

THUR FRI SAT SUN

Essay: Artificial Intelligence: its promise and perils

Outline:

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Thesis statement

2. Artificial Intelligence: Discussing its promises and perils

3. promises of AI: opportunities and advantages

a). Reduction in human error

b) Digital Assistance

c) AI Driving force behind numerous inventions

d) Unbiased decisions

e) Judicial gains from AI technology

f) Role of AI in ^{advancing} exploring space exploration

4. Perils and challenges faced by AI:

a) Job displacement due to automation and AI

b) Data privacy and security

c) AI is turning to be potential Threat to democratic values

d) The excessive use of AI also Threat to environment

e) Loss of human control

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5) Future implications of AI

a) Heightened intrusions into personal lives

b) Unchecked AI could exacerbate socio-economic divides

- c) The potential atrophy of essential human abilities
- d) Unemployment surge

6. Conclusion

Principles of AI: capabilities and advantages
Artificial Intelligence: Definition and its benefits and risks

"The development of full artificial intelligence could spell the end of the human race. It would take off on its own, and re-design itself at an ever increasing rate. Humans, who are limited by slow biological evolution, could not compete and would be superseded."

(Stephen Hawking)

The field of AI presents both promising opportunities for enhancing various aspects of human life, while simultaneously harboring potential perils that need careful consideration, making it imperative to strike a balance between harnessing its benefits and mitigating its risks.

AI stands at the forefront of technological innovation, promising to reshape nearly every facet of our lives. Its capabilities

to

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to analyze vast databases, and even emulate human intelligence have sparked both excitement and apprehensions. While AI has immense potential to revolutionize industries, improve efficiency, and solve humanity's most pressing challenges.

It's no secret that human error is common. If NASA engineer uses inches instead of centimeters in design, it could mean explosion. In United States alone, the potential cost of bad data caused by human error is roughly \$3.1 billion a year. AI helps automatically find patterns and trends in data. AI helps ⁱⁿ comparing goals more objectively and reducing human errors in decision making. AI technology is not susceptible to human error. It is trained to avoid human errors allowing it to detect mistakes and correct them. For example, Google's DeepMind can diagnose severe eye diseases as accurately as world class doctors. Additionally, it can recommend the best treatment in 94% of cases.

An other example, ^{includes} In weather Forecasting using AI they have reduced the majority of human error. So, it has helped in reducing human error.

Some of the highly advanced organizations use digital assistance to interact with users which saves the need for human resources. The digital assistants also used in many websites to provide things that user want. Some chatbots are designed in such a way it become difficult to determine whether we chatting with chatbot or human being.

Organizations have a customer support team that needs to classify the doubts and queries of customers. Using AI the organizations can setup the voice chatbot which ^{can} help customers with all their queries.

AI could help reduce the time and costs associated with inventing, while also increasing the technical depth of inventions.

AI-driven design optimization tools such as Autodesk's generative design software, help engineers and designers create more efficient and innovative products.

AI-driven algorithms, like those developed by Insilico Medicine, are used to analyze vast databases and used to predict potential drug candidates significantly speeding up the drug discovery process.

(Evaluation of antibiotic activity of methicillin in healing, 2018)

So, AI has made significant advancements in the field

of inventions and innovations.

AI can significantly enhance the efficiency of judicial process by rapidly analyzing large volumes of legal texts and extracting relevant information. This expedites research, allowing legal professionals to focus more on strategy and argumentation.

AI powered platforms like ROSS and Lexis Nexis employ natural language processing (NLP) to assist lawyers in legal research and document review. They can quickly sift through vast amounts of legal texts to find relevant cases, statutes and precedents, reducing hours of manual labor.

(ROSS - intelligence (Lexis Nexis))

AI-driven cases management systems like Clio help lawyers and judges manage cases more efficiently.

Job displacement by AI can occur when AI systems and robots perform tasks more efficiently and cost effectively than humans.

A study by World Economic Forum predicted that by 2025, automation could lead to the displacement of 85 million jobs especially in routine based industries.

"Computers, intelligent machines and robots seems like the workforce of future - And as more and more jobs are replaced by technology, people will have less work to do and ultimately will be sustained by payments from the government" (Elon Musk, the cofounder and CEO of Tesla).

Innovations and Technology are certainly changing; skills and jobs.

According to Bloomberg report, more than 120mn workers will need

retraining in the next three years due to AI impact on jobs., according to IBM survey.

AI systems often rely on vast amounts of data to train and operate effectively. However, this can include personal and sensitive information, leading to concerns regarding privacy and data protection.

For instance, In 2020, the Capital One breach exposed personal data of over 100 million customers, showcasing the vulnerability of sensitive information present in AI to hacking. So, to mitigate these AI system privacy concerns the companies must prioritize implement robust privacy measures. In addition, AI presents ^{these} some challenges and for computer security, such as raising ethical, legal, and social issues, or facing adversarial

attacks. AI may make decisions or actions that affect the security or rights of users, organizations, or societies without human consent or oversight.

Another challenge posed by AI ^{is} that it is a threat to democratic values. Its use significantly impact democratic processes including elections, the right to assembly and associations and right to hold opinions and receive or impart information.

A "Democratic Index" published by Economists in 2011 reported that half of world's countries scored lower than the previous year. This included the United States, which was demoted from "~~full~~ ^{flawed} democracy". The principle factor was "erosion of confidence in the public institutions."

Interference by Russia and Voter
manipulation by Cambridge
Analytica in the 2016 presidential
elections played a large part
in that public disaffection -

(Artificial intelligence: Risks to
privacy and democracy, Yale University
Journal by Karl Manhein, 2019) -

STEM education and AI both
have affected the conventional
civic education and political
socialisation among children and
adults. This is reducing the
'citizen's political awareness' from
early stages of their education -
when people are not being
educated about their how
society functions, they are not
civically engaged due to
apathy and ignorance. The
United States' voters turnout
rate has been trending

lower than other countries for decades. Fewer people are joining unions and volunteering, poor turnout and representation leads to policies that don't display the interests of constituents, making them harmful to democracy.

(AI's Threat to democracy comes from within, Toby Winick, 2023)

Next challenge posed by AI is that excessive and increasing use of AI technology ^{is a threat} to the environment.

The super computers used to ^{run} cutting edge AI programs are powered by the public electricity grid and supported by back up diesel powered generators. Training a single AI system can emit over 250,000 pounds of carbon dioxide. In fact, the use of AI technology across all sectors produces carbon dioxide

emissions at a level comparable to the aviation industry.

(Artificial intelligence's environment costs and promises, Elisbet Jones, 2022)

The possibility of a AI system becoming uncontrollable and dangerous cannot be ignored.

The theoretical calculations presented in the study suggest that controlling such systems would be impossible and algorithm that can prevent it from harming humans cannot be developed.

Accidents involving self driving cars have caused questions about the extent to which AI can make complex decisions autonomously.

AI is a great at churning out misinformation. Some studies show AI generated misinformation to be even more persuasive.

False content created by humans.

AI helps those who deliberately seek to mislead purveyors of misinformation.

In May 2023, it was discovered Stephen Schwartz submitted six fake case precedents generated by ChatGPT in his brief to the Southern district of New York in *Mata, v. Avianca*, a personal injury case against the airline Avianca. Schwartz said that he had never previously used ChatGPT & that he did not recognize the possibility that ChatGPT's output ^{could} have been fabricated, and that ChatGPT continued to assert that ChatGPT's output authenticity of precedents after their non-existence was discovered.

(Here's what happens when your lawyer uses ChatGPT, Benjamin Weiser, 2023)

AI has both good things it can do and challenges or problems -

The promises of AI can make our lives exciting and helpful like self-driving cars or voice assistants like Siri. It can help doctors find better ways to treat diseases or make businesses more efficient. On the other hand, there are perils, which are like dangers that come with AI. It can invade our privacy by collecting too much information about us. And there are concerns about using AI in ways that might not be fair or ethical.

So, AI is a powerful tool with great potential, but we need to be careful to use it in ways that benefit us without causing problems or harm to us.