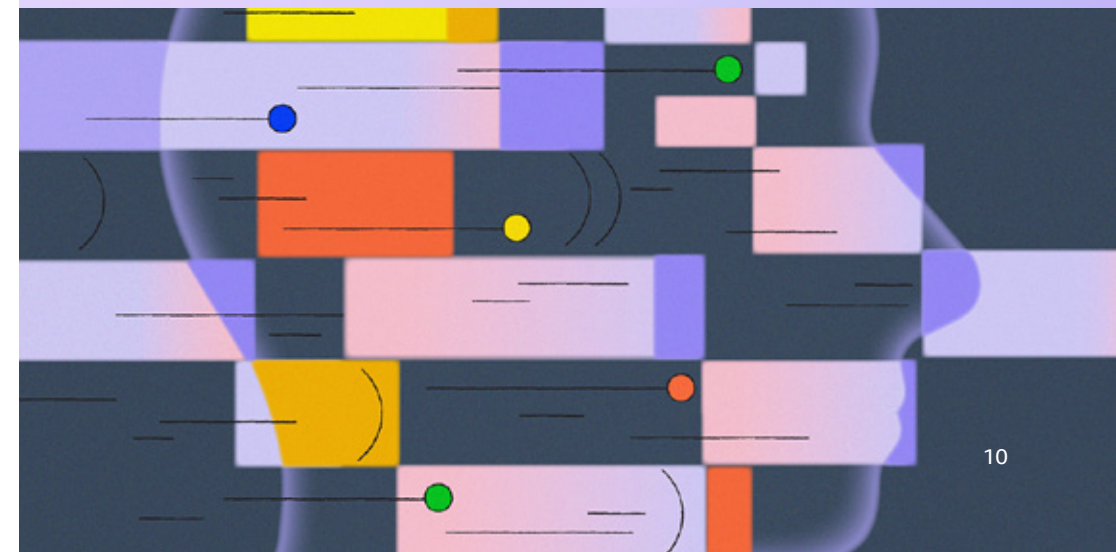
Human-in-the-loop review. For some use cases, like job screening or loan approvals, tasking people to review the AI's recommendations is key.

Explainability techniques. These are various methods developers use to determine why AI made a certain prediction—making it easier to diagnose and fix issues.

Generative AI, by the numbers

According to a 2024 PwC survey, the top benefits of investing in responsible AI practices are:⁹

- 1 Enhanced customer experience – 41%
- 2 Enhanced cybersecurity and risk management – 40%
- 3 Facilitated innovation – 39%
- 4 Improved transparency – 37%
- 5 Facilitated coordinated management of AI – 37%



How AWS can help you succeed with generative AI

AWS has a proven track record of helping startups at every stage of growth and level of funding maximize the power of gen AI to create new customer experiences, drive unprecedented productivity, and turbocharge company growth.

Trusted by more startups

Equip your startup with the raw performance, lockdown security, and cost-efficient flexibility trusted by the most startups of any cloud. Put the nearly 20 years' experience and unmatched expertise of AWS for Startups to work for you today—and set your startup on a course to accelerate growth, seize more opportunities, and perhaps even become the world's next unicorn.

Unmatched startup expertise

You will also gain expert guidance and support from the more than 1,000 former founders, CTOs, venture capitalists, angel investors, and startup mentors that make up the AWS for Startups team. It's like having a cohesive, living community to help you navigate your toughest challenges and seize critical opportunities as you build your business.

Broadest and deepest tech stack

On AWS, your startup can access the broadest and deepest set of tools to help you innovate freely and experiment with confidence. With a constantly expanding set of services and solutions, your startup can build the future today—and expand faster into tomorrow.

Programs and resources for startup success

Explore a massive range of exclusive programs, resources, events, and training opportunities on AWS. Join our flagship startup program, [AWS Activate](#), where you can apply to receive up to \$100,000* in promotional credits. Since its inception in 2013, the program has provided over \$7 billion in AWS Activate credits to startups globally.

80%

of unicorns are AWS customers¹⁰

30+

years of AWS innovation shared with new founders

200+

products and services available to startups on AWS

Why startups build with AWS

AWS aligns with the startup mindset, ensuring you can innovate without constraint, optimize costs, and build with AI you can trust.

Freedom to invent

Startups are borne from their innovative spirit. AWS provides the most choice and flexibility with a comprehensive AI portfolio to allow you to innovate without limitations and quickly build transformative experiences. Choose the models, tools, and integrations that best fit your vision. AWS invests at every layer of the AI stack, with two times more production-ready capabilities than other cloud providers.

Plus, [Amazon Bedrock](#) offers new models as soon as they are released, providing access to over 100 FMs available from leading AI companies using a single API. Amazon Titan, created by AWS and available on Amazon Bedrock, provides high-performing FMs from Amazon that are pre-trained on large datasets and built to support a variety of use cases. And [Amazon SageMaker](#) brings together widely adopted AWS ML and analytics capabilities to help you build, customize, and deploy your own models.

Value

Pursue your gen AI vision without letting costs hold you back. AWS industry-leading tools—including scalable infrastructure, cost-effective models, and powerful optimization tools—empower you to pursue AI innovation without disrupting your bottom line.

With [AWS Trainium](#) and [Amazon Elastic Compute Cloud \(EC2\) Trn1 Instances](#) and [Amazon EC2 Inf2](#) instances, you can achieve 40–50 percent cost savings on training and inference—allowing you to run inference at scale and cost-effectively.

Build apps up to 57 percent faster with [Amazon Q Developer](#), the most capable gen AI-powered assistant for software development. Accelerate nearly every step of the software delivery lifecycle and give your developers the time and tools to focus on innovation.

Artificial intelligence you can trust

Launch with security, privacy, and responsibility built in from day one. Designed to be the most secure cloud infrastructure, AWS gives you the confidence to define your AI future with enterprise-proven protection and reliability from the industry's most advanced AI specialist network.

[Amazon Bedrock Guardrails](#) implements safeguards for your AI applications, blocking harmful topics and content using customizable protections. [Automated reasoning](#) reduces hallucinations in gen AI outputs while [built-in privacy and data controls](#) keep your data from being used to train public models.

More reasons startups choose generative AI on AWS

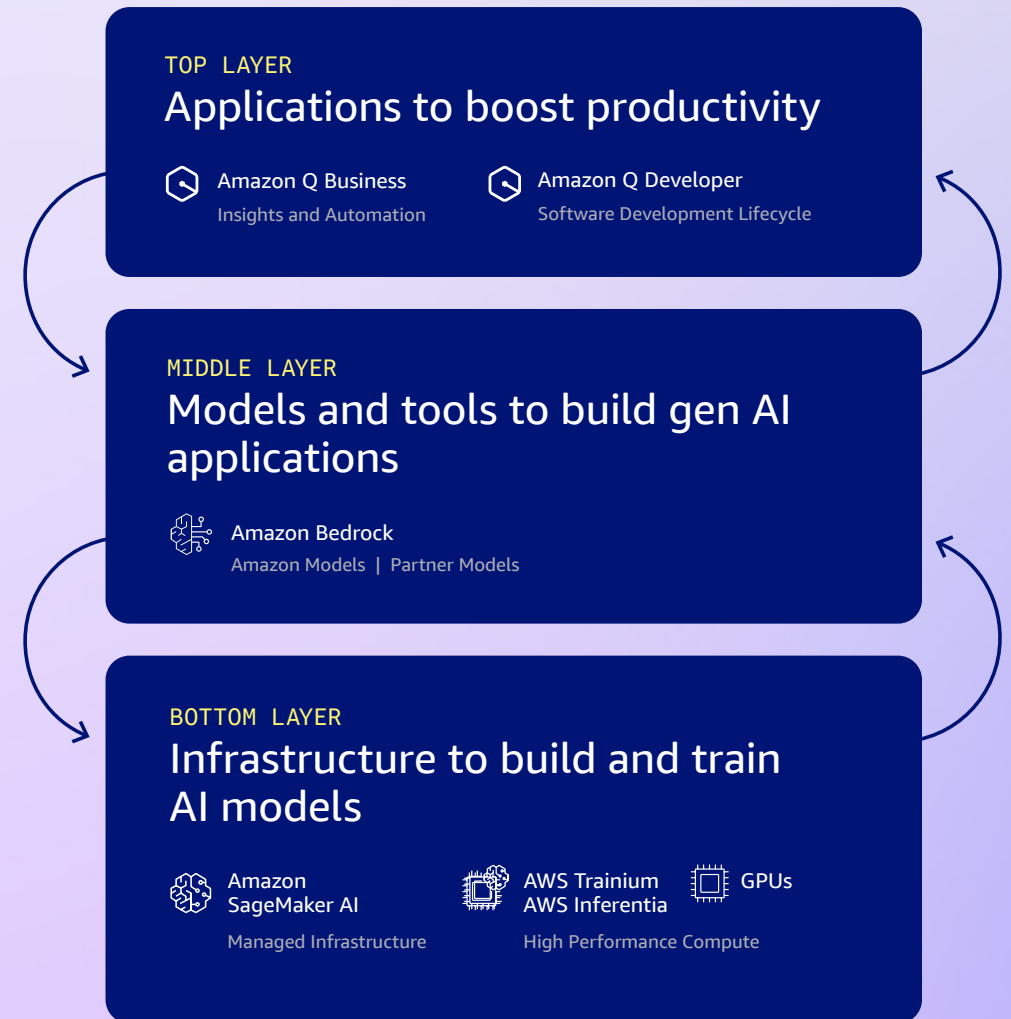
- ✓ AWS is the home to more startups and software developers than any other cloud provider
- ✓ We have the longest and strongest track record of helping startups launch, build, grow, innovate, and accelerate time to market
- ✓ The AWS for Startups team is made up of more than 1,000 former founders, CTOs, venture capitalists, angel investors, and startup mentors
- ✓ We offer access to specialized expertise tailored to a broad range of industries
- ✓ AWS helps startups establish and maintain a culture of innovation
- ✓ We offer the broadest and deepest set of services on the most secure cloud
- ✓ AWS provides the most flexible gen AI tools—so you can build your ideas, your way
- ✓ We support you from idea to MVP to maturity with startup programs, resources, and training opportunities
- ✓ Amazon Bedrock offers a broad set of capabilities needed to build gen AI applications with security, privacy, and responsible AI
- ✓ Plus, you can also now use your AWS Activate Credits* to access, test, and fine-tune FMs on Amazon Bedrock

Further reading on responsible AI for startups:

[Additional gen AI resources](#) →

AWS generative AI services

AWS offers the most comprehensive gen AI capabilities, with solutions spanning the full stack.



Startups are proving what's possible with generative AI

Startups of all sizes are integrating gen AI into their businesses to innovate faster and build an advantage over competitors. Here are a few examples that demonstrate how we help startups drive success with gen AI.



Coastal Carbon

[Coastal Carbon](#) is creating general intelligence of the natural world by training thousands of terabytes of satellite data. The startup is training an FM on AWS for conserving, protecting, and restoring ocean environments with [Amazon SageMaker HyperPod](#). Coastal Carbon's innovative approach will process thousands of petabytes of historical satellite data in order to create a digital twin of the natural world—all in the name of coastal ecosystem restoration.



Hippocratic AI

A leader in gen AI for healthcare, [Hippocratic AI](#) develops safety-focused LLMs for healthcare with [Amazon SageMaker HyperPod](#), accelerating their model training four times faster. Powered by this LLM, the AI agents can now respond back to a patient in two seconds or less for natural, real-time conversations with patients.

Get started with generative AI

There's no doubt that gen AI brings profound business benefits to any startup at any stage of growth. If you're just getting started with gen AI, the best way to get moving is to identify the objectives you want to pursue and the ideal use cases for your startup. AWS can help you run smarter experiments, achieve quick wins, and accelerate into the next phase of gen AI adoption.

If you're already running various gen AI pilots and projects, then it's time to talk about achieving substantial, measurable business value—and then scaling those results, quickly, efficiently, and cost-effectively. AWS has the solutions, expertise, and experience to help you navigate every step of the way.

Working with AWS can help ensure you are unlocking the potential of your data, considering responsible AI, and extracting maximum value from the broadest and deepest gen AI tech stack. Engage with an AWS expert now—and start realizing the transformative value of gen AI throughout your startup today.

[Learn more about gen AI for startups with AWS →](#)

