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**Applied Digital & Technology Solutions:** Discuss the societal risks and rewards associated with generative AI (such as ChatGPT)

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AI, short for Artificial Intelligence, is a way in which computers or machines are able to exhibit human-like behaviour. Artificial Intelligence can be used in programs through the 4 main components of Artificial Intelligence. The first feature is Natural Language Processing, the ability of technology to understand human language. The next feature is Neural Networks, this is the ability of a computer to think in a similar way to how humans logically think. The third feature is Computer Vision, this is the ability of computers to be able process visual data in a similar way to how humans perceive this data. The last feature of AI is Machine learning, where a machine is given a set of data that has different ways to respond to a prompt and to then learn from and act according to the set of data.

With the increased use of Artificial Intelligence in many different sectors for many different functions, there are now problems and benefits of using AI worldwide.

There are many different problems that come with the use of AI. An example of this is the number of jobs for many different companies in many different sectors that have been replaced with AI machines or AI powered algorithms. An example of this is in factories that have people completing simple tasks such as placing a product from one belt to another or classifying the object into different categories such as size, shape, colour or quality.

AI can be incorporated in robotics in factories in a way that AI’s Computer Vision is able to scan objects then the robot intelligently, through their algorithm, can classify the objects into different categories without the need from a human.

This creates a problem in the labour market for this specific manufacturing field as workers are fired from their jobs as they are not needed for the company to function. This has caused many people to

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become unemployed ever since AI has been introduced to not only manufacturing companies through robots.

Ther are also other AI tools having the same effect such as chatbots replacing customer service communicators, AI algorithms that can predict opportunities from markets replacing different market trend analysts and even more AI tools that can replace jobs through AI.

Another problem of using AI is that AI requires a large amount of Computing Power, the power needed to start the AI functions with a sufficient amount of electricity. This could affect the natural environment greatly as this electricity is mainly generated with fossil fuels that have effects on the environment such as polluting the environment.

This could also affect the local supply of electricity as a city's majority of electricity would be diverted to power an AI tool rather than for necessary equipment to function in a city. AI’s electricity requirement for computing power could affect the local wildlife through spills in the environment, people's health as they might be breathing in more pollution from fossil fuel use.

AI’s enormous amount of electricity usage could also have economic effects: to local businesses that aren’t able to function without a set amount of electricity, to people as they won’t get as much electricity as before or have higher electricity bills as the prices for AI might increase with a shorter supply and with a greater demand for electricity.

AI such as Generative AI can have problems such as the data can be not as trustworthy as if the data was procured from a researcher researching on the internet for their response. This is as the generative AI uses Natural Language Processing to process the input in the human language to browse through millions of data on the internet to form an answer to the user's request.

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The user could then ask where the information might have been sourced from and whether that information is reliable enough for the user to be satisfied with the complete output from the generative AI.

With AI there are many benefits for people, businesses, economies, societies and the world. A benefit of the increase in AI usage is that AI has improved the level of productivity in many different ways with AI.

An example of this is in factories, whereas mentioned before, the emergence of AI with Robotics has allowed the process of robots classifying objects to sort them into categories rather than a human. This has increased the speed at which this process is finished, therefore allowing more of the objects to be produced in the same amount of time as before.

This increases the productivity that the business benefits from with a lower cost as the business hasn’t got to spend a portion of their profits on paying workers, therefore increasing their profits with lower costs for the business. The faster production also satisfies a greater demand, allowing the business to sell more, increasing their profits while also keeping customers happy with the business.

A number of businesses in different sectors follow this same idea that with the involvement of AI, a business can benefit from lower costs, higher productivity, higher profits and better business performance through AI.

AI such as Generative AI has benefits for many businesses as a way of putting together research within minutes. This is useful for businesses as they can produce accurate pieces of information within a lower amount of time than if they researched everything themselves for information for their business.

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This gives the business an opportunity to work on improving their business with data and a accurate experience with AI.

AI can give many different types of ways to allow people to benefit from AI with a few problems with AI. This is as the use of AI can influence the economy in employment as AI provides A different way of businesses functioning without businesses needing people to function in their business. And with the environment as there is a bigger computing power for AI. With a Generative AI the data might not be exactly what the user wants from the AI. The AI benefits includes businesses benefiting from higher productivity with higher profits to increase the output by the company and to improve the business interaction with AI. And AI such as Generative AI is able to provide a user with a plentiful amount of data for the user's request allowing the user to benefit from this AI with an accurate amount of data from AI. AI can further enrich a user's experience with ease of use for a business or a user to enhance the users experience with AI.