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**Final Performance Task**

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| **PART 1 - Direction:** Answer the following set of questions.  **Overall Impact of Technology**   1. How has technology revolutionized the way we communicate?  * Instant Connectivity: Thanks to technology, you may now send and receive emails, instant messages, and video conversations with anyone in the globe at any time. * Social media: Websites such as Facebook, Instagram, and Twitter enable users to instantly share updates, pictures, and videos with a worldwide audience. * Unified Communication Tools: Slack and Microsoft Teams are examples of tools that combine file sharing, video calls, and chat to simplify business communication.  1. Give some examples of how technology has transformed the workplace.  * Remote work: Video conferencing technologies (like Zoom) and collaboration platforms (like Asana, Trello) are two examples of how technology makes it possible to operate remotely. * Automation: Repetitive processes that are automated are more productive and less prone to human error. Robots used in production and chatbots powered by AI for customer support are two examples.  1. In what ways has technology improved access to information and education?  * Online learning: Anyone with an internet connection can access classes from prestigious colleges through platforms like Coursera, Khan Academy, and edX. * Digital Libraries: Previously available only in physical libraries, a wealth of information is now easily accessible through e-books and internet resources.  1. What are some of the potential downsides to our dependence on technology?  * Privacy Issues: As businesses acquire more data, privacy and security issues are brought up. * Digital Divide: There are differences in education and work prospects because not everyone has equal access to technology. * Health Problems: Extended screen time can cause sedentary lifestyles, eye strain, and bad posture, all of which can affect one's physical health.   **The Power of Connectivity**   1. How has social media changed the way we communicate and share information?  * Users benefit from a global reach through instant sharing, enabling them to stay informed about current events and breaking down geographical barriers. This platform offers diverse content formats, making communication more engaging and informative.  1. Explain how interconnected technologies have facilitated globalization and cultural exchange.  * The internet offers enhanced communication and enables the purchase of products from around the world, fostering cultural exchange and information access. Online marketplaces like Amazon and Alibaba facilitate this global exchange, enhancing global cultural awareness.  1. What are some potential drawbacks of social media and online connectivity?  * Privacy issues are a significant concern, particularly when shared online, as it can lead to the spread of misinformation, posing significant risks to vulnerable individuals.   **Automation: Transforming Industries**   1. How can automation increase productivity and efficiency in businesses?  * Automated systems streamline processes, improving quality and consistency. They automate administrative tasks, freeing up human workers for strategic activities. This results in increased production rates and improved product quality.  1. What are some of the concerns regarding automation and job displacement?  * Due to its disproportionate benefit to capital-rich individuals and business owners, automation, especially in repetitive work, is leading to a rise in unemployment and job loss, which is compounding economic inequality.  1. How might automation create a skill gap in the workforce?  * The workforce is undergoing significant skill upskilling and reskilling due to the emergence of new jobs requiring advanced technical skills and problem-solving abilities, necessitating the implementation of comprehensive training programs.   **Emerging Technologies: Boon or Bane?**   1. Discuss some of the potential benefits of emerging technologies like AI and gene editing.  * Advanced technologies, including AI and gene editing, are revolutionizing fields like environmental sustainability and quality of life. These advancements can reduce human workload, improve healthcare outcomes, and enhance daily living through smart home devices. They also facilitate global problem-solving, addressing global challenges like climate change and disease control.  1. What are some of the ethical considerations surrounding emerging technologies?  * Powerful technologies pose ethical dilemmas in control and use, necessitating regulations to ensure their benefits. Privacy and security are crucial as technology becomes integrated into daily life. However, unintended consequences, such as misuse of gene editing or AI, require careful management and monitoring to mitigate potential risks.  1. How can we ensure privacy and security as we become more reliant on technology?  * Security Tech is crucial in addressing threats and ensuring data protection. Ensuring strong laws and global standards are in place to protect personal data, while implementing strong encryption and multi-factor authentication is essential. Training people to recognize and avoid online threats is also essential. Regular monitoring and collaboration between governments and businesses are essential to combat threats. Joining international cybersecurity alliances can further strengthen defense against global threats.   **Sustainable Technology: Towards a Greener Future**   1. Why is developing green technologies important in addressing climate change?  * Green technologies are environmentally friendly and contribute to sustainable growth by reducing greenhouse gases and promoting sustainable development.  1. What are the environmental benefits of using renewable energy sources?  * Efficiently utilize resources, minimize waste, and protect biodiversity by minimizing pollution and habitat destruction.  1. Explain why renewable energy sources are becoming increasingly popular.  * Reduce air and water pollution, leading to better public health  1. How can advancements in electric vehicles and cleaner manufacturing processes contribute to a greener future?  * Green technologies reduce emissions and pollution by conserving resources and promoting sustainable growth. Renewable energy sources like wind and solar offer lower emissions, reducing pollution and habitat destruction. Electric vehicles and cleaner manufacturing contribute to a cleaner environment, reducing emissions and pollution.   **PART 2** – In your capstone project, as a researcher/developer, what innovation have you been implemented to make it more advanced in other existing project? Discuss how your project incorporates the technology feature/function(s) that addresses a current limitation in existing technology, especially considering our growing dependence on it. |
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