

Artificial Intelligence: Pros and Cons

Outline

Overall a fine attempt
Further mature your sentence
structure and arguments

1 Introduction

1.1 Hook

1.2 General Statement

1.3 Thesis Statement:

Artificial Intelligence can greatly improve efficiency, ^{show clarity} creativity, and everyday convenience, but it also brings challenges like joblessness, privacy risks, and ethical concerns, making it important to manage its growth responsibly.

What is Artificial Intelligence (AI)?

AI is the ability of a computer, or a robot controlled by a computer to do tasks that are usually done by humans because they require human intelligence and discernment.

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2 Main Body (Pros)

2.1 Job Opportunities Jobs in IT sector

2.1.1 Creates more jobs in medical sector

2.1.2 In medical sector

2.1.3 In Automotive industry

2.2 Helps in defence

2.2.1 Automated weapons

2.2.2 Radar alert

2.2.3 CCTV cameras at homes or other places.

2.3 Reduced dependency on humans

2.3.1 Driverless cars

2.3.2 Virtual nurses

2.3.3 Domestic chores

2.4 Brings economic prosperity

2.4.1 Digital currency

2.4.2 Increased in productivity

2.4.3 Globalization

2.5 Helps in environmental protection

2.5.1 Detecting deforestation, habitat loss, and land degradation

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(3)

Case study: AI-powered Anti-Poaching efforts in Africa

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Wildlife protection and Conservation

Climate Change and weather prediction

Case study: AI-based climate change adaptation in Bangladesh

Intelligence assisting humans

Research and innovation

What are the disadvantages of AI?

Job displacement

In medical sector, Surgical robots (1)

Receptionists (2)

Retail - self check out stations at stores (3)

Accountants / Book keepers (4)

Threat to

Ethical concerns / Biases

Deep fake images ^{and videos} ~~and spying~~

Threat to

Cyber Security

Hacker can control weapons

3.3.2 Privacy

3.2.2, Misinformation
loss of social connection

3.5 Depriying man of creativity, surpasses human intelligence and creates more dependency on machines

3.5.1 ~~Take~~ ^{limitations} in Chat GPT's ~~role~~ in the learning journey.

3.6 ~~It~~ Creates more economic inequality across labor markets

4 What are the way forwards to combat with challenges?

Or Solutions to address AI's anticipated negative impacts

4.1 Strengthen Data privacy and security

4.2 Invest in AI literacy and skill development

4.3 Address economic and social impacts

4.4 Prepare for AI in geopolitics.

5 Conclusion



Stephen Hawking ~~was~~ a pioneering theoretical physicist and cosmologist who once said in an interview with BBC in 2014, "AI is likely to be either the best or worst thing to happen to humanity." AI is technology that enables machines to perform tasks that typically require human intelligence. As AI has boomed in recent years, it's become commonplace in both business and everyday life. People use AI everyday to make their lives easier - interacting with AI-powered virtual assistants or programs. Companies use AI to streamline their production processes, project gains and losses, and predict when maintenance will have to occur. As AI becomes more broadly used and applicable, it's logical to weigh the risks and rewards of using it. After all, the use of AI can help to save time, free up labor, and save workers from dangerous tasks. But it can also put workers at risk if not carefully

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6

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maintained, and cause people to lose their jobs to automation. Artificial Intelligence can greatly improve efficiency, creativity, and everyday convenience, but it also brings challenges like joblessness, privacy risks, and ethical concerns, making it important to manage its growth responsibly.

The advantages of AI are vast, ranging from increased efficiency and accuracy to improved decision-making across industries.

Artificial Intelligence (AI) has both pros and cons. To begin with the pros, AI has created new career opportunities and transformed the job market.

First, as AI technologies become more sophisticated, there is a rising demand for professionals who can fine-tune the way we communicate with AI systems. This is the role of Prompt Engineers.

This role doesn't necessarily require a computer science degree, but it does require creativity and a mastery of language.

Similarly, the increased use of AI also introduces novel threats, necessitating the role of the Cybersecurity Analyst. These professionals protect against AI-driven cyberattacks, requiring a blend of technical expertise, critical thinking, and problem-solving skills.

Secondly, in the medical sector AI algorithms are used to interpret X-rays, MRIs and CT scans, assisting radiologists in detecting anomalies like tumors, fractures, and other conditions more quickly and accurately. Moreover, Robotic Surgeon Technicians work with AI-powered robotic systems that help surgeons perform complex surgeries.

with great precision. They play an important role in making surgeries safer and more accurate.

Thirdly, AI is creating many job opportunities in the automotive industry. As self-driving cars become more advanced, engineers with expertise in AI are needed to develop and improve the systems that can control these vehicles. This includes designing algorithms for navigation, obstacle detection, and safety features.

Similarly, AI Software Developers. Creating AI-powered software for various automotive applications.

Therefore, AI is creating many new job opportunities in different industries, bringing new ideas and changing the way people work for the future.

The World Economic Forum predicts that by 2028, AI and automation will create 69 million new jobs worldwide, leading to a net reduction of 2% in overall jobs.

Besides job opportunities, AI has many advantages in defence sectors. AI is becoming more prevalent in battlegrounds like industries and businesses, the military is also day by day starting to be more AI-focused when it comes to advancement and development. AI-powered military systems can process large volumes of data more efficiently than conventional systems. For instance, a drone with advanced AI personalization algorithms can analyze battle field data. This include the location of enemy forces, the terrain, and weather conditions. In addition, there are also other utilizations of the same component in military applications, such as tanks, cars, military vehicles, and aircraft. For example, a tank equipped with AI hyperpersonalization algorithms could analyze data from its sensors and cameras to determine and make the best decision to choose the easiest route to a particular destination or the best tactics to use in a specific situation. ~~Moreover~~ ^{secondly}, AI cameras are utilized for security, surveillance, and

at home
and other
places

traffic monitoring. CCTV (Closed Circuit Television) cameras are used for various purposes. It can be used to recognize the faces of family, friends, and frequent visitors. They are installed in areas like parks and shopping centers to ensure public safety and respond quickly to emergencies. Lastly, radar alerts play a crucial role in defence. They help in detecting and tracking incoming threats, such as missiles, aircraft, or enemy ships, from a long distance. Additionally, in military operations, radar helps manage and coordinate air traffic to avoid collisions and ensure safe operations. Also, Radar is integral to missile defence systems, detecting and tracking incoming missiles to intercept and neutralize them. For instance, during conflicts such as those between Israel and Hamas, the Iron Dome (Missile Defence System) intercepted numerous rockets fired by Hamas, significantly reducing the impact of the attacks on Israeli cities.

Another advantage of AI is that it reduces dependency on humans. AI has significantly reduced dependency on humans in several ways. Firstly, AI has decreased reliance on humans with advances such as driverless cars, which use AI to handle navigation and driving tasks autonomously. For instance, in ^{UAE} Dubai, autonomous vehicles were used in recent floods in April 2024. Driverless cars equipped with AI can adjust routes to avoid flooded regions, improving mobility and safety during such emergencies. Secondly, AI has decreased dependency on humans through virtual nurses. Virtual nurses are always available to provide support to patients. These online assistants interact via text or voice and can perform a range of tasks, that includes answering general questions, providing quick diagnostics, guiding patients to the correct care, or even closely monitoring patients. For example, "Molly" the AI-powered virtual nurse assistant, was introduced by Babylon Health, UK. Lastly,

AI has reduced dependency on humans in domestic chores through the use of smart home devices. These technologies help manage and automate routine household chores, reducing the need for human effort and intervention. Robotic Vacuum Cleaners ^(e.g. Roomba) can ~~traverse~~ autonomously clean floors, navigating around obstacles and returning to their charging stations without human intervention. Moreover, AI-powered washing machines can automatically select the appropriate wash settings based on the type of clothing and level of dirt. Furthermore, ~~D~~ devices like Amazon Echo and Google Home can control smart home systems, set reminders, and manage household tasks through voice commands.

(13)

AI brings economic prosperity by ^{Date:} enhancing efficiency, reducing costs and fostering innovation. Firstly, AI is revolutionizing many sectors, and its integration with digital currency ensure significant economic prosperity. With AI, transactions using digital currencies can be processed faster and with lower costs, making it easier for businesses and people to use them. For instance, AI and digital currency working together for economic prosperity is the partnership between AI and Central Bank Digital Currencies (CBDCs). Countries like China have launched digital versions of their currency, such as the Digital Yuan, using AI to manage the system efficiently. Additionally, AI also improves security by detecting fraud and unusual activities, which builds trust in digital currency. It can help people in remote areas access financial services, promoting global economic growth. Secondly, AI has the potential to significantly increase productivity across various industries. By automating routine tasks and providing real-time data analysis, AI can help businesses make more informed decisions and improve. For instance, in the healthcare industry, AI-powered algorithms

can analyze patient data to identify patterns and make more accurate diagnoses, leading to better patient outcomes and reduced healthcare costs. Similarly, in the finance industry, AI can help financial institutions detect fraud and make more accurate predictions about market trends, leading to improved investment decisions. Thirdly, AI strengthens globalization and brings economic prosperity by enabling faster communication, efficient supply chains, and seamless international trade. With the rise of cloud computing and the internet, businesses can easily access data and collaborate with partners around the world. In addition, AI can help businesses to optimize their supply chains and improve logistics, reducing the time and cost of delivering goods and services. This can lead to increased competition and economic growth, particularly in emerging markets where access to technology is limited.

AI plays a significant role in environmental protection. Firstly, satellite imagery offers an unprecedented view of the Earth's surface, providing invaluable data for environmental monitoring. AI programs, like Convolutional Neural Networks (CNNs), are very good at analyzing satellite images and can spot deforestation, habitat loss, and land damage with great accuracy. Similarly, wildlife protection and conservation are essential for preserving the biodiversity of our planet and maintaining healthy ecosystems. Many species are threatened by habitat loss, poaching, climate change, and human activities, making it crucial to take action to safeguard their survival. AI and remote sensing have become powerful tools in monitoring and enhancing these efforts, helping to secure a sustainable future for wildlife. For instance, in Kenya's Maasai Mara National Reserve, AI-driven surveillance systems have significantly reduced poaching incidents. Smart camera traps equipped with AI algorithms can distinguish between animals and humans, alerting rangers in real-time when potential

threats are detected. This proactive approach has led to a decline in poaching activities, safeguarding endangered species like elephants and rhinos. Moreover, climate change is one of the biggest challenges the world faces, affecting ecosystems, human communities, and economies. AI-powered climate models have shown they can help us better. AI's ability to analyze data helps decision-makers create specific strategies to adapt to and reduce the effects of climate change. AI can optimize energy use, lower carbon emissions, and help design infrastructure that can withstand climate challenges. Additionally, AI helps develop efficient renewable energy systems, supporting the shift toward sustainable alternatives to fossil fuels. For instance, Bangladesh, prone to climate-change related disasters like cyclones and floods, has adopted AI-based early warning systems. The timely warnings enable authorities to evacuate vulnerable communities, saving lives and reducing the impact of natural disasters.

AI helps humans by making tasks easier and faster. It can handle repetitive work, analyze large amounts of data, and provide useful insights that help people make better decisions.

Firstly, in medical research, AI tools can analyze thousands of medical records to find patterns that might lead to new treatments for diseases like cancer or diabetes. Similarly significant progress has been achieved in the advancement of more robust computing systems, presenting promising opportunities for enhancing the accuracy and scalability of automated Electrocardiography (ECG). Moreover, the impact of AI on drug discovery has been profound, as it has significantly accelerated the drug development process, lower costs, and improved the success rate of drug development.

Secondly, in the business sector, AI helps with research and innovation by providing valuable insights and improving decision-making. For instance, companies like Netflix use AI to recommend movies

and shows based on viewing history. This system analyzes preferences to suggest content that might be enjoyable, making it easier to find new favorites. Additionally, in retail, businesses like Amazon use AI to manage inventory. AI looks at sales data to predict which products will be popular, helping stores keep the right items in stock. These AI tools enhance customer experiences and drive innovation by helping businesses make smarter decisions and stay competitive.

As AI brings significant benefits such as increased efficiency and innovation, especially in fields like healthcare and business. However, it also introduces challenges or disadvantages, including ethical issues, privacy risks, and the potential for job displacement.

One significant disadvantage of AI is job displacement, where automation and intelligent systems can replace human labor in various industries. Firstly, AI-driven automation can lead to the elimination of jobs in automotive industries. In the automotive industry, companies like Tesla and Ford have integrated robotic systems to perform tasks such as assembling parts, welding, and painting vehicles. These robots can work continuously, without breaks, replacing many human workers previously needed for these tasks. Secondly, in logistics, Amazon has implemented AI-powered robots in its warehouses for sorting, packing, and moving goods. These robots enhance efficiency but reduce the need for a large human workforce to perform manual tasks such as stocking shelves or managing inventory. For instance, Alibaba's automated warehouse in Huiyang, China. Similarly, the majority of companies across the world are now using

robots at their reception. Even the calls are being managed by AI now. Additionally, self-checkout stations in stores are a good example of automation & in retail, these stations have become popular in grocery stores and large retailers. A clear example of self-checkout automation is seen in stores like Walmart and Target in USA, Canada and Australia. Lastly, in the medical sector, AI-driven automation is also starting to reduce employment opportunities. An example of AI-driven automation in the medical sector is the use of surgical robots, such as the da Vinci Surgical System. This robot is widely used in hospitals around the world to assist surgeons in performing complex procedures with high precision. They reduce the need for human labor in operating rooms, potentially impacting jobs for surgical technicians and assistance.

Along with job displacement, AI's development raises crucial ethical concerns and biases. Firstly, the usage of deepfakes created ethical concerns. Deepfakes are now able to circumvent voice and facial recognition which can be used to override security measures. One study even showed that a Microsoft API was tricked more than 75% of the time using easily generated deepfakes. Other ethical challenges arise when it comes to impersonation. The usage of deepfakes to sway public opinion in political races can have far-reaching implications. For instance, in 2019, a deepfake video of French President Emmanuel Macron was created and circulated. The video, which was initially mistaken for a real recording, showed Macron making controversial statements about political issues and other world leaders. Although the video was eventually debunked, it created confusion and spread misinformation before the

false nature was confirmed.

Secondly, AI can make our online experiences more personalized and convenient, like customizing search results or improving customer service with chatbots.

However, this could lead to a lack of social connection, empathy for others and general well-being.

When AI algorithms present content that only aligns with a user's existing opinions, it limits exposure to diverse perspectives.

This can hinder the development of empathy and reduce opportunities for meaningful engagement in social actions.

Such an environment can negatively impact overall

well-being by creating echo chambers that prevent users from understanding and relating to others' experiences.

Another disadvantage of AI is the cyber security. AI's integration into cybersecurity has ^{both} opportunities and risks. The potential for hackers to control weapons systems is a serious and growing concern in the realm of cybersecurity. As military and critical (infrastructure) increasingly rely on digital systems and automation, the risk of cyber attacks targeting these systems becomes more significant. For instance, the Stuxnet worm, discovered in 2010, ~~target~~ was used to attack Iran's Natanz facility by targetting the control systems of uranium enrichment machines. It changed the speed of these machines just enough to cause them to break down. Moreover, in 2020, the Pakistan Telecommunication Authority (PTA) suffered a significant data breach, where hackers gained

unauthorized access to personal information of mobile phone users, including CNIC numbers and phone numbers. The breach exploited vulnerabilities in PTA's database, and the stolen data surfaced on dark web forums. This incident highlighted serious cybersecurity weaknesses and raised concerns about privacy and potential identity theft.

Another significant downside of AI is that it can diminish human creativity and innovation. As AI systems surpass human intelligence in many areas, individuals may become more reliant on machines for decision-making and creative processes. This growing dependency could lead to reduced human involvement in critical thinking and a decline in the development of unique, creative ideas. ^{History in Education} ~~For example,~~ a tool known as Chat GPT inhibit human creativity and encourage dependency. Chat GPT can generate content, solve problems, and assist with creative writing its ease of use may lead users to rely on it for tasks that traditionally involve human imagination and critical thinking. For instance, instead of brainstorming ideas or writing original content, individuals might increasingly depend on Chat GPT to draft essays, articles, or even creative works. Over time, relying on AI for cognitive tasks may

Reduce creativity and increase dependence on machines, limiting independent thought. Moreover, the use of AI in graphic design through tools like DALL-E is another hinder in critical thinking and creative ideas. Although AI tools offer convenience, their frequent use may reduce the demand for traditional artists and designers to engage in creative processes like sketching etc. As more individuals rely on AI to generate artwork or design layouts, it risks stifling human creativity and limiting opportunities for artists to innovate and express their unique styles.

Besides limitations of AI chatGPT, in the learning process, inequality is another factor in labor markets. AI exacerbates economic inequality by favoring high-skilled workers while displacing those in lower-skilled roles. The use of automation and AI-driven technologies has profoundly impacted sectors such as manufacturing and customer service. Specifically, in manufacturing, robots and automated systems have replaced assembly line jobs, resulting in many lower-wage workers becoming unemployed or underemployed. For instance, in automotive industry, where companies like Tesla have adopted advanced robotics, thereby reducing the need for manual labor and leading to job losses among lower-skilled workers. Additionally, AI generates high-paying opportunities for individuals with expertise in machine learning, data analysis, and AI system design. For example, professionals working at tech

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28

Date:

giants like Google and Microsoft benefit from substantial salary increases and enhanced job security. Consequently, this growing disparity between high-skilled and low-skilled workers contributes to widening income inequality, as the economic benefits of AI advancements are unevenly distributed.

As AI rapidly transforms the world, it becomes crucial to anticipate and address its potential negative impacts through thoughtful and proactive measures. First and foremost, strengthening data privacy and security is essential. This involves creating strong laws to protect personal information and ensuring that AI systems handle data responsibly. In addition, investing in AI literacy and skill development is crucial. People need to understand how AI works and gain the skills necessary to work alongside AI, which will help them adapt to the changes it brings. Moreover, it is important to address the economic and social impacts of AI. As AI continues to automate jobs, governments and companies should support workers by offering retraining programs and creating new opportunities. This can help prevent economic inequality and job displacement.

In conclusion, while AI brings undeniable benefits, such as increased efficiency, innovation, and the ability to solve complex global challenges, it also poses significant concerns, including job displacement, ethical dilemmas, and threats to privacy. Balancing these aspects requires a

conscientious approach to development and deployment, ensuring that AI serves as a tool for progress rather than a source of division. By fostering collaboration between technologists, policy-makers, and the public, we can harness AI's potential to create a future where its benefits are widely shared and its risks are managed responsibly. As advancements in AI continue, embracing its potential with a ~~blend~~ blend of hope and responsibility is essential. As Eleanor Roosevelt wisely said, "the future belongs to those who believe in the beauty of their dreams." With thoughtful

Stewardship and collective effort
it is possible to create a
world where innovation and
human values work seamlessly
together, fostering a positive
and prosperous future for all.

↔ The end