



# Accelerate growth and improve competitiveness

How ten leading software companies are using artificial intelligence to drive innovation, improve applications and optimize costs

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# Business in the age of accessible artificial intelligence

Thanks to the rapid adoption of cloud computing, the rise of compute power and data volumes, and the emergence of easy-to-use solutions that require little or no experience, artificial intelligence (AI) is now more accessible than ever.

Leading software companies across nearly every industry are leveraging AI to achieve business growth. For many, AI has become a core component of their operations. According to Databricks, the number of companies using SaaS LLM APIs has grown 1,310% between the end of November 2022 and the beginning of May 2023.<sup>1</sup>

Amazon Web Services (AWS) is playing a pivotal role in the advancement of AI, empowering customers to effectively use and derive the most benefit from the technology. These customers span finance, healthcare and life sciences, manufacturing, media and entertainment, the public sector, retail, and technology.

## Categorizing artificial intelligence objectives

By offering the broadest and most complete set of AI services, AWS is able to meet its customers wherever they are in their AI journeys and help them achieve their business objectives. More than 100,000 customers use AWS AI services for everything from enhancing the customer experience and predicting market trends to improving productivity and accelerating innovation.

AWS helps software companies of all sizes to successfully leverage AI across three categories of critical business objectives: improving the customer experience, optimizing business operations, and accelerating innovation.

This eBook features success stories from AWS customers that have achieved transformative results across these three categories using innovative AI capabilities.



## SUCCESS STORIES

# Accelerating innovation

Software companies leverage AI to help accelerate innovation across their products, services, and applications. This can help your teams accomplish more—regardless of their ML skills, driving productivity, ease to scale or optimizing costs.

Read on to discover how Canva and AuthBridge are leveraging AI to achieve transformative results across their businesses.





## Faster innovation, increased collaboration and improved CX

Canva is a global visual communications platform that is using ML to bring its AI image generation feature to its 100 million monthly active users.

### Opportunity

As an online platform that can create and edit presentations, social media posts and more, Canva wanted to open up content creation for everyone—regardless of skill or capability. Its goal was to empower organizations' creativity and make design as simple as possible.

A demo was initially started using an open-source, text-to-image ML model. But to take it to the next level, and scale the hardware to cope with anticipated demand, would have taken at least six months to implement. More investment was needed—and a partner that Canva could rely on.

### Solution

Having already been working with AWS for almost ten years, Canva implemented Amazon SageMaker to release its new text-to-image solution to users in just three weeks. A timeline that was unreachable before.

The image creation sequence is set up so that when a user now enters a text prompt, Amazon SageMaker Real-Time Inference endpoint generates an image. The system then filters them through the Amazon Rekognition model to automatically moderate for malicious and Not Safe For Work content. With this cutting-edge technology, users can create appropriate, unique and high-quality images in seconds—rather than hours or days.



### Results

- **Under three weeks** to roll out text-to-image features to users
- **Improved productivity** by adding content moderation
- **Accelerated innovation** in ML for users

**"Before AWS, heavy lifting and cutting edge [features], Canva couldn't ship big, modern, cutting-edge models quickly, and now we can."**

Glen Pink, Director of ML, Canva

# Innovation, scale and growth opportunities across India

**AuthBridge** verifies identities for employers and service providers across India. By using Amazon Rekognition and Amazon Textract to do so, they can make sure that people are who they say they are.

## Opportunity

AuthBridge uses AI for identity verification in real time. What started over 15 years ago with physically entering and verifying records, has now become an automated process. This helps employers verify job candidates, online gaming companies validate new members, and banks confirm loan applicants.

But even the fastest processes can't always keep up with a surge in demand. In 2020, the global pandemic led to more work for AuthBridge's AI-powered identity verification services. Many IT companies in the country wanted to quickly onboard new hires, which led to a significant increase in requests from banking and financial services companies. AuthBridge needed to migrate its IT infrastructure from its on-premises data center to the cloud that year—to keep up with the 3 million transaction requests a day.

## Solution

Following a thorough review process, AuthBridge chose to migrate to AWS cloud using AWS Snowball, as this allowed large amounts of data to be transferred in one go. Adopting a lift-and-shift strategy, applications were migrated to Amazon Elastic Compute Cloud. As transactions grew, this approach supported operations to easily scale, while keeping greater security.

For example, AuthBridge took verification to the next level by developing its own custom background verification platform, iBRIDGE. Using AI to automate processes and accelerate operations, candidates are now able to now submit all their application details in one go. Offering more reliability, better performance, and AI-enabled capabilities to speed up hiring processes. With AWS, AuthBridge has increased its output to over 60 million identity authentications every month. In the next five years, it aims to extend to markets beyond India, including regions in the Middle East and Europe.

## Results

- **90% of verifications completed** in under two seconds.
- **Over 60 million** identifications supported each month.
- **Three-hour court record** check sped up from three days.
- **New markets** quickly supported in other countries.
- **Cost optimization** of data center maintenance.

**“With AWS, we could easily scale our operations as transactions grew, while ensuring the highest level of security. Additionally, the managed services provided by Amazon RDS allowed us to offload much of the administrative complexity.”**

Shyam Prawal, Senior Vice President  
for Product Development, AuthBridge



## Better innovation and better productivity means more revenue

**Showpad** is a global leader in sales- and revenue-enablement technology. It integrates industry-leading training and coaching software with innovative content solutions so that sales and marketing teams have the tools they need to better talk to their buyers.

### Opportunity

Generative AI allows buyers to access information to inform their purchasing decisions, which only salespeople previously had access to. To meet buyer expectations, Showpad needed to innovate and evolve their sellers' roles, as they must now help prospects and customers make sense of information in the context of their businesses and the specific challenges that they're facing.

### Solution

Showpad embedded AI innovation throughout the product experience. During the process, Showpad relied on **Amazon Bedrock** and **Amazon SageMaker** to rapidly experiment and subsequently push new models to production.

PitchAI, Showpad's latest sales coaching software, helped improve pitch quality with actionable feedback in real time. PitchAI's AI-powered search enriched search results, reducing sellers' time spent looking for the information, and its AI-powered test questions streamlined the process of creating training materials for sellers.

### Results

- **Improved experience:** Showpad was able to add value during the sales process and build buyer trust and confidence.
- **Workflow automation:** AWS services relieved time-consuming administrative tasks, allowing salespeople to focus on innovation.
- **Enhance decision-making:** Showpad was able to drive better conversations that empowered more effective decision-making in solving customer challenges.
- **Faster innovation:** Amazon Bedrock and Amazon SageMaker allowed Showpad to experiment and test new models for production.

**"Showpad is leveraging AI to improve how sales and marketing teams partner together in pursuit of a shared goal—closing more deals. It enables sellers to focus more time on what truly matters—bringing meaningful value to each buyer interaction."**

Tony Grout, Chief Product Officer, Showpad





ACCELERATING INNOVATION

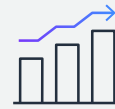
# Machine learning services for accelerating innovation

Amazon SageMaker offers an end-to-end service to build, train, and deploy ML models for any use case with fully managed infrastructure, tools, and workflows



## Accelerate machine learning development

Reduce training time from hours to minutes with optimized infrastructure. Boost team productivity up to 10 times with purpose-built tools.



## Prepare data at scale

Access, label, and process large amounts of structured data (tabular data) and unstructured data (photos, videos, and audio) for ML.



## Make machine learning more accessible to non-developers

Enable more people to innovate with ML through a choice of tools—integrated development environments for data scientists and no-code visual interfaces for business analysts.



## Streamline the machine learning lifecycle

Automate and standardize MLOps practices across your software business to build, train, deploy, and manage models at scale.



ACCELERATING INNOVATION

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## Bring applications to life

Amazon Rekognition makes it easy to add highly accurate and automated image and video analysis to your applications.



## Extract printed text, handwriting, and data from any document

Amazon Textract can automatically recognize and take out data from different file types and formats.



## Combine multiple tasks

Traditional multistep Business Intelligence tasks can be turned into intuitive and powerful experiences—transforming software companies' products with data analytics capabilities.

## SUCCESS STORIES

# Improving the customer experience

Many software companies are turning to the intelligent, predictive powers of AI to enhance the customer experience and improve innovation. If you're taking a fresh look at your company goals, or trying to understand how AI can help deliver the best customer experience, then you're likely to find practical inspiration in the following five success stories. Read on to discover how BIPO, Discovery Education, Tape Ark and Automation Anywhere are demonstrating the transformative power of AI to elevate customer satisfaction scores.





## Helping global customer base, whatever the time zone

Founded in 2010, **Freshworks** is a cloud-based customer service software company. It offers software for sales CRM, IT service management, customer messaging and more for 52,000 clients in over 100 countries.

### Opportunity

With so many clients in so many countries, queries and issues needed to be quickly sent to the right department to help. Time zones and employee availability meant that simple rules that applied to similar companies couldn't cope. And created a lot of frustration for both clients and employees.

### Solution

Using Amazon SageMaker, Freshworks built its AI flagship product Freddy, designed to better support its ticket resolution and routing models. 33,000 models are currently being built for 11,000 accounts, utilizing better AI automation. Thanks to this, issues raised can quickly be directed to the right teams—both from an availability and technical point of view—to speed up ticket resolution.

### Results

- **Faster response to customers:** 59% of customers experienced a reduction in ticket waiting times.
- **Can build solutions quickly:** Build time was reduced from 27 hours to 33 mins.
- **More accurate:** 85% accuracy on models created with SageMaker.
- **New opportunities:** AI-based "Freddy" has helped attract more mid-market customers and delight them with state-of-the-art AI solutions.

**"I am happy and proud to say all of our products and all of our customers are serviced from the AWS platform. We are an AWS all-in company."**

Girish Mathrubootham, Founder and CEO,  
Freshworks





# Using AI facial recognition to improve HR Management Systems

**BIPO** provides cloud- and mobile-based human resource management solutions for over 3,300 customers worldwide. Its Human Resource Management System (HRMS) manages HR-related processes for more than 400,000 employees. In 2020, BIPO expanded its capabilities using AI to reduce repetitive tasks thanks to Amazon Textract.

## Opportunity

One of its most time-consuming jobs was the claims submission process. With multiple claims to file each month, each took an average of 20 minutes and took up to 50 hours each month to complete.

In 2020, after seeing a growing trend for facial recognition employee attendance tools, it explored integrating existing clocking systems on the market with the attendance-taking function on its HRMS. However, the costs were high for its customers as BIPO would need to help its customers purchase over \$50,000 worth of devices and on-premises servers.

## Solution

With the help of Amazon Textract and Amazon Rekognition, BIPO successfully reduced cost- and productivity-related inefficiencies on the HRMS. The OCR technology on BIPO's HRMS not only allows them to upload claims in an accurate and timely basis, but the time savings can also be redirected to other higher-value work within the company.

Looking ahead, BIPO will roll out the image-to-text claims processing and facial recognition-based attendance-taking feature to more customers. The features have been welcomed by customers, with an adoption rate of 20 percent since their introduction. BIPO also plans to introduce these facial recognition-based access controls at meetings, conferences, exhibitions, and other similarly sized events.



## Results

- **Improved customer experience:** 20% adoption rate since being introduced.
- **Reduced costs and increased productivity:** employees able to concentrate on other higher-value work.
- **Ongoing innovation:** solution has been adopted across other parts of the customer journey.

**"We must constantly introduce cutting-edge features and solutions to serve our customers better. With AWS, we have halved the time it takes to innovate, build, and implement these features from four months to two months."**

Derick Teo, Director, Enterprise Go-Digital Solutions, BIPO





# Helping educators deliver personalized learning experiences

**Discovery Education** transforms teaching and learning by empowering teachers with customized solutions that support learning, wherever it takes place. This state-of-the-art digital platform supports edtech learning with award-winning multimedia content, instructional support, and innovative classroom tools. Discovery Education serves approximately 4.5 million educators and 45 million students in nearly 100 countries and territories.

## Opportunity

Educators are constantly connecting to high-quality, standards-aligned digital content. To help increase efficiency, productivity, and engagement with students, Discovery Education was looking to incorporate personalization into every aspect of the customer experience. They sought an AI solution to ensure the delivery of tailored and relevant content to match individual users' patterns and preferences.

## Solution

Discovery Education embedded Amazon Personalize, which uses data to power personalized recommendations, into its enhanced learning platform. This transforms customer experiences and allows developers to build applications with the same ML technology used by Amazon.com for real-time recommendations. All done with no ML expertise required. It avoids the burden of building the model and also means educators spend less time searching for digital resources and more time teaching.



## Results

- **Faster claims processing:** Discovery Education increased the number of claims reviewed for potential fraud by 83%.
- **Higher engagement:** Discovery Education had a 229% increase in homepage clickthrough rate and 220% increase in high-value interactions with content, such as assigning, downloading, and sharing.
- **Personalized experiences:** The solution delivered personalized experiences to match users' patterns and behaviors.
- **Increased productivity:** Amazon Personalize helps make use of purpose-built ML algorithms, taking the onus away from Discovery Education.
- **Ongoing innovation:** Discovery Education continues to add, contextualize, and organize exciting new content and timely resources each month.

**“Our goal is to use machine learning to better match what we know about our educators, and what we know about our students, and how our platform is being used. By using Amazon Personalize, we are able to personalize our K12 learning platform.”**

Pete Weir, Chief Product Officer, Discovery Education



# Transforming physical document archives into digital files

**Tape Ark** is a global tape-to-cloud migration specialist. Helping organizations to manage ageing corporate documents, it specializes in using data analytics, AI, and ML to reconnect them with their legacy data.

## Opportunity

The document management sector faces challenges tracking and organizing physical archives. With some archives recorded on different materials, it can be difficult to access and store. Traditional document management involves expensive processes like scanning or manual review of archive boxes, leading to ongoing warehousing costs.

Tape Ark aims to address this by transforming it into digital files. And wanted to take a closer look at how AI and ML could provide a cost-effective solution, which automatically identifies and categorizes documents.

## Solution

Working with the AWS ProServe team, a dedicated team of data scientists, engineers and business experts, Tape Ark developed an 'ML blueprint'. And just five months later, it deployed its Rapid Box Indexer.

The solution was created using Amazon Textract. This AI software worked with ML to extract text, both handwritten and computerized, from virtually any document. This process allowed remote viewing and indexing of archived box contents, replacing time-consuming manual processes with machine learning and intelligent image analysis.



## Results

- **Better decision-making:** Search, analyze and extract valuable information from documents more effectively—while gaining deeper insights into archived documents.
- **Improved compliance:** Where document retention is legally required, businesses stay compliant by managing their archives and ensuring easy access to required records.
- **Reduced risk for customers:** Less risk of damage or loss of documents as data can be viewed digitally.
- **Cost reduction:** Up to 20 times cheaper than traditional archiving systems, with no manual document management or warehouse storage fees.
- **Scalability:** Solution can scale to meet the needs of any industry and business type with high volumes of document archives.

**“The ProServe team introduced us to a new way of thinking, a suite of emerging AWS products, and were extremely collaborative. We don’t think there is a solution like the Rapid Box Indexer anywhere in the world.”**

Guy Holmes, President and Chief Executive Officer,  
Tape Ark



# Accessible automation wherever, whenever

Automation Anywhere is a leading RPA and cloud-native intelligent automation company. Helping companies to automate complex end-to-end business processes, it is the global leader in intelligent automation solutions.

## Opportunity

The company's goal is to make automation accessible to everyone, everywhere. Working with AWS, it aims to offer its customers greater choice, flexibility and reliability for their generative AI deployments.

## Solution

Fusing intelligent automation with generative AI on AWS, Automation Anywhere is developing a solution to speed up process automation, document processing and contact center intelligence. And will use Amazon SageMaker Jumpstart, Amazon Bedrock, and other AWS AI and ML services to strengthen its go-to-market offerings.

## ISV Accelerate Program

- **A co-sell program for AWS Partners**, it provides software solutions that can either run on or integrate with AWS. It helps AWS Partners drive new business by directly connecting participating software companies with the AWS Sales organization.
- **For Automation Anywhere**, the program provides support and benefits to meet customer needs through collaboration with AWS field sellers across the globe. This means better customer outcomes and assures mutual commitment from AWS and its partners.

**“Putting our cloud-native Automation Success Platform on AWS was the first step, and now through intelligent automation fused with generative AI on AWS, we enable every employee in every company with the potential to transform business and reshape the way we live and work.”**

Mihir Shukla, CEO, and Co-Founder



## IMPROVING CUSTOMER EXPERIENCE

# Solutions to improve customer experience

### Virtual agents and chatbots

[Amazon Bedrock](#)

[Amazon Lex](#)

[Amazon Polly](#)

### AI-enabled contact center

[Amazon Connect](#)

[Amazon Transcribe](#)

[Call Analytics](#)

[AWS CCI](#)

### Personalization

[Amazon Bedrock](#)

[Amazon Personalize](#)

### Extract and analyze

[Amazon Rekognition](#)

[Amazon Textract](#)

### Prepare data, and build, train, and deploy machine learning models with Amazon SageMaker

Organizations that want to develop their own models can execute against any of the above use cases with [SageMaker](#). The end-to-end service provides pre-built models and purpose-built tools for every stage of the AI lifecycle and even includes no-code tools for business analysts to generate ML predictions.



## SUCCESS STORIES

# Optimizing business operations

With its ability to process massive amounts of data quickly and intelligently, AI can help software companies streamline operations, automate processes, and predict business outcomes. This can help improve productivity and augment team capabilities. The following success stories from Orion Health and HUMAN Security demonstrate how core business operations can be optimized with the power of ML.





## Better consumer health experiences

**Orion Health** wants to improve the healthcare experience for everyone. As a leading omni-channel customer engagement platform, it brings together vast amounts of health data to provide healthcare professionals and health insurers with the tools they need to manage their members' wellness programs. This is done through analytics and employing care management and patient engagement.

### Opportunity

Ensuring access to timely, accurate and validated information is critical to healthcare organizations. But bringing it together can be difficult. So Orion Health was looking to create a user-friendly hub that would gather new and existing patient engagement technologies, with a key purpose to prevent people from needing to visit overcrowded hospital Emergency Rooms.

Orion wanted to build a platform where users could ask health-related questions using natural language processing. And in return get quick and easy access to trusted answers.

### Solution

The platform, built with the help of Amazon Kendra, is now known as the Digital Front Door; it is secure, open, and scalable.

It drastically improves the current processes of finding information and ensuring that people are getting the help they need, when they need it.



## Results

- **Improved access to trusted health information**, which gathers data from multiple areas onto one platform
- **Better consumer health experience** with a simplified health questionnaire and more detailed answers
- **Reduced costs** thanks to more efficient systems and automated processes

**"Amazon Kendra was a natural fit for what we were looking for and what we were trying to do and was a perfect centerpiece for our new digital front door product."**

Jomo Starke, Senior Director of Innovation,  
Orion Health



## Automating machine learning training while reducing time-to-market

**HUMAN Security** provides cybersecurity services to organizations and internet platforms, protecting them from sophisticated bot attacks, fraud and account abuse. It helps over a thousand brands verify the humanity of more than 20 trillion interactions each week across commercial and public sector security.

### Opportunity

HUMAN Security was looking to handle its data in a faster and more agile manner. Previously, it had been training and releasing ML models manually. The company was looking to accelerate the iteration of ML models to reduce TTM and improve performance of its MediaGuard solution, which protects media companies and agencies from fraud.

### Solution

With Amazon SageMaker, AWS has helped HUMAN Security to scale and automate its ML training. Teams can build and train models for any use case quickly and efficiently.

### Results

- **More deployments:** Compared to previous processes, HUMAN Security has tripled the number of deployments it can now achieve.
- **Faster production times:** With Amazon SageMaker, HUMAN Security has dramatically reduced the amount of time needed to produce ML models with full traceability.
- **More cost effective:** With the help of Amazon EC2, data integration costs were reduced by 15%.

**“By using Amazon SageMaker, we’ve substantially reduced the amount of time that is needed to train ML models.”**

Austin Leirvik, Staff Data Scientist,  
HUMAN Security

## Solutions to optimize business operations

### Intelligent document processing

[Amazon Augmented AI \(Amazon A2I\)](#)

[Amazon Comprehend](#)

[Amazon Comprehend Medical](#)

[Amazon Rekognition Content Moderation](#)

[Amazon SageMaker](#)

[Amazon Textract](#)

### Fraud detection

[Amazon Fraud Detector](#)

[Amazon SageMaker](#)

### Supply chain optimization

[Amazon Bedrock](#)

[Amazon SageMaker Canvas](#)

[Amazon SageMaker](#)



## Solutions to boost employee productivity

### Conversational search

[Amazon Lex](#)

[Amazon Polly](#)

### Content creation

[Amazon Bedrock](#)

[Amazon SageMaker](#)

[Jumpstart](#)

### Text summarization

[Amazon Bedrock](#)

[Amazon Comprehend](#)

[Amazon SageMaker](#)

## NEXT STEPS

# Start realizing the business value of your machine learning today

AWS offers the most comprehensive selection of AI services and solutions to develop the most innovative, productivity-boosting and customer-experience-improving solutions. That's why more than 100,000 organizations use AWS to accelerate their AI journeys.

Explore AWS AI services that fit your business needs—and learn how to get started today.

## Accelerate growth for your software business with AWS AI services.

If you'd like to find out more, contact your AWS Account Manager or visit [ML resources here](#).

