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12 most popular AI use cases in the enterprise today

Feature

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Artificial Intelligence   Chatbots   IT Strategy

From chatbots to predictive maintenance, companies across every industry are putting AI to work to deliver business value. Here's where AI is having its greatest impact.

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Organizations all around the globe are implementing AI in a variety of ways to streamline processes, optimize costs, prevent human error, assist customers, manage IT systems, and alleviate repetitive tasks, among other uses. And with the rise of generative AI, artificial intelligence use cases in the enterprise will only expand.

To gain a better understanding of how companies are putting AI to practical use, consultancy Deloitte surveyed 2,620 global business leaders, across 13 countries, as part of its Fueling the AI Transformation report. The survey identified the most prominent uses of AI for a variety of verticals, ranging from financial services to government and public

services.

Following is our analysis of the 12 most popular ways AI is being used across all industries in the enterprise today, as companies seek to capitalize on artificial intelligence's promise to improve customer service, cut business costs, and supercharge business processes.

1. Cloud pricing optimization

Organizations are leaning on AI to help reduce cloud costs and to find cost-effective solutions for running cloud applications. Airbnb is one company using AI to optimize pricing on AWS, utilizing AI to manage capacity, to build custom cost and usage data tools, and to optimize storage and computing capacity. Dropbox is another company that is using AI to optimize cloud costs and operational expenditures, reducing its dependency on AWS and saving nearly $75 million in the process. AI tools help companies optimize cloud pricing and spending by identifying cloud usage patterns for improved cost prediction, detecting anomalies in cloud usage, identifying opportunities for saving, and uncovering more cost-effective resources to use.

2. Voice assistants, chatbots, and conversational AI

Conversational AI tools such as chatbots and voice assistants have grown in popularity, making technology more accessible, offering support to customers, and reducing the load on IT support representatives. At Estée Lauder, the company has released a voice-enabled makeup assistant designed to assist visually impaired people with applying makeup. Meanwhile, companies such as Pentagon Credit Union (PenFed) are using chatbots and conversational AI to help customers get answers to common questions faster, reducing the load on customer service reps.

3. Uptime/reliability optimization

For companies that rely on web services or e-commerce, maintaining uptime and website reliability is a top priority. AI helps organizations achieve this by constantly scanning systems, networks, and processes for inefficiencies, potential disruptions, and to identify any looming threats in a way humans could never accomplish. Nearly all major organizations are employing AI to support their unique uptime and reliability needs. Netflix, Uber, Facebook, Salesforce, AirBnB, and many more are implementing AI to monitor, maintain, and keep their services up and running and available for customers. For companies that offer round-the-clock digital services, using AI can help identify problems before they start, while also reducing instances of crashing, hacking, and human error.

4. Predictive maintenance

At GE, AI is leveraged regularly for predictive maintenance, analyzing data directly from aircraft engines to identify any problems, needed maintenance, and to ensure the overall safety of aircrafts. Rolls-Royce has also found use for AI in predictive maintenance to improve the efficiency of jet engines and reduce the amount of carbon their planes produce, while also streamlining maintenance schedules through predictive analytics. The District of Columbia Water and Sewer Authority is using predictive maintenance to identify potential water main breaks and to monitor performance of collection systems. DC Water even has an AI tool called Pipe Sleuth that can review CCTV footage of sewer pipes to assess their maintenance needs in real-time.

5. Customer service operations

AI has become a go-to tool for customer service operations, helping organizations ensure customers receive the support they need while alleviating some of the burden on service representatives and call centers. When Lufthansa Group's business was disrupted by the COVID-19 pandemic, its call centers were overwhelmed with customers trying to navigate cancelled and rescheduled flights, accelerating the company's move toward digital transformation in these areas. For other companies, AI use in customer service has also been driven by consumer's increased expectations. McKinsey reports that around 67% of millennials "expect real-time customer service," and 75% of customers expect a "consistent cross-channel service experience." Unilever, which is leveraging GPT API to create AI tools to minimize food waste and auto-generate product listings, is also using the API to create a platform that filters emails sent to customer service, sorting spam from legitimate messages, and scaling those up to customer service agents.

6. Personalization

When you log onto your favorite social media app or streaming service, the experience is tailored to your personal taste and browsing habits — all the way down to the targeted advertisements. AI has helped companies deliver products and content to targeted audiences, ensuring that every app or service you use is personally tailored to the user's unique interests. Spotify will put you onto a new artist, Amazon will remind you that it's time to stock up on your most purchased products and suggest related products you may be interested in, and YouTube will deliver a curated feed of content suited to your interests. AI personalization utilizes data, customer engagement, deep learning, natural language processing, machine learning, and more to curate highly tailored experiences to end-users and customers. Retail giant Nordstrom also uses AI in its Nordstrom Analytical Platform (NAP) to gain deeper insights into its customers' activities and to provide predictions for delivering more personalized experiences for its customers. The company also uses AI to manage inventory control, navigate the fulfillment process, and route orders to the nearest store for customers, among other applications.

7. IT operations management

AI IT operations management (AIOps) tools are growing in popularity. According to a report from OpsRamp, enterprises are using AIOps platforms for intelligent alerting (70%), root cause analysis (57%), anomaly and threat detection (52%), incident auto-remediation (50%), and capacity optimization (27%). Delta Airlines has used AIOps to create a "full-scale digital simulation environment for its global operation," which the company says is a "first in commercial passenger aviation," to maintain reliability, especially during inclement weather. The platform analyzes operational data points and uses that to create hypothetical outcomes that help Delta employees make "critical decisions before, during, and after large-scale disruptions," according to a press release from Delta

8. Process automation

AI has proved to be an effective tool for automating time-consuming processes that are often prone to human error. By automating processes, organizations can free up employees to work on more complex projects. Atlantic Health System uses process automation to streamline the process of obtaining prior authorizations, sparked by the need to alleviate the increased workload caused during the COVID-19 pandemic. Automating prior authorizations helps speed up the time to treatment, freeing up doctors and nurses to focus on patients, and reduces the manual efforts around obtaining authorization and scheduling appointments. Johnson & Johnson has combined RPA with ML, AI, and task mining to identify and automate complex processes that span across departments. AT&T is another company that has made use of process automation since 2015 to alleviate extensive manual data entry tasks, which has since evolved to streamline several processes across the organization.

9. Financial reporting and accounting

Intuit is one organization using AI to improve data analysis around financial planning for clients, with over 730 million "AI-driven consumer interactions per year, leading to 58 billion machine learning predictions per day." Using its own Generative AI Operating System (GenOS) platform, Intuit can implement financial large language models that specialize in tax, accounting, cash flow, and more. This helps reduce repetitive tasks for workers and helps streamline and reduce errors with data entry, transaction categorization, and invoice processing. PWC is using AI similarly, to better inform consulting through natural language processing, machine learning, deep learning, model operations, automated ML, digital twins, generative AI, embodied AI, responsible AI, and more. The company is investing $1B over the next three years to "expand and scale" AI capabilities, as it's clear that more organizations are starting to recognize the benefits of AI for financial reporting and accounting practices.

10. Recruiting/hiring

Amazon is one organization utilizing AI in the hiring process to screen resumes, match candidates with best suited roles, perform initial online candidate assessments, and pass data along to recruiters to make contact with candidates. This is quickly becoming a common practice for organizations to help reduce the manual labor involved in sorting through resumes, thereby speeding up the hiring process and time-to-hire. AI can also be used for conducting initial video interviews. Unilever, which processes over 1.8 million job applications each year, partnered with Pymetrics to build an online platform that can assess candidates over video software. In the second stage of interviews, candidates answer questions for 30 minutes while the software analyzes their body language, facial expressions, and word choice using natural language processing and body language analysis technology. Once employees are in the door, organizations such as Schneider Electric, also use AI to help advance and develop employees careers, matching them with opportunities for continued learning, new projects in the organization, and networking opportunities with thought leaders across the organization.

11. Safety and quality

AI can help organizations automate and streamline safety and quality assurance processes, ensuring there are fewer risks to the company and consumers, while also ensuring better quality products and services. Boeing is using AI to detect anomalies with aircraft sensors, analyze data collected off aircrafts, and improve overall flight safety. AI can also be integrated into products to better ensure their safety and the safety of the people who use them. Google, for example, has implemented AI safety features to its lineup of Nest products, with the ability to detect intruders as well as smoke or carbon monoxide. It can also use AI to help identify whether there's an actual emergency or if it's a false alarm. This year, Boeing also partnered with Shield AI to "explore strategic collaboration in the areas of autonomous capabilities and artificial intelligence on current and future defense programs." Shield AI has created technology called Hivemind, which enables AI to autonomously fly drones and aircrafts without GPS, communications, or a human pilot.

12. Workforce schedule optimization

AI has found its way into plenty of processes, helping companies streamline efforts that once took up a lot of time for managers. That's especially true when it comes to workforce schedule optimization, where AI has helped companies optimize scheduling, considering several factors such as employee availability, customer traffic, and employee skillsets and preferences, all at once to identify the optimum schedule. Companies such as Walmart, Starbucks, Costco, Delta Airlines, Target, and many more use this technology to identify the best schedule for the company's needs.

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