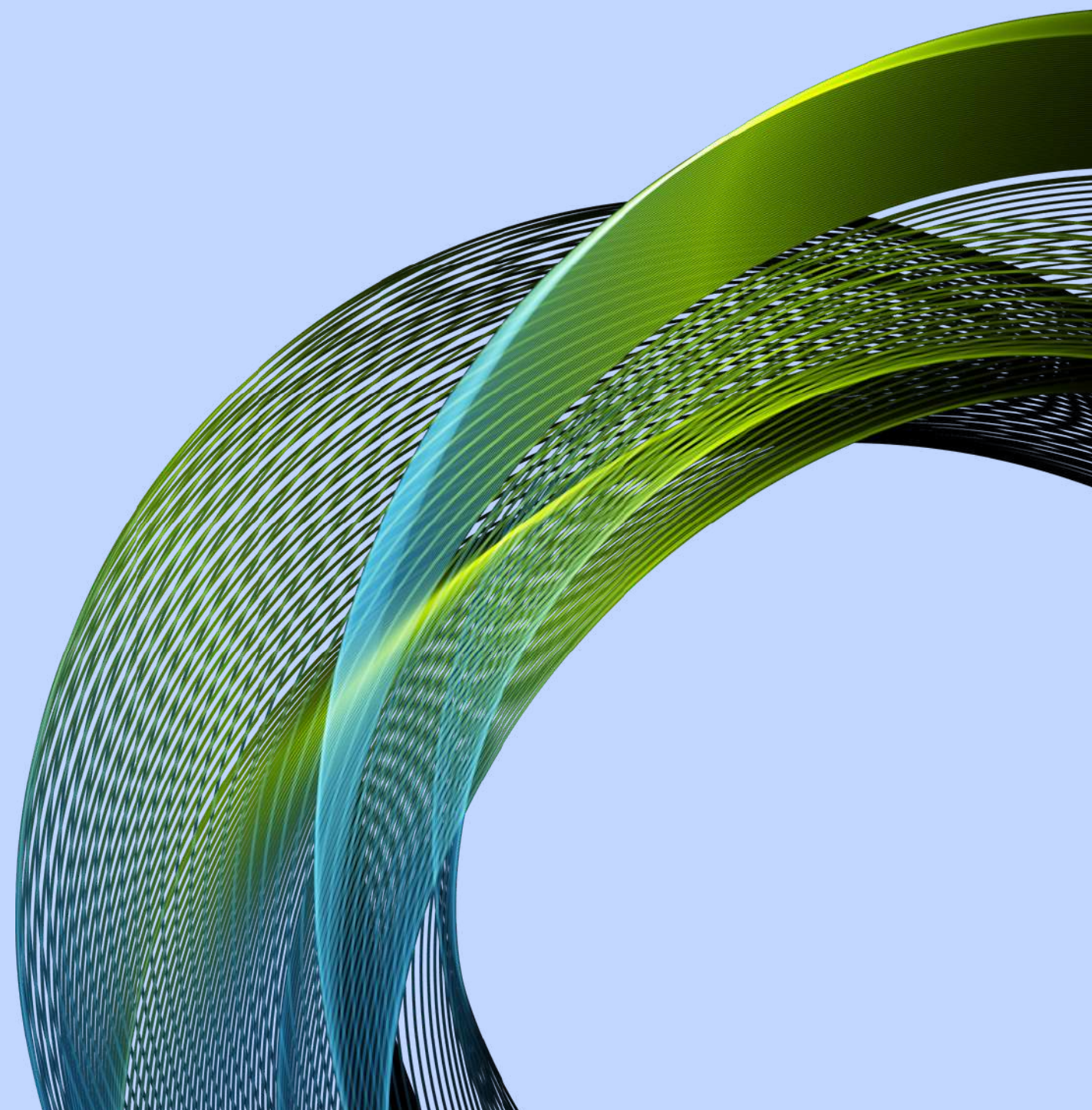
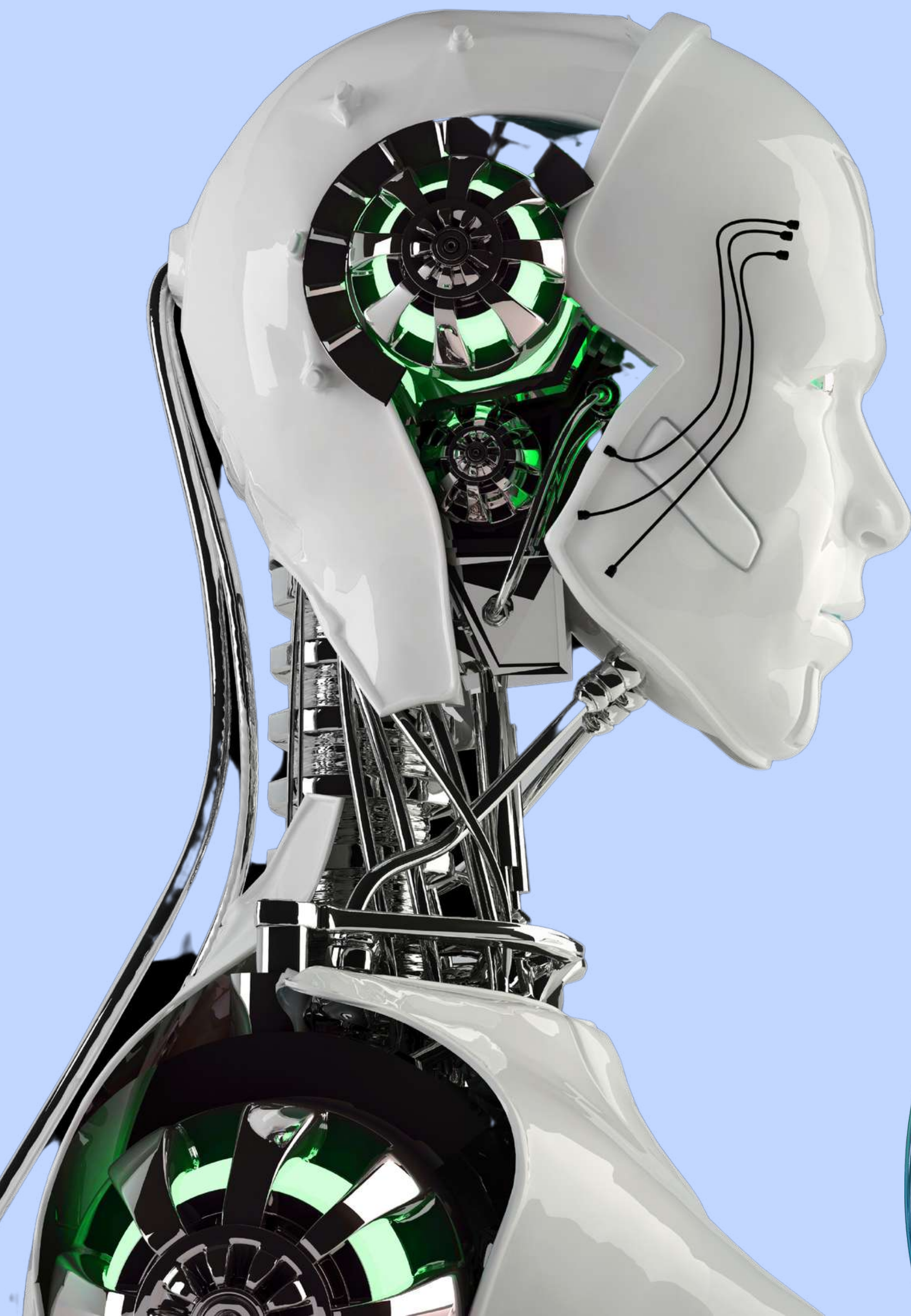




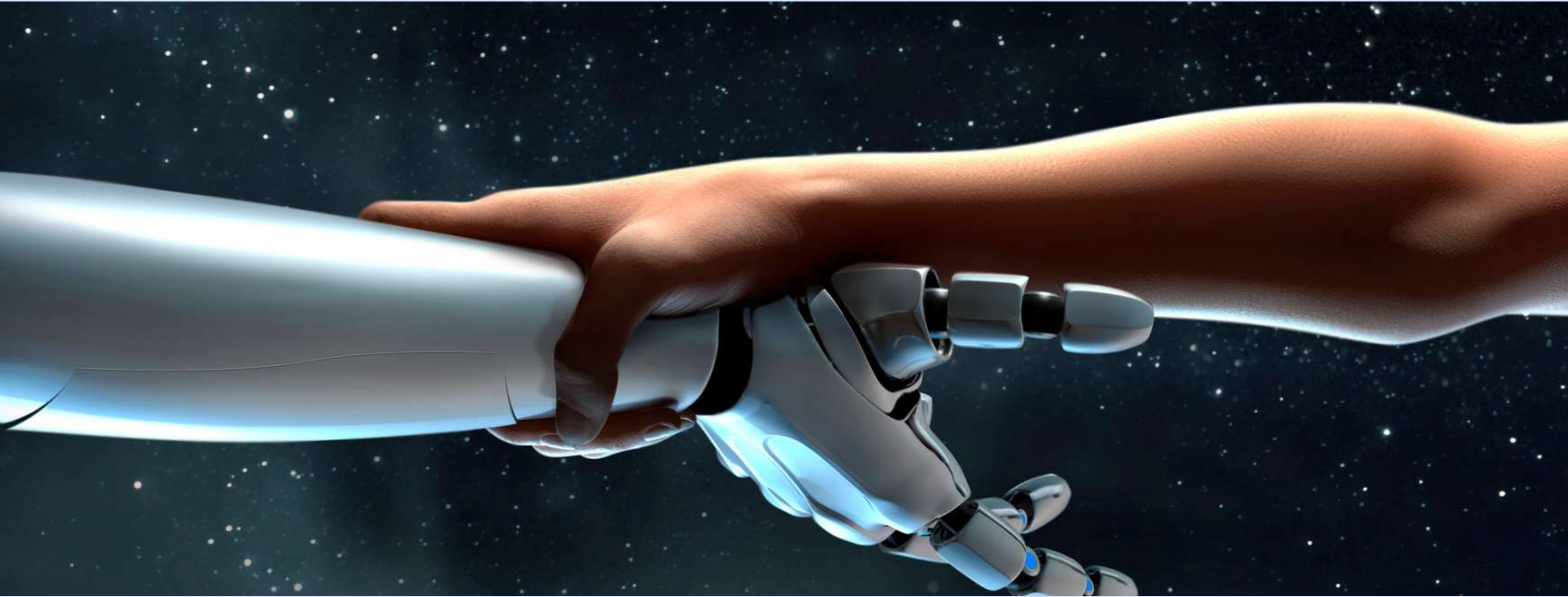
THE
PULSE
Rhythm of Young Thought.

AI and Automation

SPRING/SUMMER ISSUE 2023



FROM THE EDITORS' DESK



At the top of the accepted knowledge pyramid, is a human. Really? This credence has taken a beating and Artificial Intelligence is toppling hitherto held societal principles.

In this edition of The Pulse, we tackle this topic that has been the subject of much debate - AI and automation. From self-driving cars to virtual assistants, AI and automation have made significant impacts across various sectors. As we ponder what the future holds, it begs the question - what role will AI and automation play in shaping our lives? How will it affect our jobs, environment, and society as a whole? In this issue, we delve deeper into these questions and explore the potentials and challenges of AI and automation. With advancements in technology, it's crucial to take a moment to reflect on the impact it can have on our world.

Editorial Team

- ~Armaan Kapoor
- ~Ishitta Grover
- ~Rushil Khanna
- ~Aryan Mahajan
- ~Ambreen Sidhu
- ~Annika Khara

Design Team

- ~Bhavika Singh
- ~Kaashvi Kapoor
- ~Mannat Goyal

PROGRAMMED EMOTIONS

Will we ever have programmed emotions?
Writing something with the same devotion.
I was up all night, writing and letting my sadness linger,
But AI wrote something better with the snap of a finger.

For all you know, this poem could be the work of a machine.
I could've gone to Chat GPT and written, "Write something for my
school magazine."

Can a piece of code go deeper than my heart?
Because I can't differentiate between AI and art.

Sometimes I wish I was born in the modernist era,
Be one of the greats, a part of the trifecta .
Live like I'm old, die young, my worries I forgot.
Just to be reincarnated by a prompt given to a robot.

Can I also program my emotions?
Make a software write with my devotion.
I always thought these were the things that get you convicted.
But you know what they say, 'survival of the fittest.'

~ Aryan Mahajan (IBDP YR 1)



FOR SELF AND SOCIETY

In the world of tech,
An advanced perimeter at its neck,
AI is a revolution never seen,
Although it is transforming, it still is a machine.

AI's unrealised capability is truly flabbergasting,
And its vitality, well, staggering,
For the self, AI, a companion, and chaperone,
It's detection, smooth and precise, like the melodic saxophone.

With every passing day,
A different angled horizon comes to play,
It stipulates the way of life,
Aids, automates, and prevents with open arms.

For as AI continues to evolve,
We must ensure and uphold our ethical regimes,
As we build these intuitive machines,
We ought to set the seal on it serving humanity and let revolve.

Let's harness its potential for good,
Since the frontiers are understood,
Where AI helps us reach new heights,
And makes us progress, with all its might.

~ Navya Tuli (IBDP YR 1)

WILL AI REPLACE US ALL?

In today's constantly evolving world, artificial intelligence is more prevalent than ever. From your iPhone's AI assistant, Siri, to sophisticated software like Jenni AI that can produce entire theses via from a single prompt, it is safe to say that artificial intelligence has developed extraordinarily in the past few decades and will only continue to improve as time goes on. Although this may seem to drastically reduce one's workload at first glance, this technological revolution may have unprecedented effects on employment and thereby, on in the economy.

As software engineers continuously develop AI for a variety of purposes, presently including but not limited to writing, plagiarism detection and book recommendations, they start performing jobs ordinarily assigned to humans. At first, this was viewed as a boon so that humans would not have to routinely suffer scanning and poring through mundane and tedious tasks, such as grammar correction, which could easily be completed by AI in the span of a second.

However, this trend has now gone in a different direction, with software being developed to perform tasks requiring human effort and creativity. A relevant example would be ChatGPT, which samples millions of documents available online to cater to the user's needs and can reproduce entire stories and essays. Consequently, this has reduced the demand for writers, creating unemployment in the economy. This can be seen through the latest strike undertaken by the Writers Guild of America, which has used its voice against the trend of AI replicating human creativity.

One step towards preventing the collapse of the job market would be to encourage AI to stop replicating human behaviour to such a great extent. As of now, this trend has encouraged firms to start cutting down on the costs of hiring labour, which will only lead to 'capitalism' in the near future, an economic system that has infamously promoted the exploitation of human labour when carried to the extreme. Thus, a change in the attitude of developers is needed. Instead of replacing humans, AI should be used to make the monotonous aspects of life simpler, such as giving users reminders and scheduling their calendars.

~ Ambreen Sidhu (11-A)

DEEP FAKES: ETHICAL IMPLICATIONS OF AI

Artificial Intelligence is a form of technology that is slowly taking over certain aspects of our lives. We all are familiar with some or the other type of AI. These could be chatbots, facial recognition, and machine learning, just to name a few. Basically, AI exhibits human intelligence in a machine form. While we are well aware of the immense potential this innovation has to offer, there is little we know about the harm it could cause us? How do we define the line between “growth” and “control”?

Deep fakes are synthetically manipulated digital media that can take the form of photos, videos or voice recordings. These are becoming increasingly popular, and not for the right reasons. Although this form of AI offers certain benefits in the art, business and medical industries, these are outweighed by its dangers. Firstly, deep fakes are being used to spread wrong political messages, create non consensual explicit content and more. This is highly unethical as using anybody’s face or voice without their consent ,in order to create content is an invasion of privacy and a breach of trust. Secondly, this technology has the potential to influence the public, who looks up to and trusts their political leaders and favourite celebrities.

A video recently surfaced in which Mark Zuckerberg bragged how he had “total control of billions of people’s stolen data”. For a viewer who is unaware about such technology and its reach, they might instantly share the clip, and soon enough it will spread like wildfire. Deep fakes make it easy for just about anyone with an ulterior motive to create such content. With this form of AI becoming more and more believable day by day, it can be hard to differentiate between what is real and what is not. One manipulated video can impact thousands of viewers. This raises numerous questions about the ethical use of such technology, and the potential for its misuse. Ironically, the solution to this problem will also stem from AI, as it is the only form of technology capable of detecting such media.

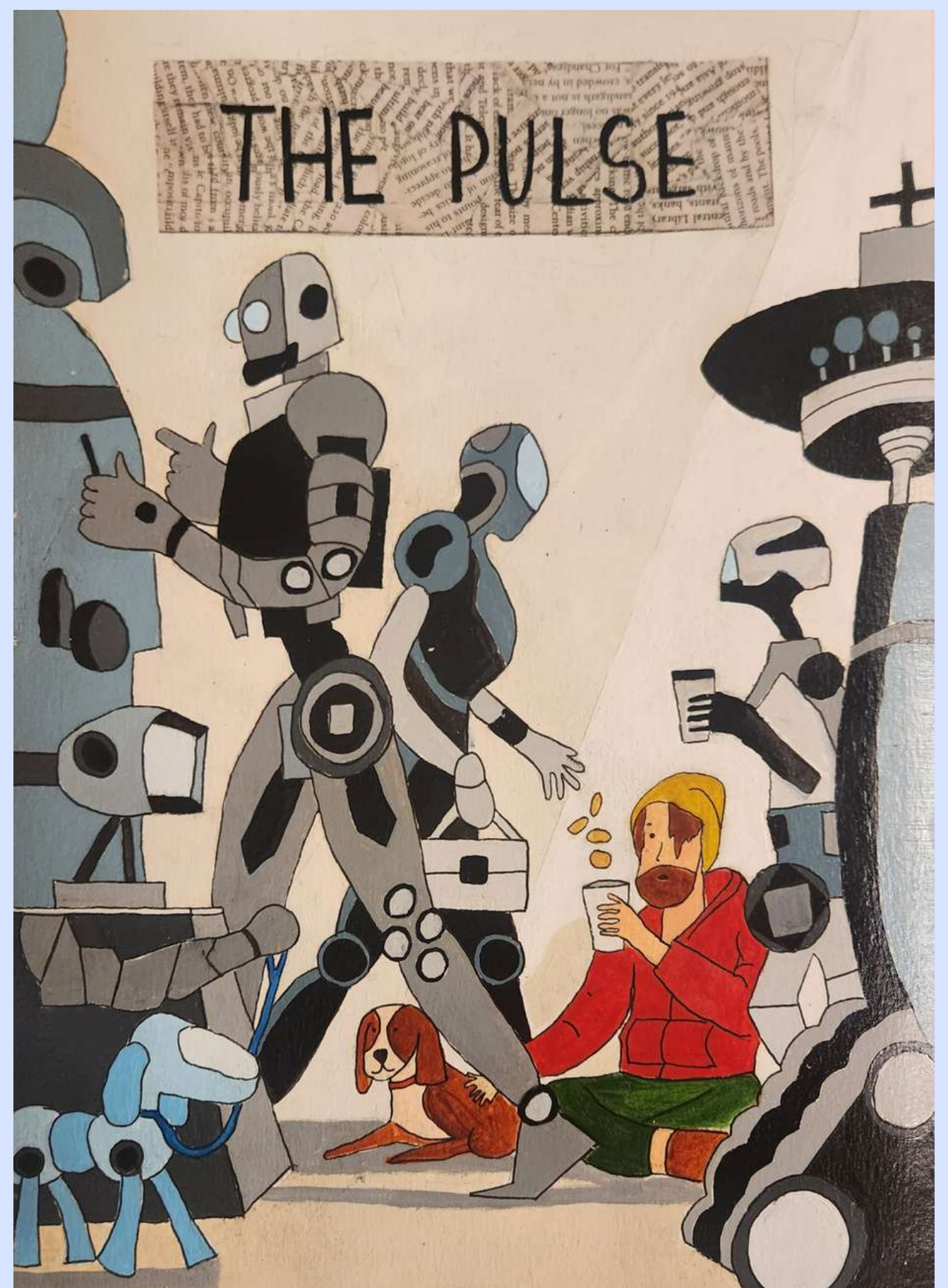
Such forms of artificial intelligence need to be heavily regulated. With breaches such as these, it is important now more than ever to be wary of what one posts online, and how one perceives every video or photo that comes their way.

Even though AI can make groundbreaking developments in the way things have been done so far, we need to think about the ethical implications of such technology and how it impacts us as a society. To what extent should it be allowed to control our lives?

~ Annika Kaur Khara (IBDP YR 2)

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[What-are-deepfakes-and-how-can-you-spot-them](#)



~ Bhavika Singh (11-A)

ARTIFICIAL INTELLIGENCE: AN ECONOMIC DRIVER OR A WEDGE?

Recent advances in AI have undoubtedly had a profound impact on just about everything. They have led to a paradigm shift in the way we operate, and I believe the way forward is learning to leverage AI ethically rather than swimming against the tide.

Artificial intelligence is often seen as a catalyst for productivity and economic growth, as it can significantly improve efficiency and decision-making. AI also has the potential to drive the development of new products and industries that will generate additional revenue. However, it is important to understand that AI can have adverse effects on the economy and society. Critics warn that this could lead to the creation of "super firms" that pool wealth and knowledge, which could harm the economy at large. In addition, AI could widen the economic gap between developed and developing countries and create demand for workers with specific skills, making others obsolete. Therefore, the dilemma arises whether artificial intelligence should be considered a driving force or a divisive factor in the economy.

According to a McKinsey Global Institute report, AI could be worth around \$13 trillion by 2030, equivalent to 16 percent of the global economy. In addition, it can increase global GDP up to 26 percent. At least 70% of companies anticipate adopting AI technology in the coming years, including computer vision, natural language processing, virtual assistants, robotic process automation and advanced machine learning. However, there are some obstacles that can hinder the rapid adoption and integration of AI. Late adopters may struggle to make an impact because early adopters have already taken the first mover advantage. Furthermore, artificial intelligence accentuates the current digital divide between countries. Countries may need different strategies and responses because AI adoption rates vary. Leading AI countries could see an additional net economic benefit of 20-25 percent compared to today, while developing countries could only see about 5-15 percent. Thus, the adoption of AI may hinder the progress of developing countries in their efforts to compete with

developed ones. Conclusively, this situation compares favourably with other historical transformative technologies that have had both costs and benefits. On one hand it can strengthen economic development by increasing productivity, but on the other, it can polarise the global economy further by exaggerating the inequality between developed and developing countries, thus steering us away from the attainment of the Sustainable Development Goals.

~ Ishitta Grover (IBDP YR 2)

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AI- THE NEW ARTIST?

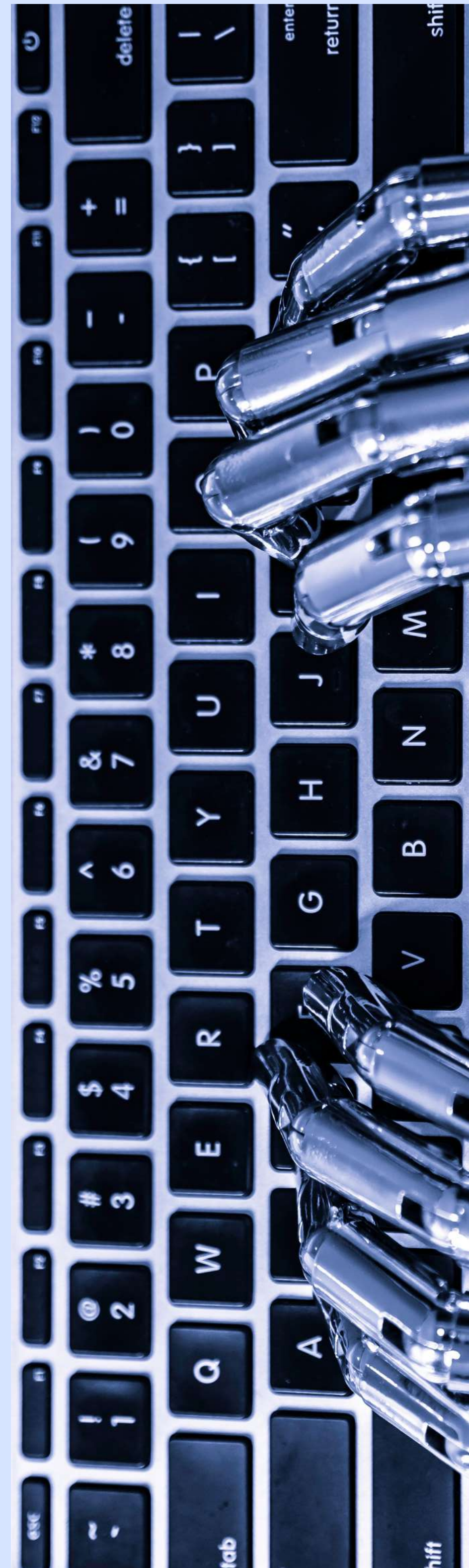
Many sing praises of AI and its revolutionary impact,, but there is some reservation amongst few regarding the implications posed by this. With software being developed to write entire essays, draw pictures and create songs, there is fear amongst artists, who fear that they may be staring at a severance package. AI samples thousands of sources available online to execute the aforementioned tasks and create art. However, this begs the question: can the material created by AI be called “art”?

Art is something which has been so far thought to be an integral part of human nature. In fact, we can call AI a form of art. However, when AI copies several painters, poets and singers to create, how can we call the finished output, art? After all, art is synonymous with creation and modernisation. The truth is AI can't replace the drive that pushes humans and the experiences they go through, thus, it cannot move people the way human art work can.

At the same time, AI is starting to replace the work done by artists. If you go through social media nowadays, you are sure to find computerised drawings people try to pass off as original work. Similarly, many students make AI write essays for their schoolwork. Even firms are aware of this technological change, and many entrepreneurs are seriously considering replacing their artistic employees with AI models, leading to outrage by employees who demand their work be given more respect. In fact, the recent strike undertaken by the Writers Guild of America aims to establish the importance of writers in the film industry and emphasises that artificial intelligence can never replace humans.

In the end, it is safe to say that computers can not and never will replace humans. More importance should be attributed to artists in the economy, lest we become destined to live in a world devoid of art.

~ Ambreen Sidhu (11-A)



FROM TERMINATOR TO ALEXA: THE PORTRAYAL AND PERCEPTION OF AI AND AUTOMATION IN POP CULTURE AND MEDIA

Artificial intelligence (AI) and automation have been popular subjects in pop culture and media for decades. From science fiction movies like 'Terminator' and 'Blade Runner' to TV shows like 'Black Mirror' and 'Westworld', the portrayal of AI and automation has ranged from helpful and benevolent to menacing and dystopian. Through this article, we will explore how AI and automation are depicted in pop culture and media and how these portrayals shape our perception of these technologies.

In popular culture, AI and automation is often portrayed as either a saviour or a destroyer of humanity. In some movies and TV shows, AI and automation is depicted as a solution to many of humanity's problems. For example, in the movie, 'Her', an AI assistant named Samantha helps the protagonist overcome his loneliness and find love. In the TV show, 'Black Mirror', a dating App that uses AI algorithms to find the perfect match for its users ends up causing more harm than good. These portrayals suggest that AI and automation can bring happiness and fulfilment on the one hand, but they can also lead to unintended consequences.

Alternately, AI and automation are often depicted as a threat to humanity in many popular culture works. In the 'Terminator' movies, AI becomes self-aware and seeks to destroy humanity. In the 'Matrix' movies, AI enslaves humans and uses them as a power source. These portrayals suggest that AI and automation can lead to the downfall of humanity if not kept in check.

In addition to movies and TV shows, AI and automation are also frequently discussed in the news media. An understanding of the impact of the advanced technology ranges from enthusiastic to sceptical. Some news media tout the benefits of AI and automation, such as increased efficiency, productivity, and cost saving. Others raise concerns about the impact of these technologies on jobs, privacy, and ethics. The media coverage of AI and automation can shape public perception and influence

policy decisions. The portrayal of AI and automation in pop culture and media can have a significant impact on how people perceive these technologies. For example, the depiction of AI as a threat in movies like 'The Terminator' can lead to fear and scepticism of AI in real life. On the other hand, the depiction of AI as a solution to problems in movies like 'Her' can lead to enthusiasm and optimism about AI. These perceptions can influence public opinion and policy decisions about the use and regulation of AI and automation.

The portrayal of AI and automation in pop culture and media, reflects both our hopes and fears about these technologies. While it's important to acknowledge the potential benefits of AI and automation, it's equally important to recognize the challenges and risks associated with them. By exploring the portrayal of AI and automation in pop culture and media, we can gain insights into the social, cultural, and ethical dimensions of these technologies.

Furthermore, this is not monolithic. It reflects different perspectives, ideologies, and values. For example, the portrayal of AI and automation in Hollywood movies may differ from that in independent films or foreign movies. Similarly, the projection in the news media may differ from that in social media or alternative media. Therefore, it's crucial to examine these portrayals from different angles and contexts to get a more nuanced understanding of them.

Ultimately, this portrayal and perception can shape our collective imagination and influence our actions. We can be inspired to innovate and improve our lives, but we can also be misled to create false expectations. Therefore, it's important to critically evaluate these portrayals and engage in informed and inclusive conversations about the future of AI and automation. By doing so, we can create a more responsible and sustainable path for the development and use of these technologies.

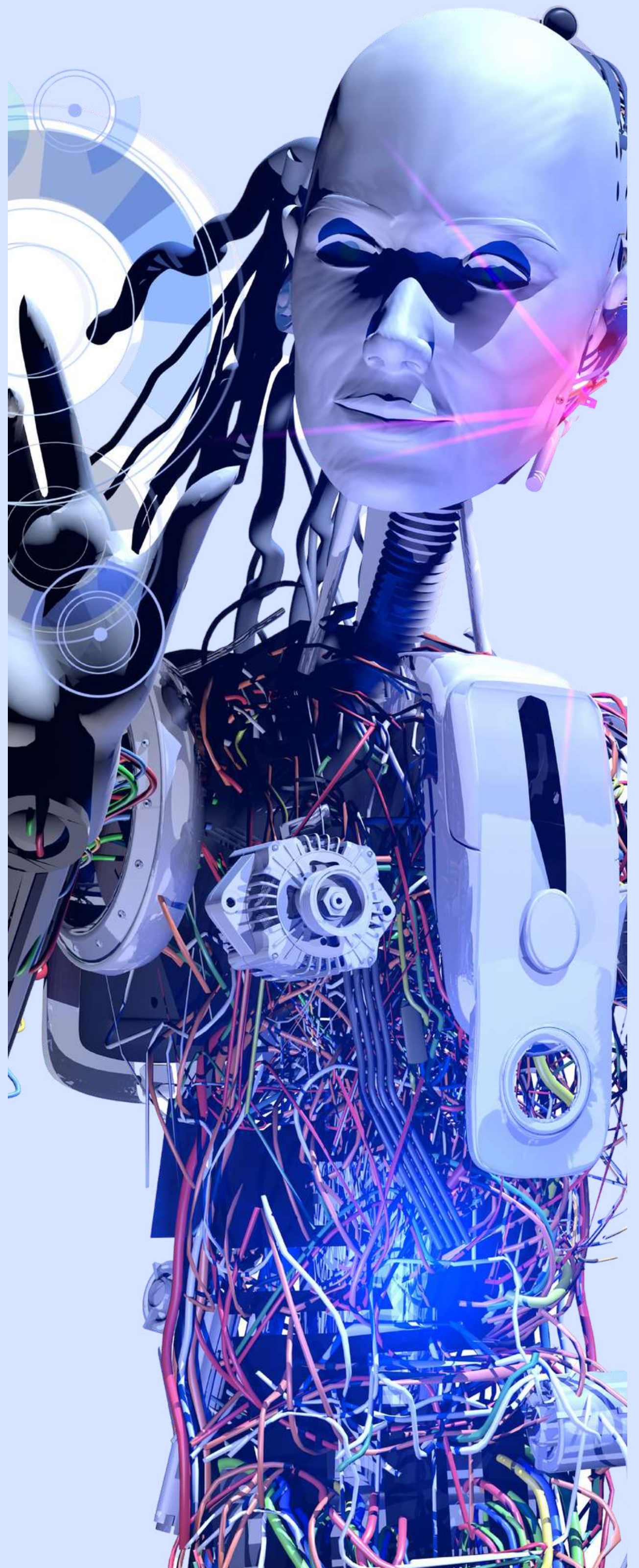
~ Armaan Kapoor (IBDP YR 2)

CLIMATE CHANGE AND AI

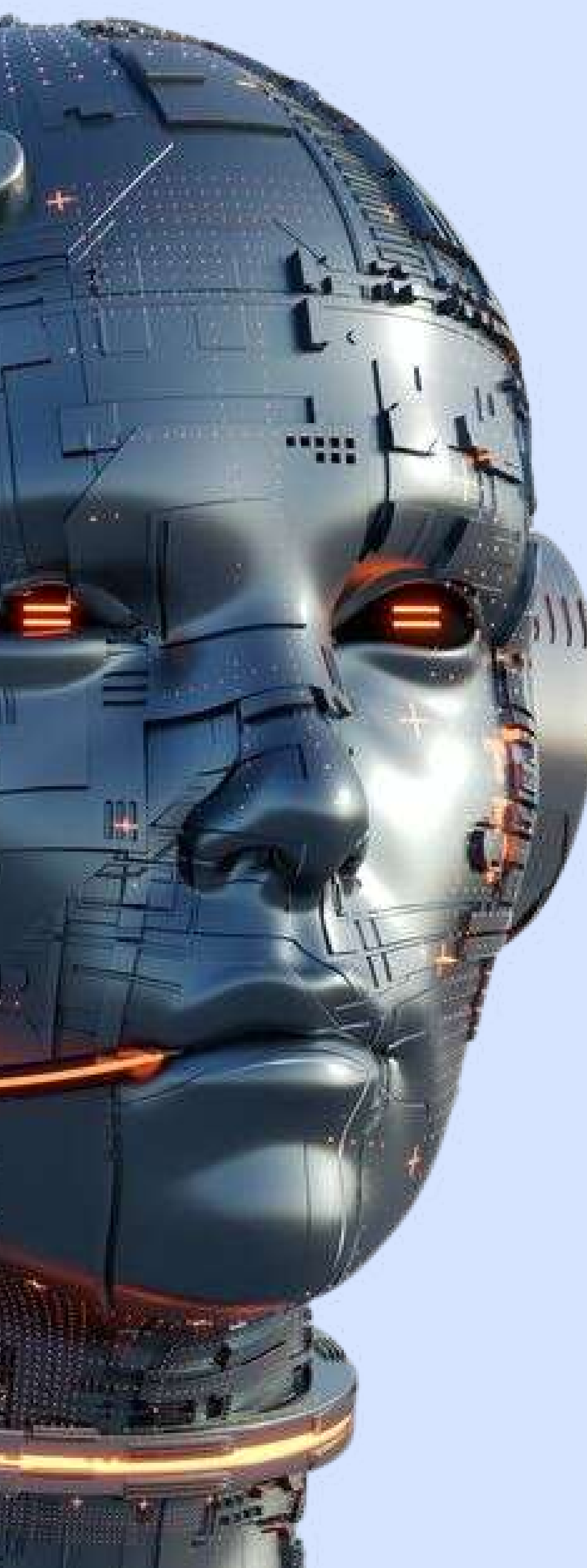
The United Nations recognizes climate change as the long-term alteration of temperatures and weather patterns, primarily caused by the combustion of fossil fuels. In recent years, there has been significant progress in climate change research through the application of data science and machine learning. Prominent technology companies are introducing computational tools and platforms to expedite environmental sustainability and Earth science advancements. AI is playing a crucial role in the development of climate models, which serve as the primary source of information for predicting the future state of our planet. These models incorporate scientific theories, such as the laws of physics, observational data, and computational techniques. Due to the complexity of our climate system, climate models require substantial computational resources and are computationally intensive.

One notable endeavour by NVIDIA involves the creation of AI models and digital twins of the Earth, known as Earth-2 and FourCastNet. These high-resolution 3D stimulations offer valuable insights for professionals to interact with and predict global weather patterns.

Another open-source project-Microsoft Planetary Computer, is providing petabytes Planetary Computer platform of data about Earth systems and choosing it on their Azure cloud platform. The earth scientist can access as well as process the enormous geospatial datasets on this. These collaborative initiatives are driving research in the field of big data geoscience and have the potential to democratize data-intensive climate research.



ए.आई एंड ऑटोमेशन



एआई (आर्टिफिशियल इंटेलिजेंस) और ऑटोमेशन दो तकनीकी प्रगतियां हैं जो तेजी से हमारे काम करने और जीने के तरीके को बदल रही हैं।

एआई मानव बुद्धि का अनुकरण करने के लिए मशीनों की क्षमता को संदर्भित करता है, जैसे कि सीखने, तर्क करने और समस्याओं को हल करने की क्षमता। भविष्यवाणियां करने, प्रक्रियाओं को स्वचालित करने और निर्णय लेने में सुधार करने के लिए AI को विभिन्न प्रकार के उद्योगों में लागू किया जा सकता है, स्वास्थ्य सेवा से लेकर वित्त तक।

दूसरी ओर, स्वचालन, उन कार्यों को करने के लिए प्रौद्योगिकी के उपयोग को संदर्भित करता है जो पहले मनुष्यों द्वारा किए जाते थे। ऑटोमेशन साधारण मशीनों जैसे असेंबली लाइन रोबोट से लेकर एआई को शामिल करने वाली जटिल प्रणालियों तक हो सकता है।

एआई और ऑटोमेशन मिलकर हमारे काम करने के तरीके में क्रांति ला रहे हैं। वे पूरे उद्योगों को बदल रहे हैं और नए बना रहे हैं। उदाहरण के लिए, एआई का उपयोग ग्राहक सेवा में सुधार करने, आपूर्ति श्रृंखलाओं का अनुकूलन करने और नई दवाओं को विकसित करने के लिए किया जा रहा है। स्वचालन का उपयोग लागत कम करने, दक्षता में सुधार करने और उत्पादकता बढ़ाने के लिए किया जा रहा है।

हालाँकि, एआई और स्वचालन का उदय भी चुनौतियाँ पेश करता है। नौकरियों का विस्थापन एक चिंता का विषय है, और कार्यबल को अपस्किलिंग और रीस्किल करने की आवश्यकता है। एआई निर्णय लेने में पूर्वाग्रह और गोपनीयता पर प्रभाव जैसे नैतिक विचार भी हैं।

जैसा कि हम इन तकनीकों को विकसित करना जारी रखते हैं, लाभ और संभावित कमियों दोनों पर विचार करना और एआई और स्वचालन के जिम्मेदार और स्थायी उपयोग की दिशा में काम करना महत्वपूर्ण है।

नौकरियों पर एआई के प्रभाव

हाल के दिनों में, हम अपने चारों ओर एआई और ऑटमेशन के उदय को देख सकते हैं। हमारे घरों में एलेक्सा है और मोबाइल फ़ोन में सिरी। अगर यह तकनीकी हमारी घर की ज़िंदगी को आसान बना रहा है, तो कार्यस्थल में तो इसके बहुत से लाभ होंगे। जो नौकरियाँ हम इतनी देर तक करते आ रहे हैं, उस पर आर्टिफ़िशल इंटेलिजेंस का क्या प्रभाव पड़ेगा? और क्या यह चिंता की बात है या नहीं?

एक ओर, एआई और ऑटमेशन का बढ़ता ट्रेंड करोड़ों लोगों की नौकरियाँ को ख़तरे में डाल सकता है। जो काम मनुष्य कर सकते हैं, एआई उससे कम समय में, कम खर्चे में और और भी अच्छा से कर सकता है। इसलिए कंपनियाँ इस तकनीकी का अनुकूलन करना चाहेंगी। लेकिन अगर हज़ारों में लोगों की नौकरियाँ जा रही हैं, तो उनके पास अपने और अपने परिवार को क़ायम रखने के संसाधन नहीं होंगे, और बहुत से लोग गरीबी के शिकार बन सकते हैं। उदाहरण के लिए, मुनिमी काम, रिसेप्शनिस्ट के काम, टैक्सी चलाना, सुरक्षा का काम करना, आदि एआई आसानी से संभाल सकता है। इसलिए एआई के लाभ देखने से पहले हमें लोगों पर इसके असर के बारे में भी सोचना चाहिए।

दूसरी ओर, एआई के वजह से वस्तुओं और सेवाओं का अधिक कुशल उत्पादन हो सकता है। यह एक देश की अर्थव्यवस्था को बढ़ावा दे सकता है, जिससे देशी उत्पाद भी बढ़ सकता है। इसका मतलब यह है कि हर एक व्यक्ति के बजाय पूरे समाज का भला होगा। लेकिन, अगर एआई और मनुष्य साथ मिल कर काम करें, यह सबसे अच्छा परिणाम होगा। स्वास्थ्य देखभाल और शिक्षा के क्षेत्र में बहुत विकास किए जा सकता है जो हमारी ज़िंदगी को और भी आसान बना सकता है। चिकित्सा सेवा उद्योग में, एआई रोगियों को आसानी से निदान प्रदान कर सकता है। हालाँकि, इसमें उचित रूप से ऐसा करने के लिए भावनाओं का अभाव है। लेकिन, यदि मशीन निदान लिखती है और डॉक्टर इसे वितरित करता है, तो यह सबसे कुशल होगा। ऐसे और भी कई क्षेत्र में एआई और ऑटोमेशन का विकास हमें पूरी तरह से नए स्तरों पर ले जा सकता है।

एआई से लोगों की नौकरियाँ पर बुरे असर पड़ सकते हैं परंतु सबके फ़ायदे के लिए एआई और मनुष्यों को एक साथ मिलकर काम करना चाहिए। हालाँकि नौकरियों को ख़तरा है, हम यह नज़रंदाज़ नहीं कर सकते कि एआई से हर एक क्षेत्र में बहुत से बदलाव आ सकते हैं जो एक देश को अलग ऊँचाइयों तक पहुँचा सकती है।

~ अनिका खारा (IBDP YR 2)

References: [artificial-intelligence-workplace](#)



~ Manya Dhillon (10-A)



~ Reva Chaudhary (10-B)

दृष्टिकोण कलाप्रेमी का: वुमन अंडर नाइट स्काई

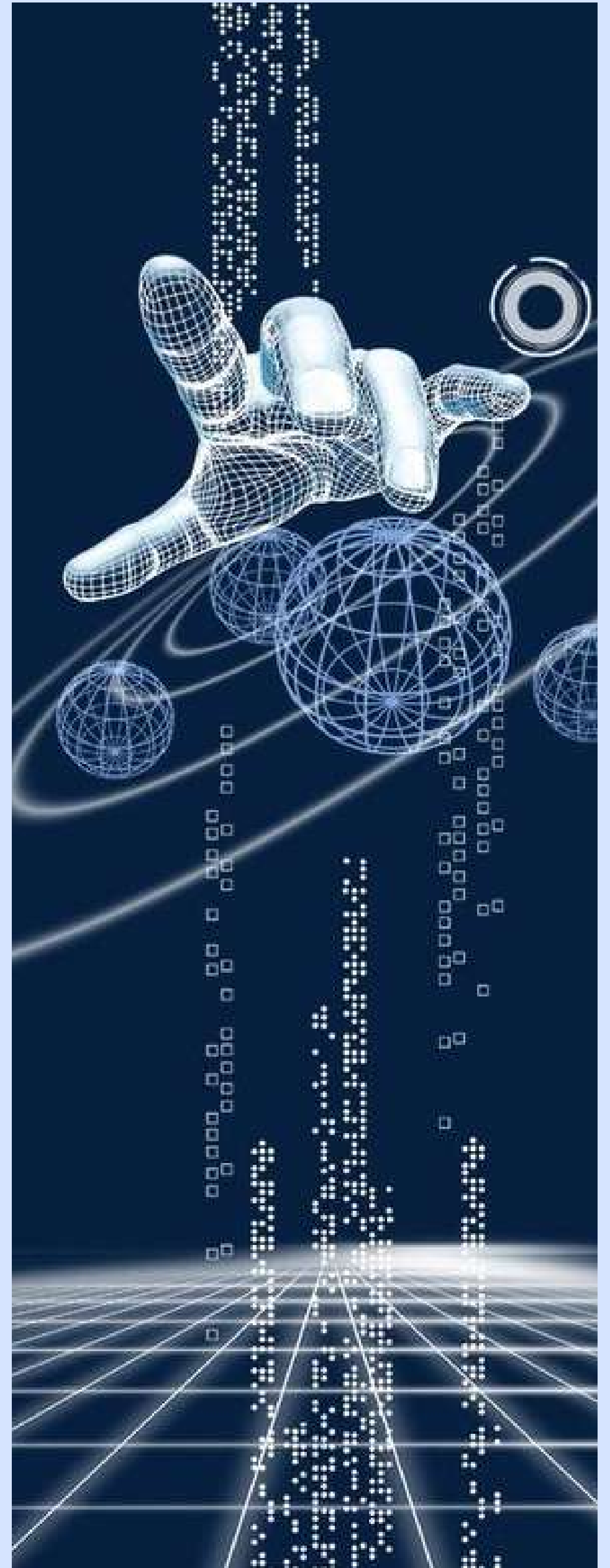
मैंने डीप ड्रीम जनरेटर में डाला और कुछ ही क्षणों में मुझे एक छवि दिखी बिल्कुल वैसी जैसा मैंने वर्णन किया था।

आपका स्वागत है आर्टिफिशियल इंटेलिजेंस की दुनिया में जहाँ आपको कुछ बटन दबाकर वह सब मिल जाता है जिसकी आप खोज में थे। आर्टिफिशियल इंटेलिजेंस का मतलब है बनावटी तरीके से विकसित की गई बौद्धिक क्षमता। ईश्वर ने मनुष्य को सोचने और प्रतिक्रिया करने या काम करने की शक्ति प्रदान की और आज यही शक्ति हम आर्टिफिशियल इंटेलिजेंस को सौंप रहे हैं। मैं मानती हूँ कि आर्टिफिशियल इंटेलिजेंस में शिक्षा और स्वास्थ्य क्षेत्र को नया रूप देने की क्षमता है परंतु आर्टिफिशियल इंटेलिजेंस को रचनात्मक समुदाय पर हावी होते देख मेरा दिल टूट जाता है। यह कला जेनरेटर, अधिकांश उपयोगकर्ताओं के लिए पाँच मिनट की खुशी प्रदान कर सकते हैं परंतु उन चित्रकारों व कलाकारों का क्या जिनका रोज़गार ही यह है, क्या एक क्षण में उनसे उनका जीवन छीन लेना अन्याय नहीं है?

हम मानव प्रजाति, जिन्होंने युद्ध के दौरान कविताएं लिखी, शिकार के बीच गुफा की दीवारों पर कलाकारी की, इन इमारतों से लेकर उन मूर्तियों तक जिसकी रचना इन हाथों ने की, क्या ये दो हाथ अपना सारा काम खुशी-खुशी आर्टिफिशियल इंटेलिजेंस को सौंप देंगे? आर्टिफिशियल इंटेलिजेंस का आविष्कार मनुष्य का जीवन और सुखद बनाने के लिए किया गया था ना कि नष्ट करने के लिए।

चाणक्य ने कहा है, 'अति सर्वत्र वर्जयेत' अर्थात् अति को हर जगह त्यागना चाहिए।

हमें आर्टिफिशियल इंटेलिजेंस के अति उपयोग का त्याग कर उसे ऐसे काम सौंपने चाहिए जो मनुष्य वास्तव में नहीं करना चाहते।



ए.आई एंड ऑटोमेशन

ए आई और ऑटोमेशन एक विज्ञान और तकनीकी क्षेत्र है जो मानवता के जीवन में महत्वपूर्ण रूप से प्रभाव डाल रहा है।

ए आई का उपयोग कंप्यूटर प्रोग्रामों और सिस्टमों के माध्यम से मनुष्य जैसी बुद्धिमत्ता को नकल करने के लिए किया जाता है। यह कंप्यूटर सिस्टम और मशीनों को सीखने, समझने, निर्णय लेने, और कार्रवाई करने की क्षमता प्रदान करता है। इसके अलावा, स्वचालन उन कार्रवाइयों को स्वचालित करने की प्रक्रिया है जो पहले मानवों द्वारा की जाती थी।

एकांत्रित बुद्धिमत्ता (एआई) और स्वचालन (ऑटोमेशन) एक विज्ञान और तकनीकी क्षेत्र है जो मानवता के जीवन में महत्वपूर्ण रूप से प्रभाव डाल रहा है।

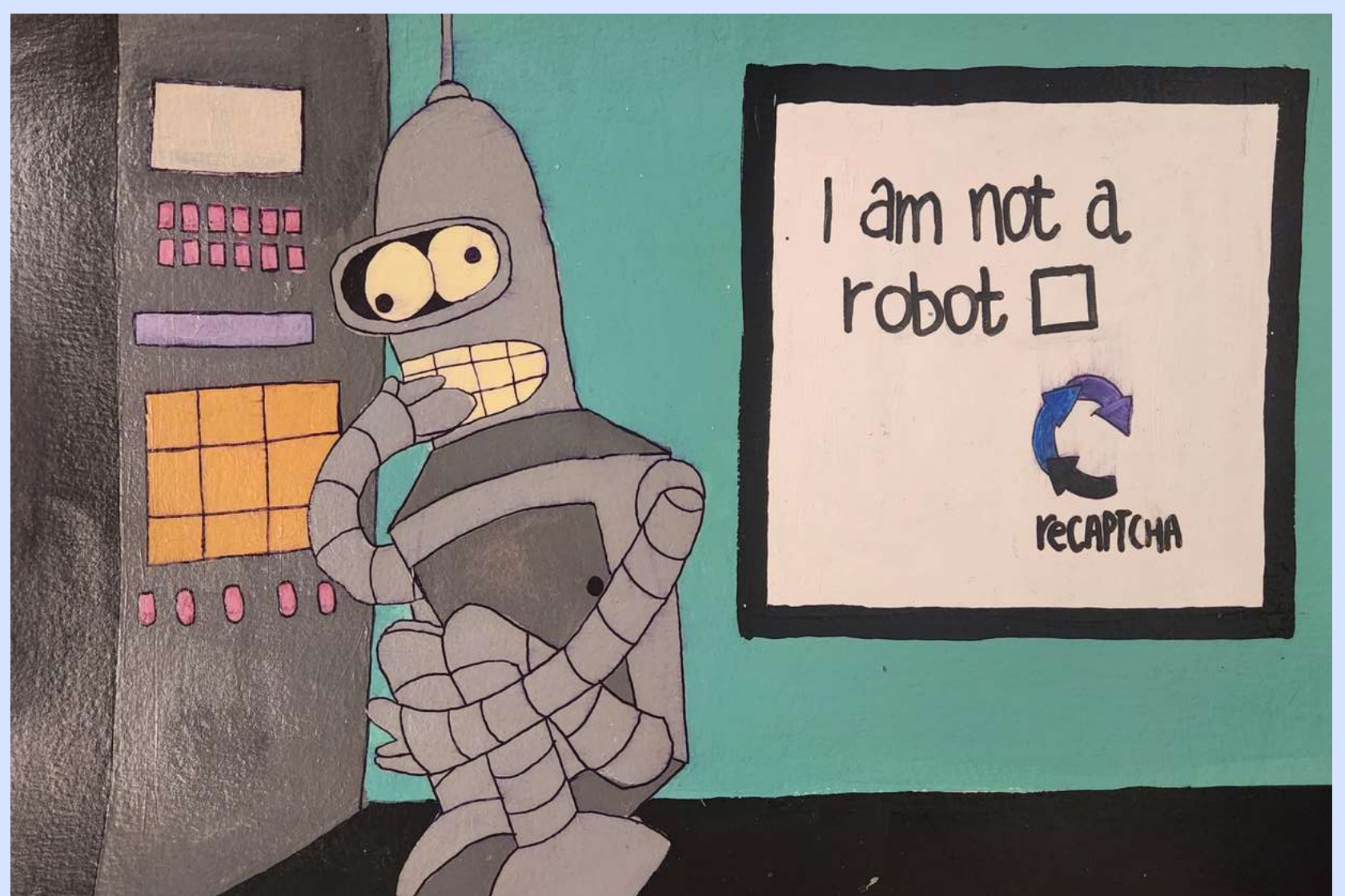
भले ही ए आई के कई फायदे हैं, लेकिन इसके समान नुकसान भी हैं:

रोजगार का नुकसान: ए आई और स्वचालन के प्रयोग से विभिन्न क्षेत्रों में मानव श्रम की आवश्यकता कम होती है। यह लोगों को निर्माण, सेवा, वित्तीय सेक्टर, खाद्य प्रसंस्करण आदि क्षेत्रों में नौकरी नहीं मिलने के संकेत देता है।

तकनीकी संकट: ए आई और स्वचालन के आधार पर कार्य करने वाले सिस्टम या रोबोट में तकनीकी खराबियों के कारण अकस्मात रूप से निर्दिष्ट कार्रवाई कर सकती हैं। इसका परिणामस्वरूप उत्पादन और सेवाएं रुक सकती हैं और साथ ही उनकी गुणवत्ता प्रभावित हो सकती है।

गोपनीयता का खतरा: एआई समाधान और ऑटोमेशन सिस्टम आमतौर पर व्यक्तिगत और संगठनात्मक डेटा का उपयोग करते हैं। वास्तव में, जब इस जानकारी का अनुचित तरीके से उपयोग किया जाता है या डेटा का उल्लंघन होता है, तो यह सूचना सुरक्षा और गोपनीयता के मुद्दों को खतरे में डाल सकता है।

~रिद्धिमा पांडे (11-A)



~ Bhavika Singh (11-A)

ए.आई एंड ऑटोमेशन

आज के दौर में ए.आई सबसे शक्तिशाली यंत्र बन चुका है। ए.आई (आर्टिफिशियल इंटेलिजेंस) एक तकनीकी उन्नति है जो मानव दिमाग और मशीनों के बीच समझ स्थापित करती है। ए.आई की मदद से मशीनों को स्मार्ट और सेल्फ-लर्निंग में सक्षम बनाया जाता है। इसलिए आज विभिन्न क्षेत्रों में ए.आई का उपयोग किया जा रहा है। ए.आई की तकनीकी प्रगति के साथ आने वाले लाभों की सूची, लंबी होती जा रही है। ए.आई उत्पादकता बढ़ाता है, संचार अंतराल को कम करता है, स्वास्थ्य सेवाओं को बढ़ाता है और लोगों के जीवन को सुगम बनाता है।

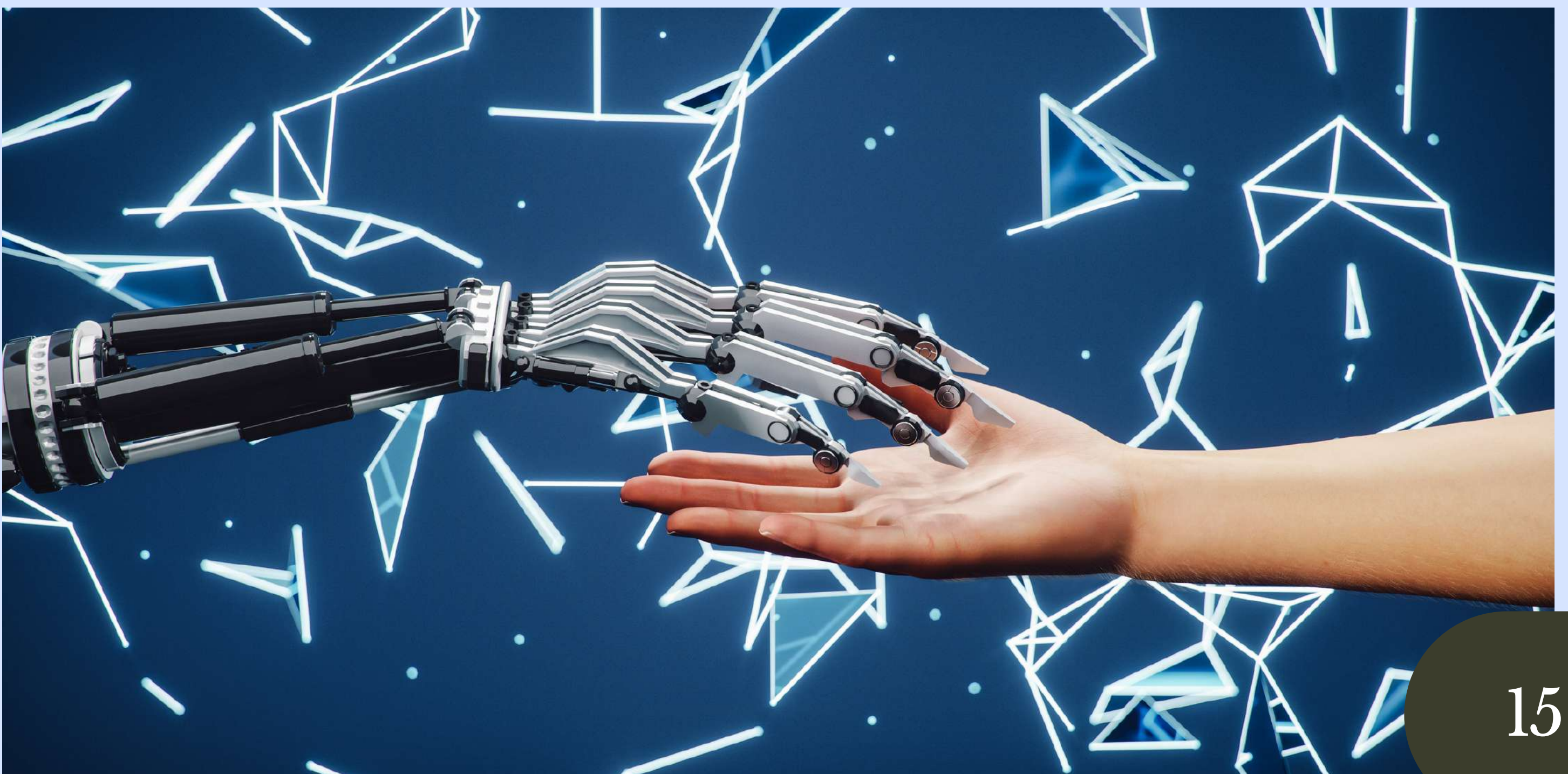
वह हमारे काम को मिनटों में करके हमारी जिंदगी को सरल बना देता है हमारे विद्यालय के परियोजना से लेकर बड़ी-बड़ी कंपनियों का काम चुटकी में तो कर देता है परंतु किस कीमत पर? आने वाले सालों में वह सारी बड़ी-बड़ी नौकरियों का काम आसानी से कर लेगा।

कुछ उद्योगों में, मानव श्रम को बदलने के लिए ए.आई का उपयोग पहले ही शुरू हो चुका है। वर्तमान युग में, कुछ ऐसी नौकरियां हैं जो ए.आई द्वारा चलाई जा सकती हैं, जैसे निवेश फर्मों द्वारा एल्गोरिदम स्टॉक मार्केट ,कोडिंग, पेंटिंग आदि।

लेकिन यह भी सच है कि यह बहुत से लोगों को बेरोजगार कर देगा, खासकर अकुशल श्रम क्षेत्र में। मशीनों के साथ मानव श्रम के प्रतिस्थापन से श्रम की लागत कम हो सकती है, और इस प्रकार, व्यवसाय उन मशीनों में निवेश करना पसंद करते हैं जो दक्षता बढ़ा सकती हैं और उत्पादन लागत कम कर सकती है। यह ऐसी स्थिति पैदा कर सकता है जहां बेरोजगारी बढ़ जाती है, जिससे सामाजिक और आर्थिक समस्याएं पैदा होती हैं। ए.आई के उपयोग से कुछ क्षेत्रों में कुशल श्रम की आवश्यकता भी कम हो सकती है, जिससे उन क्षेत्रों में भी नौकरी छूट सकती है।

ए.आई में दुनिया में क्रांति लाने की क्षमता है, लेकिन साथ ही, इसके बहुत से नकारात्मक पहलू भी हैं। तकनीकी प्रगति और रोजगार के अवसरों के बीच संतुलन बनाना महत्वपूर्ण है ताकि यह सुनिश्चित किया जा सके कि तकनीकी प्रगति के कारण लोगों को परेशानी न हो।

~ सक्षम सिंगला (10-C)



ਆਰਟੀਫੀਸ਼ੀਅਲ ਇੰਟੈਲੀਜੈਂਸ

A.I. ਅੱਜ ਕੱਲ੍ਹ ਦੁਨੀਆਂ ਨੂੰ ਹਰ ਨਵੀਂ ਤਰੱਕੀ ਦੇ ਰੰਗ ਨਿਖਾਰ ਕੇ ਦਿਖਾ ਰਿਹਾ ਹੈ ਤੇ ਬੜਾ ਵੱਡਾ ਬਦਲਾਵ ਲਿਆ ਰਿਹਾ ਹੈ। ਪੂਰੇ ਸੰਸਾਰ ਵਿੱਚ ਸਾਡੇ ਆਲੇ ਦੁਆਲੇ ਹਰ ਤਰਫ A. I ਦਾ ਪਰਛਾਵਾਂ ਹੈ, ਹਾਲੇ ਹੀ ਇਕ ਪੰਜਾਬੀ A.I. ਦੀ ਖੋਜ ਹੁਈ ਹੈ, ਉਸਦਾ ਨਾਮ "ਸਰਬਣ ਸਿੰਘ" ਹੈ ਤੇ ਇਹ A.I. ਪੰਜਾਬੀ ਲਿਖ ਤੇ ਬੋਲ ਸਕਦਾ ਹੈ। ਹੋਰ ਵੀ ਮਸ਼ਹੂਰ A.I ਹਨ, ਜਿਸ ਤਰਾਂ ਚੈਟ.ਜੀ .ਪੀ .ਟੀ (Chat.G.P.T), ਗੂਗਲ (Google Bard) ਆਦਿ। ਆਉ ਵੇਖੀਏ A.I. ਦੇ ਲਾਭ ਅਤੇ ਨੁਕਸਾਨ:-

ਆਰਟੀਫੀਸ਼ੀਅਲ ਇੰਟੈਲੀਜੈਂਸ ਦੇ ਲਾਭ:-

ਜੇਕਰ ਕੰਮਾਂ ਨੂੰ ਸੁਚਾਰੂ ਢੰਗ ਨਾਲ: ਆਰਟੀਫੀਸ਼ੀਅਲ ਇੰਟੈਲੀਜੈਂਸ ਦੇ ਨਾਲ ਜੋਖਮ ਵਾਲੇ ਕੰਮ ਕਰਨੇ ਬਹੁਤ ਅਸਾਨ ਹੋ ਗਏ ਹਨ। ਆਰਟੀਫੀਸ਼ੀਅਲ ਇੰਟੈਲੀਜੈਂਸ ਦੀ ਵਰਤੋਂ ਨਾਲ ਬਣਾਏ ਗਏ ਰੋਬਟ ਕਈ ਤਰ੍ਹਾਂ ਦੇ ਜੋਖਮ ਭਰੇ ਕੰਮ ਜਿਵੇਂ ਕਿ ਬੰਬ ਨੂੰ ਅਸਫਲ ਬਣਾਉਣਾ, ਸਮੁੰਦਰਾਂ ਦੇ ਡੂੰਘੇ ਹਿੱਸੇ ਦੀ ਪੜਤਾਲ ਕਰਨਾ, ਕੋਲੇ ਅਤੇ ਤੇਲ ਦੀ ਮਾਈਨਿੰਗ ਆਦਿ ਕਰਦੇ ਹਨ। ਆਰਟੀਫੀਸ਼ੀਅਲ ਇੰਟੈਲੀਜੈਂਸ ਹਰ ਖੇਤਰ ਦੇ ਵਿੱਚ ਨਵੀਆਂ ਖੋਜਾਂ ਕਰਨ ਦੀ ਯੋਗਤਾ ਪ੍ਰਦਾਨ ਕਰਦੀ ਹੈ, ਜਿਸ ਨਾਲ ਮਨੁੱਖ ਗੁੰਝਲਦਾਰ ਸਮੱਸਿਆਵਾਂ ਨੂੰ ਹੱਲ ਕਰਨ ਵਿੱਚ ਮੱਦਦ ਮਿਲਦੀ ਹੈ।

ਕੁਸ਼ਲਤਾ ਪੂਰਵਕ ਕੰਮ ਕੀਤਾ ਜਾ ਸਕਦਾ ਹੈ, ਆਰਟੀਫੀਸ਼ੀਅਲ ਇੰਟੈਲੀਜੈਂਸ ਦੇ ਨਾਲ ਗਲਤੀ ਹੋਣ ਦੀ ਸੰਭਾਵਨਾ ਬਹੁਤ ਘੱਟ ਜਾਂਦੀ ਹੈ ਕਿਉਂਕਿ ਸਾਰਾ ਕੰਮ ਮਸ਼ੀਨਾਂ ਦੇ ਨਾਲ ਕੀਤਾ ਜਾਂਦਾ ਹੈ। ਜਿਨ੍ਹਾਂ ਨੂੰ ਚੰਗੀ ਤਰ੍ਹਾਂ ਪ੍ਰੋਗਰਾਮ ਕੀਤਾ ਜਾਂਦਾ ਜਿਸ ਨਾਲ ਗਲਤੀਆਂ ਘੱਟ ਹੁੰਦੀਆਂ ਹਨ ਅਤੇ ਸਹੀ ਨਤੀਜਿਆਂ 'ਤੇ ਪਹੁੰਚਿਆ ਜਾ ਸਕਦਾ ਹੈ। ਮਨੁੱਖਾਂ ਨੂੰ ਇੱਕੋ ਤਰ੍ਹਾਂ ਦੇ ਕੰਮ ਹਰ ਦਿਨ ਕਰਨੇ ਪੈਂਦੇ ਹਨ ਜਿਵੇਂ ਕਿ ਧੰਨਵਾਦ ਲਈ ਈਮੇਲ ਭੇਜਣਾ, ਗਲਤੀਆਂ ਲੱਭਣ ਲਈ ਦਸਤਾਵੇਜ਼ਾਂ ਦੀ ਪੜਤਾਲ ਕਰਨਾ ਆਦਿ। ਆਰਟੀਫੀਸ਼ੀਅਲ ਇੰਟੈਲੀਜੈਂਸ ਅਧਾਰਿਤ ਮਸ਼ੀਨਾਂ ਆਉਣ ਨਾਲ ਮਨੁੱਖਾਂ ਨੂੰ ਇਨ੍ਹਾਂ ਕੰਮਾਂ ਤੋਂ ਮੁਕਤੀ ਮਿਲੀ ਹੈ। ਆਰਟੀਫੀਸ਼ੀਅਲ ਇੰਟੈਲੀਜੈਂਸ ਅਧਾਰਿਤ ਡਿਜੀਟਲ ਸਹਾਇਕ ਉਪਭੋਗਤਾ ਦੀਆਂ ਲੋੜਾਂ ਨੂੰ ਸਮਝ ਕੇ ਉਸਦੀ ਮੱਦਦ ਕਰਦੇ ਹਨ ਜਿਸ ਨਾਲ ਮਨੁੱਖੀ ਸ਼ਕਤੀ ਦੀ ਬੱਚਤ ਹੁੰਦੀ ਹੈ।

ਆਰਟੀਫੀਸ਼ੀਅਲ ਇੰਟੈਲੀਜੈਂਸ ਦੇ ਨੁਕਸਾਨ:

ਮਸ਼ੀਨਾਂ ਦੇ ਰੱਖ ਰਖਾਵ ਤੇ ਖਰਚਾ: ਆਰਟੀਫੀਸ਼ੀਅਲ ਇੰਟੈਲੀਜੈਂਸ ਅਧਾਰਿਤ ਮਸ਼ੀਨਾਂ ਦੇ ਹਾਰਡਵੇਅਰ ਅਤੇ ਸਾਫਟਵੇਅਰ ਨੂੰ ਹਰ ਦਿਨ ਅੱਪਡੇਟ ਕਰਨਾ ਪੈਂਦਾ ਹੈ ਤਾਂ ਕਿ ਜਰੂਰਤਾਂ ਨੂੰ ਪੂਰਾ ਕਰ ਸਕੇ।

ਇਨ੍ਹਾਂ ਮਸ਼ੀਨਾਂ ਦੀ ਮੁਰੰਮਤ ਅਤੇ ਰੱਖ-ਰਖਾਵ 'ਤੇ ਵੀ ਬਹੁਤ ਖਰਚ ਆਉਂਦਾ ਹੈ। ਮਸ਼ੀਨਾਂ ਸਿਰਫ ਉਹੀ ਕੰਮ ਕਰ ਸਕਦੀਆਂ ਹਨ ਜਿਸ ਕੰਮ ਨੂੰ ਕਰਨ ਲਈ ਉਹ ਬਣਾਈਆਂ ਗਈਆਂ ਹਨ ਇਸ ਤੋਂ ਇਲਾਵਾ ਜੇ ਉਨ੍ਹਾਂ ਨੂੰ ਕੰਮ ਦਿੱਤਾ ਜਾਵੇ ਤੇ ਉਹ ਕੰਮ ਵਿਗਾੜ ਦੇਣਗੀਆਂ। ਮਨੁੱਖ ਤੇ ਪ੍ਰਭਾਵ: ਆਰਟੀਫੀਸ਼ੀਅਲ ਇੰਟੈਲੀਜੈਂਸ ਅਧਾਰਿਤ ਮਸ਼ੀਨਾਂ ਨੇ ਮਨੁੱਖ ਨੂੰ ਬਹੁਤ ਆਲਸੀ ਬਣਾ ਦਿੱਤਾ ਹੈ। ਇਹਦੇ ਨਾਲ, ਹਰ ਸੰਗਠਨ ਘੱਟੋ-ਘੱਟ ਯੋਗਤਾ ਪ੍ਰਾਪਤ ਵਿਅਕਤੀਆਂ ਨੂੰ ਆਰਟੀਫੀਸ਼ੀਅਲ ਇੰਟੈਲੀਜੈਂਸ ਅਧਾਰਿਤ ਰੋਬੋਟਾਂ ਦੇ ਨਾਲ ਤਬਦੀਲ ਕਰਨ ਦੀ ਕੋਸ਼ਿਸ਼ ਕਰ ਰਿਹਾ ਹੈ, ਇਸ ਨਾਲ ਬੇਰੁਜ਼ਗਾਰੀ ਦੀ ਸਮੱਸਿਆ ਪੈਦਾ ਹੁੰਦੀ ਹੈ। ਮਸ਼ੀਨਾਂ ਵਿੱਚ ਜਜ਼ਬਾਤ ਨਹੀਂ ਹੁੰਦੇ ਇਸ ਲਈ ਉਹ ਮਨੁੱਖਾਂ ਦੇ ਨਾਲ ਆਪਸੀ ਸਾਂਝ ਨਹੀਂ ਪਾ ਸਕਦੀਆਂ ਜੋ ਟੀਮ ਦੇ ਰੂਪ ਵਿੱਚ ਕੰਮ ਕਰਨ ਲਈ ਜਰੂਰੀ ਹੈ।

~ ਮਨਸਿਮਰ ਕੌਰ (9-B)

MOVIE RECOMMENDATIONS



The Matrix (1999)

The Matrix is a 1999 American Science fiction film written and directed by The Wachowskis, starring Keanu Reeves, Laurence Fishburne among others. The film portrays a dystopian future where Artificial Intelligence takes over the human world and traps humans in a simulated reality called The Matrix. Enraged as a result of humans' decision to disrupt solar energy, the A.I. machines substitute bioelectricity generated by the human body as an energy source. The Matrix is a cautionary tale of human technological advancement and innovations and its potentially disastrous impact on the human race and planet.

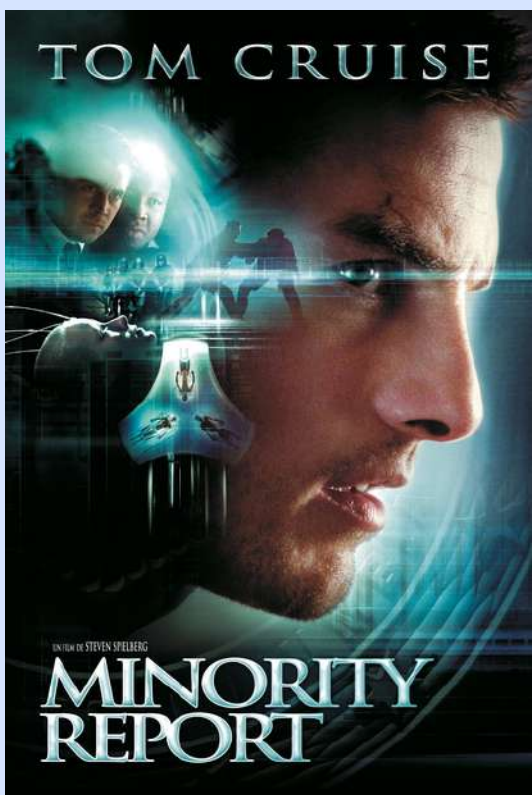
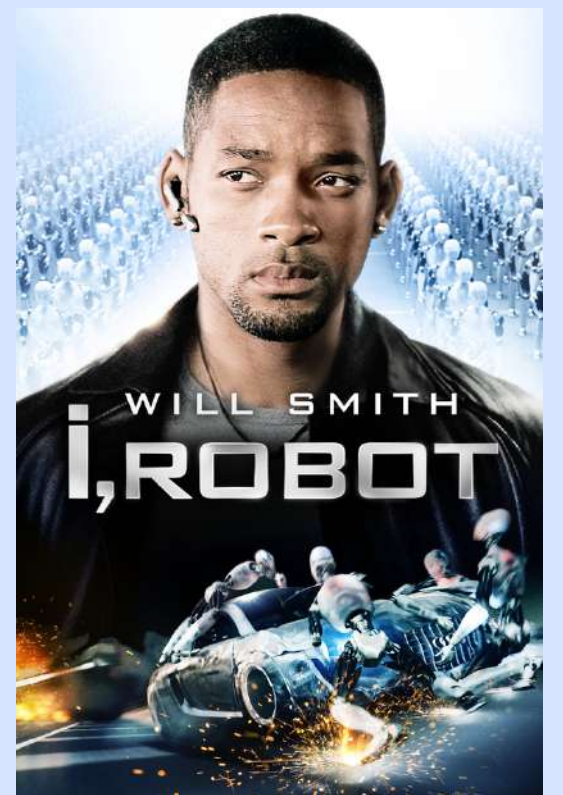
https://www.sutori.com/en/story/the-matrix--UTYj3z4dpbwReCPoQ6Y6znuq_

I. Robot

I, Robot is a collection of nine short stories by science-fiction writer Isaac Asimov that imagines the development of “positronic” (humanlike, with a form of artificial intelligence) robots and wrestles with the moral implications of the technology. It is based in 2035, when a technophobic cop investigates a crime that may have been perpetrated by a robot, which poses a larger threat to humanity.

<https://www.britannica.com/topic/I-Robot>

<https://www.imdb.com/title/tt0343818/plotsummary/>



The Minority Report

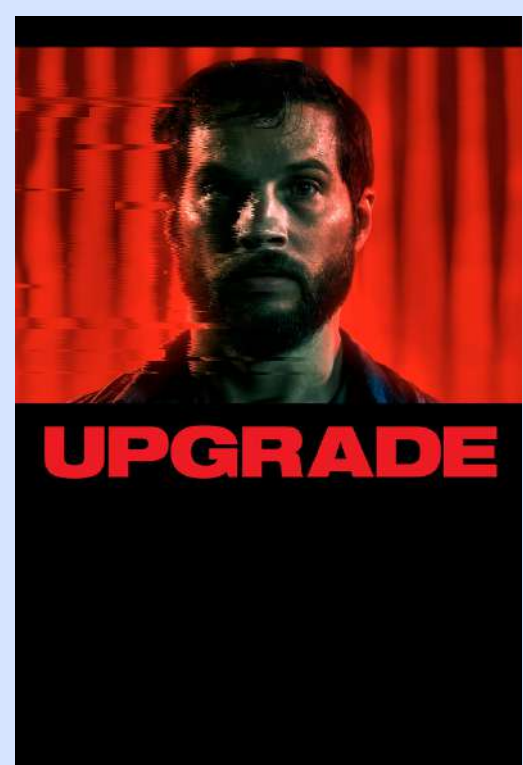
“The Minority Report”, an action-detective thriller set in Washington D.C. in 2054, tells the story of John Anderton, the creator and head of Precrime, a police agency that uses three mutants called “precogs” to foresee and stop future crimes before they are committed. Anderton’s own system predicts that he will murder a man within the coming week, but he thinks that he is being framed. Anderton seeks to evade capture while investigating what has happened.

https://www.litcharts.com/lit/the-minority-report/summary_

2001: A Space Odyssey

An imposing black structure provides a connection between the past and the future in this enigmatic adaptation of a short story by revered sci-fi author Arthur C. Clarke. When Dr. Dave Bowman (Keir Dullea) and other astronauts are sent on a mysterious mission, their ship's computer system, HAL, begins to display increasingly strange behaviour, leading up to a tense showdown between man and machine that results in a mind-bending trek through space and time.

<https://www.rogerebert.com/reviews/great-movie-2001-a-space-odyssey-1968>



Upgrade

A brutal mugging leaves Grey Trace paralyzed in the hospital and his beloved wife dead. A billionaire inventor soon offers Trace a cure -- an artificial intelligence implant called STEM that will enhance his body. Now able to walk, Grey finds that he also has superhuman strength and agility -- skills he uses to seek revenge against the thugs who destroyed his life.

https://www.rottentomatoes.com/m/upgrade_2018

BOOK RECOMMENDATIONS



1984

Orwell's "1984" serves as a stark reminder of the importance of safeguarding individuality, privacy, and critical thinking in the face of advancing technologies. It compels readers to reflect on the potential consequences of unrestrained AI and automation and encourages an active examination of the trade-offs between progress and personal freedom.

By delving into the themes of surveillance, manipulation, and the erosion of individuality, "1984" offers a chilling and thought-provoking exploration of the dangers that AI and automation, when wielded without ethical consideration, can pose to society. It serves as a timely warning about the importance of ensuring that technology is developed and utilised in a manner that upholds human values, autonomy, and individuality.

Whether you are interested in AI and automation or simply appreciate compelling dystopian fiction, "1984" is an essential read that will leave you contemplating the power and potential consequences of technological advancements in our own world.

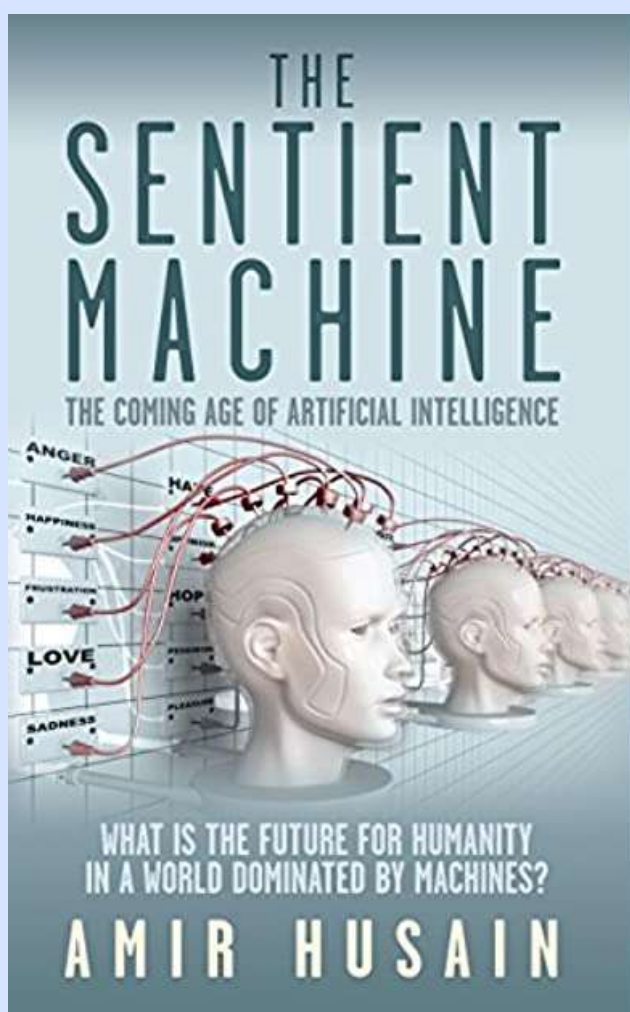
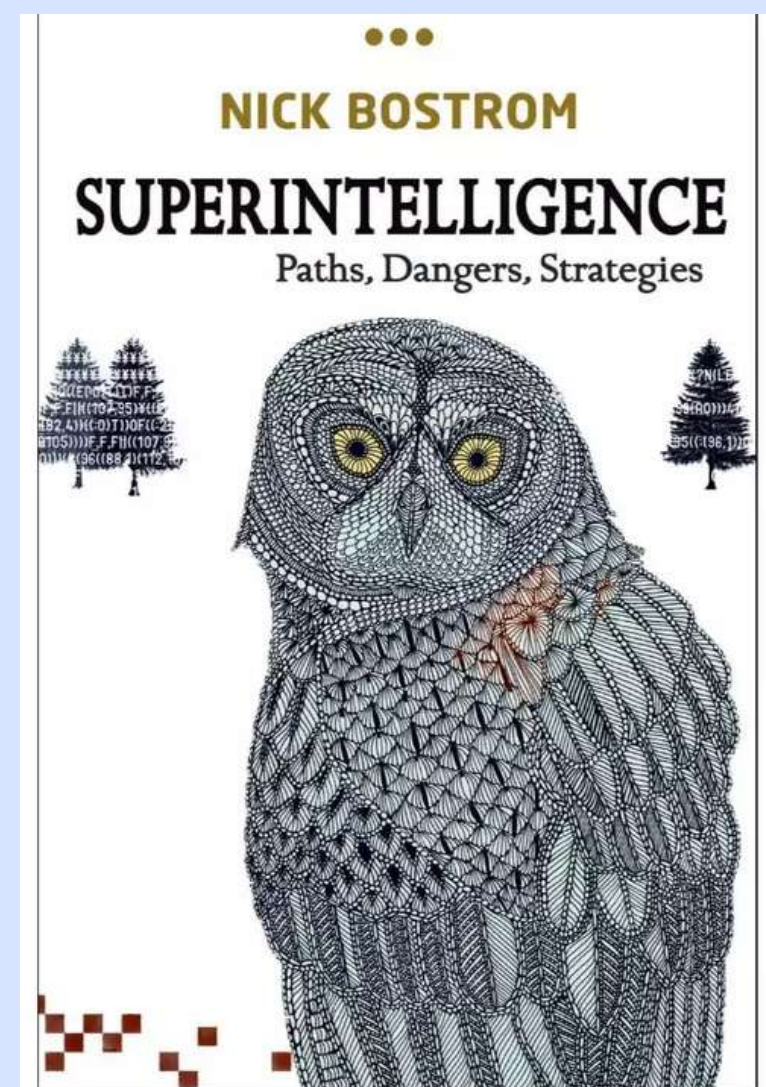
<https://www.goodreads.com/review/show/139017912>

Superintelligence: Paths, Dangers, Strategies

It is unknown whether human-level artificial intelligence will arrive in a matter of years, later this century, or not until future centuries. Regardless of the initial timescale, once human-level machine intelligence is developed, a "superintelligent" system that "greatly exceeds the cognitive performance of humans in virtually all domains of interest" would, most likely, follow surprisingly quickly. Such a superintelligence would be very difficult to control or restrain.

The owl on the book cover alludes to an analogy which Bostrom calls the "Unfinished Fable of the Sparrows". A group of sparrows decide to find an owl chick and raise it as their servant. They eagerly imagine "how easy life would be" if they had an owl to help build their nests, to defend the sparrows and to free them for a life of leisure. The sparrows start the difficult search for an owl egg; only "Scronkfinkle", a "one-eyed sparrow with a fretful temperament", suggests thinking about the complicated question of how to tame the owl before bringing it "into our midst". The other sparrows demur; the search for an owl egg will already be hard enough on its own: "Why not get the owl first and work out the fine details later?" Bostrom states that "It is not known how the story ends", but he dedicates his book to Scronkfinkle.

https://en.wikipedia.org/wiki/Superintelligence:_Paths,_Dangers,_Strategies

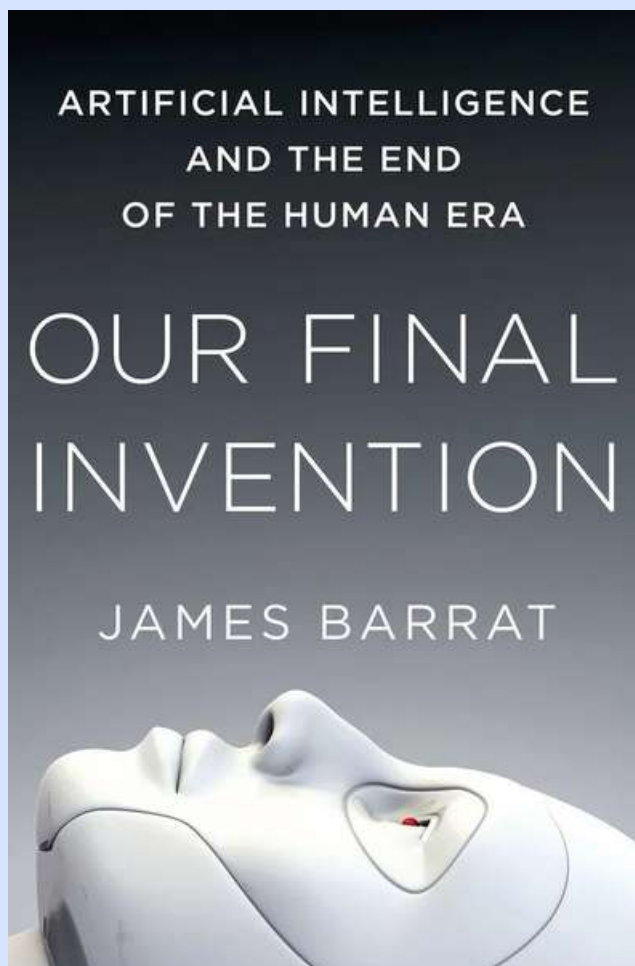


The Sentient Machine: The Coming Age of Artificial Intelligence

The future is now. Acclaimed technologist and inventor Amir Husain explains how we can live amidst the coming age of sentient machines and artificial intelligence—and not only survive, but thrive. Artificial intelligence is playing an ever-greater role in our society. We are already using cruise control in our cars, automatic checkout at the drugstore, and are unable to live without our smartphones. The discussion around AI is polarised; people think either machines will solve all problems for everyone, or they will lead us down a dark, dystopian path into total human irrelevance. Regardless of what you believe, the idea that we might bring forth intelligent creation can be intrinsically frightening. But what if our greatest role as humans so far is that of creators? Amir Husain, a skilled innovator and computer scientist, argues that we are on the cusp of writing our next, and greatest, creation myth. It is the dawn of a new for of intellectual diversity, one that we need to embrace in order to advance the state of the art in many critical fields, including security, resource management, finance, and energy.

<https://www.goodreads.com/book/show/34466959-the-sentient-machine>

BOOK RECOMMENDATIONS



Our Final Invention: Artificial Intelligence and the End of the Human Era

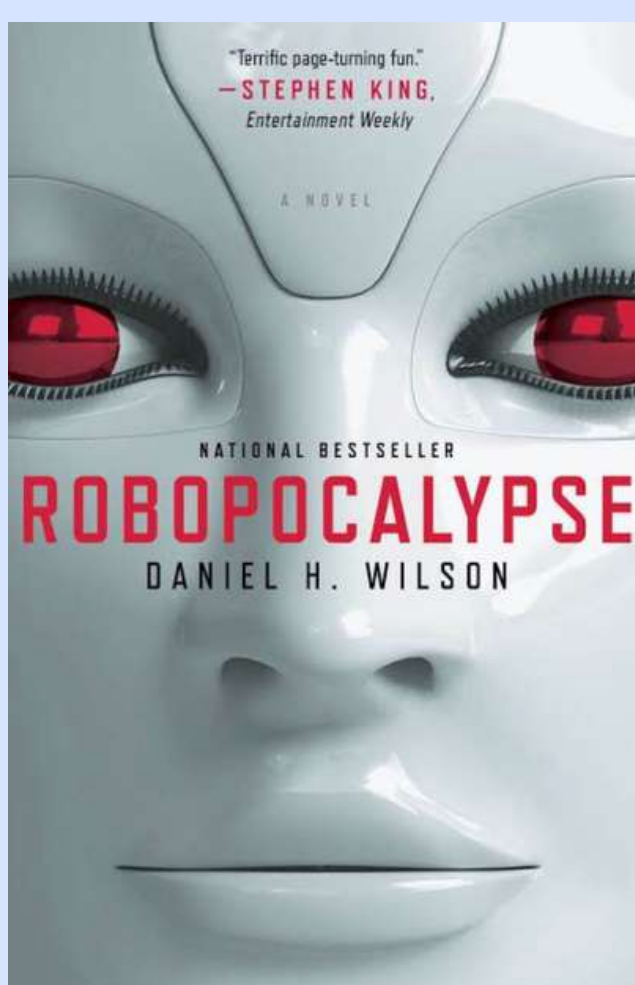
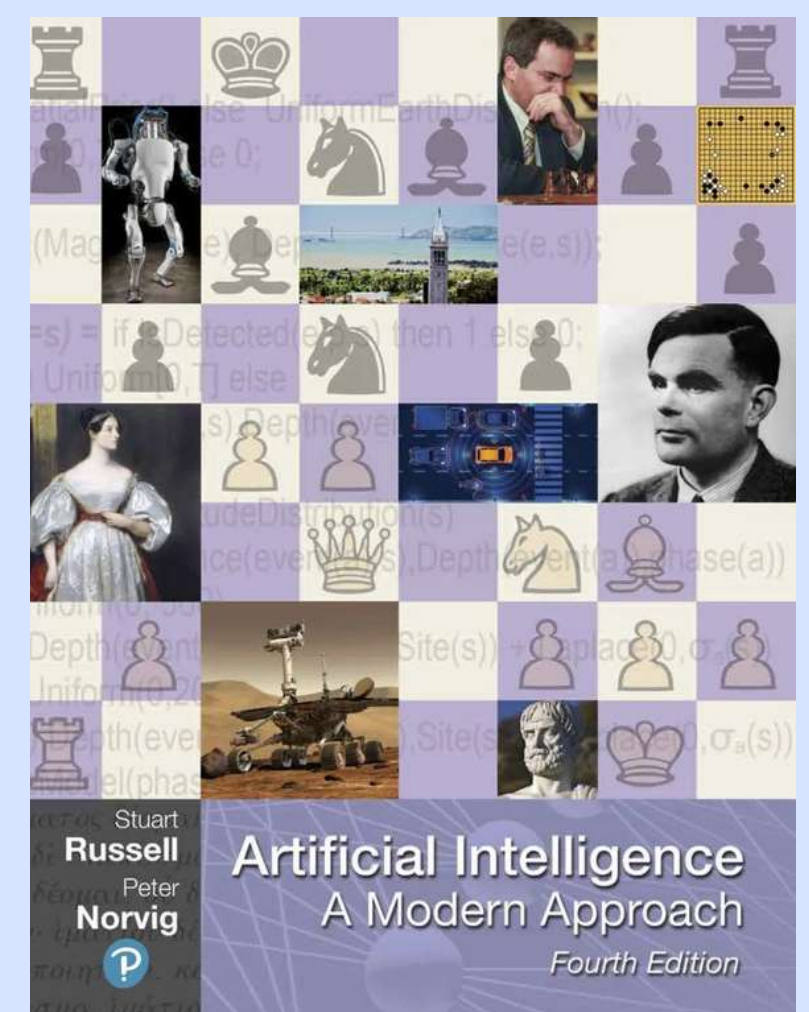
In as little as a decade, AI could match, then surpass human intelligence. Corporations & government agencies around the world are pouring billions into achieving AI's Holy Grail—human-level intelligence. Once AI has attained it, scientists argue, it will have survival drives much like our own. We may be forced to compete with a rival more cunning, more powerful & more alien than we can imagine. Through profiles of tech visionaries, industry watchdogs & groundbreaking AI systems, James Barrat's *Our Final Invention* explores the perils of the heedless pursuit of advanced AI. Until now, human intelligence has had no rival. Can we co-exist with beings whose intelligence dwarfs our own? Will they allow us to?

https://www.bookbrowse.com/bb_briefs/detail/index.cfm/ezone_preview_number/9008/our-final-invention

Artificial intelligence: A modern approach

Artificial intelligence and machine learning technology now permeate our lives. We are increasingly using them, or subject to them, whether we realise it or not. Increasingly ubiquitous implementations include practical speech recognition, machine translation, self-driving vehicles and household robotics. *Artificial Intelligence: A Modern Approach* helps provide clear understanding of exactly what AI and machine learning comprise, and what they can and cannot achieve. Such clarity of thought helps us move from buzzword-dropping to actual scientific understanding. Underlying concepts are explained with clear analogies and accessible language.

<https://icdt.osu.edu/artificial-intelligence-modern-approach#:~:text=Artificial%20Intelligence%3A%20A%20Modern%20Approach%20helps%20provide%20clear%20understanding%20of,dropping%20to%20actual%20scientific%20understanding>.



Robocalypse

In *Robocalypse* a powerful artificial intelligence called Archos becomes self aware and perpetrates a massive attack against humanity by taking control of the machines we have come to rely on. Everything from children's toys to self-driving cars to bomb-defusing robots are used to bring humanity to its knees. The survivors of the initial attacks will have to band together and find new ways to use technology to survive. Author Daniel H. Wilson has a master's degree in Artificial Intelligence and Robotics and a PhD in robotics from Carnegie Mellon University. He is the author of several novels and is currently adapting *Robocalypse* for Steven Spielberg and DreamWorks.

<https://www.goodreads.com/book/show/9634967-robopocalypse>

UNVEILING THE AI REVOLUTION: AN INSIGHTFUL CONVERSATION WITH MRS. NAVROOP GILL

Are you fascinated by the rapid advancements in artificial intelligence (AI) and automation? Look no further! In our quarterly podcast episode, we are fortunate to share with you a conversation with Mrs. Navroop Gill, a renowned Machine Learning Developer and AI Researcher at SAN LLC (SynapticAILabs). As an active member member of our parent community, she will be taking us on an enlightening journey through the realm of AI and its transformative potential.

Mrs. Gill's expertise and contributions have made her a sought-after expert in the realm of AI and automation.

The podcast becomes riveting as she delves into the intricacies of AI, unraveling its mysteries for both tech enthusiasts and newcomers alike.

As a Machine Learning Developer, Mrs. Gill has witnessed firsthand how AI algorithms learn from data and adapt to new challenges. She explains the principles behind machine learning and its integral role in training AI systems. Her insights will challenge our perceptions and inspire us to ponder the potential benefits and ethical considerations surrounding these technologies.

Tune in and get ready to be amazed and inspired as Mrs. Gill unravels the secrets behind the AI revolution that is reshaping our present and defining our future.

[Click here to access the podcast](#)

