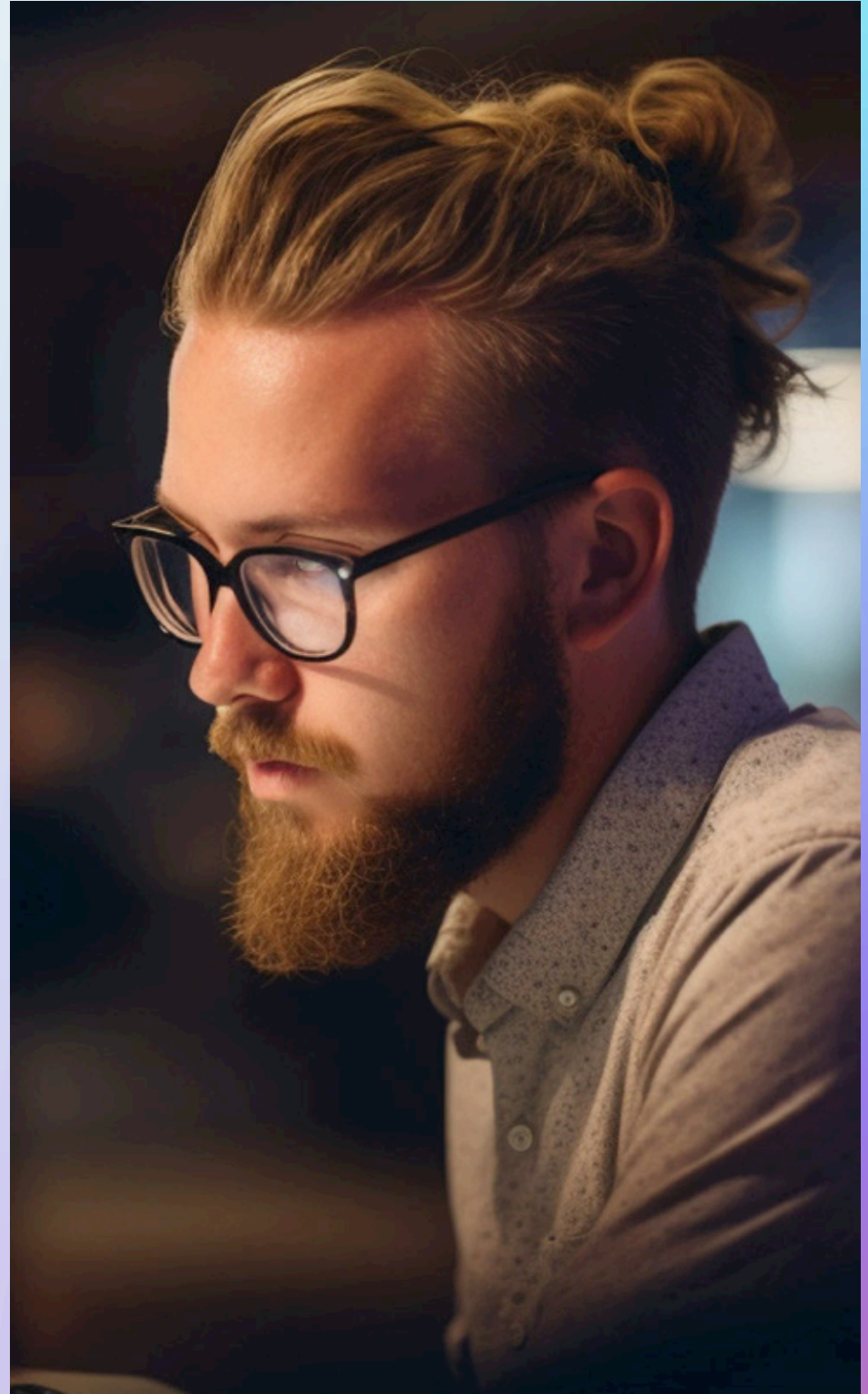




Top 6 generative AI use cases for startups

How generative AI can unlock
startup growth

This eBook is designed for startup founders interested in unlocking
business value and gaining competitive advantages with generative AI.



INTRODUCTION

Solve your most common business challenges with generative AI

The rapid emergence of generative artificial intelligence (AI) applications has brought us to an inflection point in the widespread adoption of AI. As generative AI continues to capture attention and imagination, the technology is proving transformative across all lines of business—including engineering, marketing, customer service, finance, sales, and more.

For startups across virtually every industry, the race to unlock the business value and competitive advantages of generative AI has become a top priority. Founders are leveraging generative AI to achieve benefits such as:

- **Faster innovation:** Generative AI can fast-track the entire innovation process from ideation to go-to-market. Your team can create three-dimensional renderings of your new product concepts, or even analyze your prototypes data and suggest iterations.
- **Enhanced customer experiences:** Adding generative AI functionality to products and services can lead to deeper, more powerful experiences that attract new customers and help retain existing customers.

- **Improved productivity:** Generative AI can automate tasks and augment creative thinking, allowing your team to complete projects faster and achieve more impactful results.
- **Accelerated process optimization:** Generative AI saves time, allowing you to redirect resources toward higher-value activities—such as building customer relationships or growing the business through innovation.
- **Enhanced creativity and content generation:** Startups can extend the creative thinking of staff with generative AI to both optimize existing content and explore new and innovative ideas.

While it's clear that investing in generative AI can yield substantial benefits, startups face several barriers to adoption. Many startup leaders are unsure how they will achieve a positive return on investment (ROI), lack confidence in the skills of their team, don't have the time or resources to prepare their data for training, or have yet to identify the right partner to help them use the technology.

Choosing the right generative AI use case

Before you can successfully adopt generative AI, it's important to determine where and how you can apply the technology for the greatest impact. In other words, you need to select the right generative AI use case for your startup.

This requires the consideration of several factors.

First, you need to find a balance between optimal business value and speed. A proof of concept built by a siloed data scientist is not likely to generate much enthusiasm from your team. What is more likely to attract the needed commitment, and potentially, investor funding is showing how generative AI can address the practical issues your startup currently faces. Furthermore, to not lose momentum, you will want to find something that can be accomplished in the short term, whether that means a few weeks or a few months. This is especially true if this is your first foray into AI.

Second, you will want to find a use case that will leverage your existing data to create a unique value for your startup. Generative AI business value grows exponentially when the foundation models (FMs) are customized with your own data through prompt engineering or by fine-tuning them. You will be able to customize your own FM with your data and intellectual property (IP), which will stay completely protected, secure, and private.

Lastly, here are two critical factors to consider when selecting the right generative AI use case:

- **Impactful:** Early use cases should solve real business problems (or create new opportunities that matter to your business and your investors) and demonstrate the differentiated benefit of using generative AI to solve them.
- **Relatable:** Initial use cases shouldn't be limited to solving one problem. Spark team members' imagination and inspire them to think about what they can solve within their domains using generative AI.

The best way to satisfy these two criteria is to ensure that technical experts and domain experts are working hand in hand on your generative AI project. Technical experts can conduct feasibility assessments, and domain experts will ensure the solution is solving a real business problem and that it will have a real impact.



What is generative AI?

Generative AI is a type of AI that can create new content and ideas, including conversations, stories, images, videos, and music. It is powered by large models that are pretrained on vast amounts of data, commonly referred to as foundation models (FMs).

Starting with the right use case is a key factor of success

In this eBook, we outline six use cases that can be successfully deployed using solutions built with Amazon Web Services (AWS) AI, including generative AI offerings. You can apply these use cases to kick-start your AI journey or add them to your current strategy—and they can truly transform your startup.

Choosing an impactful yet achievable generative AI use case is crucial for gaining support and buy-in. The use case should align with your strategic goals and address a clear business need. It should be scoped appropriately so that initial pilots can demonstrate value and build trust without overpromising. Selecting a use case that is too ambitious without proving more limited capabilities first can lead to disappointment and skepticism. On the other hand, choosing a trivial use case will fail to get stakeholders excited about generative AI's possibilities. The ideal use case is one that stakeholders across your startup recognize as important but is still limited enough in scope that quick wins can be demonstrated without requiring extensive infrastructure changes early on. By choosing the right balance of ambitious yet achievable, generative AI pilots can gain backing for further initiatives.

6 leading startup use cases:

- 1 **Ideate and develop new products ›**
- 2 **Team productivity and creativity ›**
- 3 **Augment and accelerate marketing content creation ›**
- 4 **Generate powerful sales content ›**
- 5 **Improve the customer self-service experience ›**
- 6 **Automate document data extraction and analysis ›**

1 Ideate and develop new products

Every successful startup founder has a unique story about how they turned their idea into a business and the many choices they made along the way. The launch phase of a startup is a critical time, and how an idea is accepted by early customers and investors can go a long way to determining its long-term prospects. It's tempting to tinker with an idea until it's perfect, but to stay competitive and keep up with customer demands, your business needs to develop and launch differentiating products quickly. Developing a minimum viable product (MVP) can be lengthy and costly, but generative AI applications can accelerate and augment product creation, ideation, prototyping, testing, and more—helping you bring more impactful products to market faster and with greater confidence.

Generative AI applications can automate manual aspects of product development, such as routine design, analysis, and writing tasks. It can also generate dozens (and, in some cases, hundreds or even thousands) of ideas from simple text prompts, all within seconds. These capabilities free your team to focus on completing more strategic and creative work, such as developing unique concepts and positioning to engage customers across audience segments. Ultimately, these applications allow your team to iterate faster.

Specific generative AI technologies offer further benefits across the new product value chain, from ideation to patent to launch, including:

- Design tools can rapidly iterate through multiple design variations to help optimize prototypes
- Recommendation algorithms, conversational AI (CAI), and natural language processing (NLP) can uncover new product opportunities based on consumer data
- Creative text and image generation AI models can generate blueprints, novel visual concepts, and designs to support your product team

Amazon Bedrock offers access to a family of models that aid ideation and accelerate design testing—all on scalable infrastructure that helps transform product creation. Amazon Bedrock also reduces physical prototyping and testing costs by parallelizing multiple design stages, such as design iteration, simulations, and variations.

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IDEAL FOR ALL INDUSTRIES

STABILITY AI

“Stability AI thrives on innovation, and our foundation model Stable Diffusion on Amazon Bedrock reflects the most pioneering developments across generative AI. Offering the latest release of our foundation model SDXL 1.0, with improved image and composition detail over its predecessor, gives Amazon Bedrock customers access to cutting-edge resources and advances our goal to activate humanity’s potential with AI.”

Emad Mostaque, Founder & CEO, Stability AI

2 Team productivity and creativity

Generative AI has the potential to fundamentally transform the way your team works. Through natural language interfaces, generative AI-powered assistants can go beyond simple search to provide meaningful answers, insights, and recommendations tailored to each employee's needs.

Knowledge workers can have complex conversations with these AI assistants and receive synthesized responses based on analysis of all the data and documents they have access to across the business. Additionally, generative AI can become an invaluable aid for writing and content creation. Your sales team can generate targeted content for specific clients simply by describing their goals and needs. Marketers can provide their AI assistant backgrounds on new campaigns and receive drafted social media posts, emails, and ad copy in the appropriate voice and tone for their audiences.

The AI assistant can also analyze large datasets to find non-obvious insights and trends, enabling data-driven decision making and strategy development. Rather than sorting through reports, employees can ask plain language questions about performance and receive clear, actionable responses and recommendations.

Finally, generative AI has the potential to enhance creativity through interactive brainstorming. Users can describe a challenge or goal and receive innovative suggestions and ideas based on AI's analysis of the issues. The interactive back-and-forth can allow for rapid refinement of concepts, leading to more breakthrough ideas in less time.

In summary, generative AI can provide knowledge workers with an intelligent and creative assistant that goes beyond search to deliver insights, content creation, and interactive brainstorming. This can free up your team to focus on more complex, meaningful work that makes the best use of its time and talents. Generative AI has the potential to usher in a new era of productivity, innovation, and enhanced job satisfaction across your startup.

[Learn more >](#)



3 Augment and accelerate marketing content creation

Your marketing team regularly spend days drafting reports, creating internal documents for meetings and approval processes, and collating data for campaigns. Automating these repetitive tasks using generative AI can free them to focus on higher-value work—like crafting compelling brand narratives and exploring innovative campaign strategies.

Generative AI also augments marketers' creative thinking. By 2026, over 100 million humans will engage generative AI assistants to contribute to their work.¹ By treating generative AI like a creative assistant or coworker, marketers can collaborate with it to come up with new ideas, discover fresh angles on specific topics, and investigate different approaches to reaching their target audience.

Perhaps best of all, generative AI can allow marketers to complete these tasks in a fraction of the time normally required—saving your startup time and resources.

AWS offers generative AI solutions to help your marketing team speed up content creation and strategic planning without losing quality. With generative AI on AWS, marketers can draft internal discussion documents in record time, develop innovative, brand-compliant creative with less effort, devise strategic plans tailored to your audience and segments—and ultimately deliver more impactful and successful campaigns.

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DESYGNER

“One thing that drove us to Amazon Pinpoint was segmentation and the ability to create unique customer journeys within a marketing automation funnel...There was a learning curve, but it was quick to get up and running. We’ve developed skills on Amazon Pinpoint that we can use for years to come to improve our marketing efforts.”

Mariana Aguiar, Founder & CPO, Desygner

STABILITY AI

“With Amazon SageMaker and the other AWS services, we can make generative AI accessible to you to create amazing new things and activate the potential of your businesses, your community, and humanity. We’re super excited to see what you’re going to create with generative AI.”

Emad Mostaque, Founder & CEO, Stability AI

4 Generate powerful sales content

Sellers are leveraging generative AI to automate manual work and help them seize opportunities faster. Generative AI can enhance your sales team's productivity, augment its work with impactful creative and new ideas, and free up more time to pursue leads, foster relationships with customers, and devise more effective sales strategies.

Your sales team is the heart of your startup, and its time is extremely valuable. Unfortunately, sellers are typically forced to spend precious hours on repetitive, undifferentiated tasks—such as drafting customer communications, entering data into CRM systems, and preparing reports.

With generative AI on AWS, your sales team can complete these duties exponentially faster—without sacrificing accuracy, quality, or even brand compliance. By analyzing your documents and data, generative AI applications can create internal communications, sales reports, and a wide range of other sales content. Once properly trained, generative AI can complete this work in seconds and with minimal or no input from your sales team.

Furthermore, a sales team can use generative AI on AWS to augment its work. Generative AI can help sellers brainstorm fresh ideas, enhance sales documents with personalized or localized content, identify new leads or opportunities, and quickly add touch points to nurture streams.

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CODA

“We’re excited about how Amazon Bedrock can bring quality, scalability, and performance to Coda AI. Since all our data is already on AWS, we are able to quickly incorporate generative AI using Bedrock, with all the security and privacy we need to protect our data built-in. With over tens of thousands of teams running on Coda, including large teams like Uber, the New York Times, and Square, reliability and scalability are really important.”

Shishir Mehrotra, Co-Founder & CEO, Coda

SHOWPAD

“We improve how sales and marketing teams partner in pursuit of a shared goal: bringing meaningful value to each buyer interaction. This requires tailoring information and improving how sellers engage with buyers, based on their unique needs. That’s why we rely on Amazon Bedrock to rapidly experiment and subsequently push new models to production, so we can ensure that every conversation is empathetic, authentic, and builds trust with buyers.”

Tony Grout, CPO, Showpad

5 Improve the customer self-service experience

The demand for self-service conversational interfaces continues to grow as more users prefer to interact with businesses on digital channels. These capabilities are no longer reserved to enterprise companies, many startups can now leverage generative AI to power voice and text conversational interfaces that enable new ways of engagement, increase customer satisfaction, reduce operational costs, and streamline business processes.

Many of these solutions are powered by CAI, which adds human-like conversation capabilities to your business applications. CAI combines technologies like NLP, natural language understanding (NLU), and natural language generation (NLG) to better understand and respond to customer inquiries.

CAI interfaces are used broadly across a variety of industry segments and use cases. The common use cases for CAI include 1) building virtual agents and voice assistants, 2) automating informational responses and data capture, 3) automating customer service, and 4) performing transactional operations.

CAI solutions provide the advanced deep learning functionalities of automatic speech recognition (ASR) and NLU to enable customers to build applications with highly engaging user experiences and lifelike conversational interactions using voice and text. With **Amazon Lex**, the same deep learning technologies that power Amazon Alexa are now available to any customer, enabling you to build sophisticated natural language conversational bots quickly and easily.

[Learn more ›](#)

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TECHSTYLE FASHION GROUP

“More and more consumers are relying on automated methods to interact with brands, especially in today’s retail environment where online shopping is taking a front seat. The Genesys Cloud and Amazon Web Services (AWS) integration will make it easier to leverage conversational AI so we can provide more effective self-service experiences for our customers.”

Aarde Cosseboom, Senior Director of Global Member Services
Technology, Analytics & Product, TechStyle Fashion Group

6 Automate document data extraction and analysis

The millions of documents created by your startup contain a treasure trove of insights waiting to be leveraged. Unfortunately, manually processing the ever-growing volumes of data to make them easy to access and search is a cumbersome and costly task. Using AI, your team can gain timely access to the information contained in your documents, leading to new insights that will inform your business decisions.

AWS offers three intelligent document processing (IDP) services that can be deployed individually or combined as building blocks to develop an end-to-end document processing solution. **Amazon Textract** automatically extracts handwriting, printed text, and data from scanned documents. **Amazon Comprehend** is an NLP service that uses ML to find insights and relationships in text. And **Amazon Augmented AI** (Amazon A21) provides built-in human review workflows to help ensure the accuracy of data.

Generative AI complements these services to further automate IDP and accelerate time to insight. You can use generative AI to flag and even correct mistakes, such as incomplete phone numbers, missing documents, or addresses without street numbers. Generative AI can complete this work faster and with fewer resources than traditional IDP workflows, which rely on manual review and complex scripts. **Amazon Bedrock** makes FMs from leading AI startups and Amazon available through an API, so you can identify and access the model that best suits your IDP requirements.

You can also quickly and efficiently build, train, and deploy your own ML models for text extraction and analysis with **SageMaker**. This fully managed service provides several built-in ML algorithms—such as BlazingText and Linear Learner—that are optimized for text classification, NLP, and optical character recognition (OCR).

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IDEAL FOR ALL INDUSTRIES

HNRV

“Hnry receives thousands of documents every day, from business expense claims to identity documentation. On average, 38% of these documents will have errors in their user-transcribed fields, requiring manual correction by our accounting team. Using Amazon Textract functionality on these documents helps reduce manual data transcription and increase overall accuracy by over 80%. With automatic invoice processing using Amazon Textract, we can continue to simplify managing customer’s day-to-day accounting needs, saving them from the tedious, time-consuming task of data entry.”

James Fuller, Co-Founder & CEO, Hnry

Start or expand your generative AI journey now

With the use cases in this eBook, you can leverage generative AI to propel innovation, improve your customer self-service experience, find insights faster through conversational search, create compelling marketing and sales content quickly, ideate and develop exciting new products, and automate document data extraction and analysis.

We chose to highlight these six use cases because startups like yours are achieving impactful, measurable results with them today—and because they fulfill the requirements you should look for when identifying a suitable application for generative AI. These use cases can be completed in a matter of months, solve real business problems, increase performance, reduce costs, and improve the customer experience.

The business potential of generative AI goes far beyond these six use cases. With the broadest and deepest set of generative AI services and ML tools available today, AWS can help you apply generative AI in a wide variety of ways that can transform your business—allowing you to push innovation to new heights and reimagine the possibilities of what your startup can achieve.

[Learn more about AWS ML for startups ›](#)

[Explore generative AI ›](#)

