

THE USE OF AI IN TODAY'S TECHNOLOGY DEVICES

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ABSTRACT

Artificial Intelligence (AI) software is used to design and build smart applications from scratch with the help of machine learning and deep learning. Deep Feed is a social media management platform that uses cutting-edge technology to streamline and optimize social media. Artificial intelligence (AI) is a broad branch of computer science that aims to create intelligent machines that can perform tasks that traditionally require human intelligence. AI allows computers to simulate and even enhance the capabilities of the human mind. It works by combining large amounts of data with intelligent algorithms that allow rapid processing and automatic learning of patterns or features in the data. Artificial intelligence is the intelligence generated by machines that mimic human behavior or thoughts and can be trained to solve specific problems.

AI-powered assistant, fraud prevention, application of artificial intelligence (AI) in education, application of AI in smart manufacturing, application of AI technology in combating cybercrime, application of AI in healthcare services such as skin diseases, heart diseases, combating COVID-19, application expertise in neuro-oncology, use of 3D protein models. Application of AI has a sensitivity of 99.1% for abnormal X-rays. AI has improved the detection of large breast tumors in chest X-rays. AI has increased the ability to identify metastatic disease in all images of lymph node biopsies. Probability of cancer.

Keywords: *Artificial Intelligence, Application of AI, Machine Learning, Robots, Applications of AI in Robotics, HRM, AI in Business.*

INTRODUCTION

AI is used in many impressive, creative, and useful ways in almost every field. In March 2023, a chatbot model called GPT-4 was released, based on a very large language model. It uses AI to generate human-like texts and represents the most advanced intelligence of Open AI. GPT-4 is a big step forward in the AI race, but experts say it is potentially dangerous. Experts think that this situation could lead to new cybercrimes. Use of AI in military operations and disaster management. Application of AI in bioinformatics and other advanced research for decades with data collection. machine. Some people believe that in order for AI to have a long life, it must be beneficial and safe for human life. AI is already very powerful. AI is also a research tool with many great new applications. Recently, Alpha Fold has made great progress in solving the problem



of 3D protein folding, a problem that scientists have been working on for decades. Despite the benefits of AI, there are still questions about its safety and benefits to human civilization. Ensuring that AI benefits everyone is a challenge. As AI grows stronger, its impact on today's economy, politics, and culture also grows.

Introduction: Artificial intelligence (AI) and how it works

Artificial intelligence (AI) is a broad branch of computer science that aims to create intelligent machines that can perform tasks that traditionally require human intelligence. AI is a field of research that combines many approaches, particularly advances in machine learning and deep learning, and has revolutionized nearly every industry. It is used to develop technology and apply knowledge to business. AI reduces rework time, increases employee productivity, and improves the overall customer experience. Artificial Intelligence (AI) is the ability of machines to simulate and even enhance human thinking. AI works by combining large amounts of data with intelligent algorithms that allow software to learn from patterns or features in the data. AI algorithms are an extension of machine learning, which teaches computers how to perform tasks on their own. In turn, tools continue to learn to improve processes and work more efficiently than the human mind.



Productivity, increased efficiency, and the elimination of repetitive tasks. As the world of work continues to evolve and digital technologies advance into the 21st century, the rise of AI in the workplace has become a hot topic of discussion. While some see AI as a useful tool that can increase productivity and improve the employee experience, others worry that it could lead to mass unemployment, requiring people to study law and teach ethics. For example, chatbots and virtual assistants are often used to automate routine



tasks previously performed by human workers, which can lead to layoffs. Additionally, as AI becomes smarter, it could replace human workers in more complex tasks like data analysis or customer service.

Artificial intelligence is a broad field encompassing many theories, approaches, and technologies, including the following main subfields:

1. Neural networks use approaches from statistics, performance research, and physics to uncover hidden insights in data. A neural network is a type of machine learning that consists of interconnected networks (such as neurons) that process information by responding to external inputs and passing information between each unit. A neural network is a mathematical model inspired by the structures of the brain. Each neuron in a neural network is a mathematical function that takes information from the input, transforms it into a more appropriate form.

2. Deep learning uses large neural networks with multi-layer processing, taking advantage of advances in computing power and improved training to learn complex patterns in large amounts of data. Applications typically include image and speech recognition.

3. Computer vision relies on pattern recognition and deep learning to understand what is in an image or video. When machines can process, analyze, and understand images, they can capture images or videos in real time and interpret their environment. CV helps machines understand and interpret the worldview in a meaningful way. It gives computers the ability to interpret and understand the visual world.



4. Natural language processing (NLP) is the ability of computers to analyze, understand and produce human language. NLP stands for Natural Language Processing, which allows humans to communicate with computers using natural language used in everyday life. What are the advantages and disadvantages of AI in supporting democracy? Artificial intelligence (AI) and businesses for businesses. There is an excellent digital infrastructure and governance mechanisms that protect privacy and freedom of expression. EU countries are already strong in digital and business-to-business markets.



Applications of AI in Robotics

AI can also make workplaces safer, as robots can be used for dangerous tasks and create new opportunities as AI-powered industries grow and change. From an application perspective, it is clear that AI can help develop new products and services, including in areas where American, Chinese, and European companies have strong positions. AI can support a healthy, green and circular economy by improving technology, agriculture, health, fashion and green tourism. AI can increase sales, improve machine maintenance, increase production and quality, improve customer service and save energy. powerful. AI can also promote diversity and openness by reducing the potential for bias in hiring decisions using data analytics. He hopes that AI will be used more in crime prevention and criminal justice. AI is already being used by online platforms to detect and respond to illegal and inappropriate behavior. The under-use of AI is seen as a major threat. For example, developed and developing countries have regressed due to poor implementation of major initiatives such as the EU (Green Deal, loss of competitive advantage with the rest of the world, economic stagnation and destruction of human livelihoods).

The lack of initiative, insufficient investment or disruption of the digital economy due to AI. Rely on data for machine learning. Using too much power can cause problems. AI can have a major impact on privacy and data protection. The application of AI in the workplace will lead to the elimination of many jobs. However, AI also holds the promise of creating better jobs, education and training opportunities, thus keeping skilled workers in the workforce longer. AI has potential for a variety of sectors and systems, including automation, education, legal services, risk reporting and research. The use of specialized skills in the workplace includes: a. There are many AI applications in healthcare organizations that can perform a variety of daily tasks. For example, AI machines can “read” personal medical records and X-ray results of patients with various diseases (such as breast mammogram results, data from X-rays and biopsies, and low-dose CT scans for lung cancer). AI can also act as a personal health assistant. For example.

AI can act as a life coach (such as reminding patients to take their medications), reminding people to exercise and for how long, or giving advice on eating habits. Good foods to prevent obesity. Wholesale trade. Computer technology can provide virtual



shopping resources, offer personalized recommendations, and negotiate with customers on purchases. Companies with inventory management and organizational issues (clothing, tools, equipment, etc.) and the site's installation process can also improve with the help of AI. AI can analyze factory Internet of Things (IoT) data. The Internet of Things (IoT) is growing rapidly, but the security of IoT operations and deployment is still a problem for many organizations. A key aspect of IoT security is ensuring that devices and services are trusted to interact with the security ecosystem.

AI technology can unlock the full potential of data to solve the biggest health challenges facing humanity today and in the future, from ensuring the safety of medicines to bringing new treatments to market faster. AI increases the speed, precision, and efficiency of human work in financial institutions. AI technology can be used to identify which banking transactions are likely to be fraudulent. AI can make smart cities even smarter. It can help support national defense through strategic planning and preventive surveillance. Europe has invested nearly €700 million in public-private partnerships in robotics and AI. Therefore, many AI-based applications

Alphabet (Google), Microsoft, Amazon, Apple, and Meta (Facebook).

The top five tech companies in the data technology sector are: Alphabet (Google), Microsoft, Amazon, Apple, and Meta (Facebook). The internet is becoming more widespread, businesses are growing, and millions of people computers and smartphones. As a result, companies that provide internet services or sell computers or smartphones have seen their revenues increase. The number of internet users has increased from 16 million in 1995 to 5.473 billion in July 2022. Major Markets in 2023: Among major tech companies, Apple leads the way in acquisitions, having acquired 29 AI startups since 2010, followed by Google with. Microsoft and Facebook are close behind with acquisitions, respectively. Big tech companies like Intel, Sales force, Twitter, and IBM are also among the biggest beneficiaries. Founded in 1998 and headquartered in Shenzhen, China, Ten cent's communications and social services connect more than a billion people worldwide.

It also offers a wide range of services, including cloud computing, advertising, fintech, and other business services. As of March 2023, Tencent's market value was \$471.66 billion. But another advantage is the availability of vast amounts of data, which is essential for training AI models and the ability to evaluate and commercialize AI products and services. AI has finally become a core technology of the fifth industrial revolution. These advances have led to the development of artificial intelligence that can perform tasks previously thought to be unique to humans, such as image and speech recognition, translation, and decision-making. , was founded in 1976 by Ronald Wayne and Steve Wozniak. As of March 2023, Apple's market cap reached \$2.6 trillion, making it the world's most valuable company.

It's still growing and growing. Businesses are realizing the potential of AI and are using it to gain a competitive advantage. Artificial Intelligence Systems will eventually evolve into autonomous systems, just like robots or machine learning that were popular three decades ago. But today, most AI applications are becoming more versatile by combining different technologies. Siri is Apple's intelligent assistant, available on all Apple devices, designed to help users complete their daily tasks. The first virtual personal assistant, Siri, is the result of years of AI research between Microsoft and the Swiss Federal Institute of Technology Lausanne (EPFL). Siri is an easy way to make calls, send messages, use apps, and do everything with just your voice.)

Artificial Intelligence (AI) Practical Applications

AI applications in E-Commerce

It is estimated that approximately \$36 billion was invested in AI startups in 2020. In the first half of 2021 alone, this amount has exceeded \$38 billion and reached \$38 billion. Alexa is a virtual personal assistant. Amazon now wants to provide users with seamless integration with a wide range of smart home devices. Alexa and Siri are digital voice assistants from Amazon and Apple. They are not just simple tools, but real applications of intelligence. . AI machines can translate words, play games, and recognize patterns. They usually learn this by analyzing masses of data and looking for patterns that will influence their decisions. In most cases, people will follow the learning of AI, encouraging good decisions and preventing bad decisions.

The capability and popularity of (smart intelligence) has increased exponentially in recent years, and we see it in almost every sector and research area. Applications of Artificial Intelligence Artificial Intelligence (AI) has been applied to e-commerce and financial services to achieve better customer experience, better supply chain management, and advanced marketing strategies. The primary mission of the brand is to set standards, improve product quality, and find new ways to reach and serve customers while keeping costs low. Machine learning and deep learning are the two most powerful techniques. AI technology is used to create recommendations that will allow you to better interact with your customers. These recommendations are based on their research background, interests, and hobbies. It helps you improve your relationship with your customers and their loyalty to your brand. Virtual assistants and chatbots can help improve the customer experience when shopping online. Credit card fraud and fake reviews are two of the biggest problems ecommerce businesses face. AI can help reduce the risk of credit card fraud.

The slow changes in the use of AI in education can help teachers increase their productivity and focus more on their students rather than their work or management. Individual study, plagiarism detection (for materials in many subjects that require passing certain university courses), and 24/7 tutoring services are just a few examples. The use of AI in education has opened up new opportunities for the creation of good education.

However, the use of tasks or methods is still difficult for most researchers and experts in the field of computers and education.

The challenge in developing an intelligent teaching and learning transformation lies not only in computer programming skills, but also in technology that will simulate the skills of human experts. The latter includes the knowledge and experience of human teachers who make decisions and make decisions based on the best evidence to solve student problems and help them learn effectively. Applications in the field include automation that will help teachers personally assist students with previous tasks such as grading, scheduling, and facilitating communication between parents and guardians. , facilitate answers to daily questions, and manage access, curriculum, and other content. Digitize. Teachers can adapt different elements such as animations and learning content to students at different levels. AI helps create more immersive learning experiences by creating and presenting audio and video narrations and completing lesson plans.

Another area that has been actively used for a long time. AI-powered robots detect obstacles in their path with real-time updates, plan their journeys immediately and perform various tasks. Over 50 years of history. Automakers use robots in various production processes. Why robots? They are efficient and reliable on the production line. They also bring supply chain automation to the automotive industry, making it one of the largest users of robots. Companies in the automotive industry have realized the need to develop next-generation mobile services using the most advanced and computational design methods, innovative testing and efficiency, communication integration of solutions, and adoption of 5G network and application deployment. As a result, mergers and acquisitions activities focused on acquiring AI capabilities are increasing in the automotive industry. Robots are used to complete the process with the help of computers and AI in the manufacturing process. Robots can work in challenging environments that humans cannot, and they can also perform repetitive tasks quickly and accurately. Our modern business world would not be possible without robots. The world needs robots to complete dangerous tasks and perform productive tasks.



Robots are used in many tasks, such as cleaning up waste and chemicals, intercepting bombs, and protecting soldiers on the battlefield. Robots also have precision that human hands cannot reach, and can be repeated for an unlimited period of time. This product is ideal for precision cutting, welding and assembly. Robots have also revolutionized medical procedures, allowing many types of surgeries to be performed non-invasively instead of traditional and time-consuming procedures. Medical devices have become so advanced that they can even be used in brain, heart and eye surgeries, allowing doctors to treat diseases that were previously only treatable through surgery. Home robots, also known as self-service workers or collaborative workers, are designed to help with household chores. They perform a variety of tasks, including cleaning, laundry, and caring for the elderly and disabled. An example of a home robot is the Roomba robot vacuum cleaner. It is a small autonomous cleaning robot that can be programmed to clean floors, carpets, and rugs. Roombas have been used in homes around the world since 2002.

Applications of AI in Human Resources

Applications of Artificial Intelligence in Human Resources Recruitment with the help of artificial intelligence is a widely used process in companies. Artificial intelligence can help in hiring blind people. You can analyze your application based on certain parameters using machine learning software. AI-powered systems can scan the profiles and resumes of job applicants to give job seekers an idea of the potential they have to choose from. Recruitment is always time-consuming and repetitive. For example, many companies are using AI to process big data to increase efficiency, accuracy, and productivity. Simply put, AI is nothing more than automation that allows us to solve large, complex, repetitive problems and achieve great results. AI can illuminate the path to achieving goals. Automation has the potential and benefits of being applied to recruiting processes, especially repetitive, high-volume tasks like screening, sourcing, and scheduling. AI technology is designed to speed up time-consuming processes in the recruiting process so employees can focus on more important tasks. Jobs. AI programs can search online resumes and social profiles to find the best candidates for each job based on specific characteristics.

They can also send personalized messages to successful candidates, and they can do this at scale. AI is being taught to overcome human bias in production and analysis. The key is to provide the program with gender-neutral data and tell it to ignore other statistical data that could lead to biased decisions. Once your AI program finds and communicates with candidates, the AI in the hiring process can guide candidates quickly and effectively to ensure that candidates perform well. Recruiters' chatbots can instantly answer candidates' questions, provide quick advice, and suggest next steps. They can provide links to job descriptions, explain when and where the company is hiring, and schedule interviews.



From chronic diseases like cancer to radiation, AI is being used to create effective and accurate products to help care for patients with these diseases. One of the best solutions in modern medicine. The global market size of this new revolution in healthcare is estimated at \$10.4 billion in 2021. Among these, the largest revenues were generated by medical testing and robotic surgery applications. AI algorithms allow machines to obtain more accurate results by having the opportunity to understand training data, which helps people gain unique insight into the regulation, monitoring process, diagnosis and patient outcomes. In recent years, artificial intelligence (AI) has been increasingly used in healthcare to create intelligent machines that can diagnose diseases and detect cancer cells. Ensuring early diagnosis in chronic diseases. AI uses a combination of historical data and medical intelligence to discover new drugs. In addition, healthcare organizations deal with a large amount of medical information. When working in healthcare, there's a lot of information to consider, from patients' medical histories to insurance records. AI can streamline many workflows and increase overall efficiency by processing large amounts of data at a speed far below what humans typically require. In healthcare, AI can help improve patient care. And by developing intelligent, intelligence-enabled digital systems. Integrating AI with existing IT processes to gain the support and trust of physicians and comply with government regulations.

Artificial Intelligence in Business

Business is one area of the business world where artificial intelligence (AI) is widely predicted to bring significant change. McKinsey's research found that marketing is the business activity with the biggest financial impact after sales. This means that if you are a marketer and you are not using AI, you are missing out on the benefits of the most transformative innovation. Analytics, machine learning models, etc. to deliver the best and most personalized advertising. AI can help you tailor your marketing content to your brand and voice. It can be used to manage your daily tasks such as jobs and job postings. Chatbots, which are built on artificial intelligence, natural language processing, natural language generation, and natural language understanding, can analyze a user's words and respond in a human-like manner. AI can provide real-time personalized services based on users' behaviors and can be used to adapt and optimize business processes to meet the needs of local businesses. >

A chatbot

Chatbot is a software application used to conduct online conversations through text or text-to-speech conversion, eliminating direct contact with a human agent. A chatbot is a computer program that can converse with users in real language, understand their intentions, and respond according to predetermined rules and information. Applications According to reports, 80% of banks are aware of the benefits that AI can provide. Whether it's personal finance, corporate finance, or consumer finance, AI-based technologies can help improve a wide range of financial services. It's essential for the



future success of families, businesses, and countries. AI can help financial institutions and financial services increase efficiency and prevent cybercrime. Banks using AI models can provide financial advice, product recommendations, fraud detection, and short-term support. AI can guide guests, identify people, create accounts, and provide guidance on available products. Customers can also get help with financial management solutions.

They can also easily get the information they need from newspapers or online chats using smart technology. AI can also save businesses and individuals from a huge loss by detecting changes in business models and other red flags that could indicate scams that humans can easily spot. If there's one idea that everyone has in mind in this world at the forefront of technology, it's the unwavering belief in Artificial Intelligence (AI). Over the years, AI has been used in a variety of applications, including healthcare, robotics, e-commerce, and even banking and financial services. It's as interesting and enjoyable as any subject. One of the most difficult problems in astronomy is data analysis. That's why astronomers have turned to machine learning and artificial intelligence (AI) to develop new tools. Recently, a group of scientists used AI in their research on galaxy mergers, confirming that galaxy mergers are the main driving force behind star formation. Given the scale of the data collected, scientists have developed a deep learning algorithm that trains itself to find mergers between galaxies.

How AI impacts on the future of work

One astronomer said that the advantage of AI is that it increases the reproducibility of science. It is very important for astronomers to look for signs of the most important events in the world. In addition to providing essential services and preparing their companies for the future. The security of a company's data is considered one of the most important assets of any technology company. Information security is one of the most common and important uses of intelligence. From confidential information such as customer information (such as credit card details) to online secrets, information security is essential for all organizations to fulfill their mission and operations. This task is now complex and important; many companies are using AI-based security solutions to prevent their data from falling into the wrong hands. As the world becomes smarter and more connected than ever, the role of intelligence in business is becoming increasingly important. According to many estimates, cyber attacks will become more frequent over time, and security teams will have to rely on AI to monitor systems. Threats Hacking and data breaches are the most significant problems facing commercial organizations today. The cost of these crimes continues to rise; the average cost of a crime is \$3.62 million worldwide. Cyber security is critical to every business because of the financial impact of a breach, as well as the potential for attacks to undermine a company's customers' trust.

It's estimated that 60% of small businesses go bankrupt within 6 months of a data breach or cyber attack. Hackers launch hundreds of millions of attacks on businesses each year for a variety of reasons. In the worst case scenario, they will be compromised before



security personnel can even recognize, identify, and block them. Attackers are trying different strategies, from sophisticated malware attacks to advanced ones, so modern solutions need to be used to avoid them. Artificial Intelligence (AI) has proven to be one of the best solutions for mapping and preventing threats that harm companies.

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