Humans are constantly inventing and developing new technologies to contribute to the society that serves the purpose of connection, making It more convenient to help people connect between each other. We know the potential of the technologies and we use it to interact, in daily life, or even in our jobs. Everything we are interacting with is mostly digital, robots for automation in jobs, social media for entertainment and connection to each other, improving human productivity. With a little digital device that easy to carry around such as smartphone. We could access to the internet and learning the outside world. However, this is also a tradeoff for these digital convenience. Your identity such as personal information that you use to register for a social media account. Your photos or something that you post on the internet could be used to analyzed by corporations for many purposes, Including training Artificial Intelligence.

We are using our knowledge to slowly developing and invented computer intelligence that could be thinking and understand on their own by analyzing and developing through human data and sample. But everything has their own good and bad. These technologies help us connect between people that could improve our emotional but also have negative impact. People who are using these technologies services without proper knowledge could be at risk for their personal information. We are already trapped in a modern society that everything including corporation and government operates using digital technologies. An initial research question was exploring how technologies impacted both benefits and risk for humans and the economy. We know that everything is not perfect, there is something that we must make trade-offs to have these convenience. The cost of digital world that brings the convenience value to serve human is something that we need to be considering about. By analyzing the existing scholarship research article of different aspects impact of the technologies, many different issues and challenge that a part of social connections, human productivity, privacy and the job impacts. We must know these issues and try to balance the benefits between the technologies convenience without sacrificing the fundamental human values.

Social Connections

Technology plays an important role in connection, a report from King's College London says that "Increased connectivity and enhanced communication between individuals and organizations can save time through faster response and real-time operations." (King's College London, 2025, p. 2). Companies, recognizing the value of these connections, have developed tools such as chatbots and robots to enhance customer interaction. However, we cannot solely rely on these advanced digital technologies because, fundamentally they are just computers with intelligence trained by humans, and they possess no inherent emotional intelligence beyond that. The limitation in tasks

requiring “Human social intelligence is important in a wide range of work tasks,such as those involving negotiation,persuasion and care” that highlighted by Frey and Osborne (2017) also articulate their perspective that computers cannot yet fully replace human tasks. They state that, despite current advanced technologies “the real-time recognition of natural human emotion remains a challenging problem,and the ability to respond intelligently to such inputs is even more difficult.” (Frey & Osborne, 2017, p.261), we still cannot implement a form of computer intelligence capable of accurately recognizing the nature of human emotion in real time, this still represents challenge for existing technologies. We are primarily relying on the convenience of digital technologies. We are communicating through digital devices, and that still results in a potential downside for human interaction, as what we see or hear originates solely from a digital device. This observation from the authors further suggests that, despite the advanced technologies humans have invented and integrated into our systems, we still face a challenge in developing a computer algorithm that can comprehend feelings and connections in a manner analogous to a human. While the convenience of digital technologies is undeniable, the resulting lack of authentic connection could give rise to various problems for humans, particularly concerning human health.

Moreover, it is evident that technologies bring both benefits and negative impacts to humans, while addressing most of our problems in life, because we are carrying digital devices that contain all the knowledge around the world. We can see, speak, and interact virtually with anyone across the globe. In the modern age, we can share our thoughts and feelings, allowing other people to understand us through online platforms. On the other side, there is a lack of genuine connection, and this can lead to negative emotional states, which become a risk factor for suicide. Suicide is a condition that takes many lives annually and impacts , and we must identify and detect it in its early phases, thereby increasing the chances of saving lives. Skaik and Inkpen also gave their opinion of how importance in early detection of problems in health, which could prevent and save a person's life. They state that “early detection of suicidal ideation is critical for preventing suicide, which is related to families and communities, and for overall improvement of global mental health” (Skaik & Inkpen, p.2). This statement tells us the significance of human interaction and impact. The role of digital technology, which keeps humans connected with each other, is also considered a tool to help and prevent issues in mental health. With social media, we can sometimes understand feelings and identify and detect health problems. Often, people will use social media to express their feelings, this is a place that contains value information to help in the early detection of human mental health issues. Digital technology connivence could be used as a tool for promoting mental health. Social media can provide and give an opportunity for everyone to express their feelings and potentially allow for the identification

of health concerns. With the help of advanced technology, researchers have developed and integrated computer intelligence to help analyze based on social media posts. This method has the potential to reduce the incidence of suicide and improve human connection. While the benefits of digital technologies in promoting and protecting human health are apparent, it is also essential to acknowledge the associated issues and risks, particularly, given the open nature of social media platforms. Social media is just too freely to share opinions, which is great freedom of speech, but this also has a dark side as well. There is a chance you will likely see harmful content. The United Nations states that "social media connects billions of people and provides instant communication, but it is also a platform for false information, hate speech, and can contribute to "echo chambers" (United Nations, 2025, p. 2). This is because social media makes it easy to share information, even if it is not true. With the ease of sharing information and the combination of algorithms designed to maximize engagement post. Social media platforms often prioritize sectional content rather than content that is accurate. With these engagement posts, people will mostly see things that could potentially contain false information. If used for a good purpose, this is a great place to share our opinions about something that does not affect or harm other individuals. However, many individuals exploit these social media platforms to spread misleading information and hate speech. After all, social media is a great tool to connect people together, and we must know the potential benefits and risks of these conveniences. It is either to help build or destroy society.

Human Productivity

We cannot mention enough the benefits and the convenience of the technologies that bring human society, especially in improving our human productivity. We use our advanced technologies, such as automation and robots, in car or smartphone manufacturing . The impact of digital technology has involved to increased productivity and helps factory workers in iteration tasks "One generic way of achieving this is to reduce the variation between task iterations. As a prototypical example, consider the factory assembly line, turning the non-routine tasks of the artisan shop into repetitive routine tasks performed by unskilled factory workers." (Frey & Osborne). With the fast-moving world and time being money, companies want their manufacturing to be as efficient as possible. They integrate the technology to work with tasks that iterate repeatedly, this can boost and save a lot of time during the manufacturing process. Also, advanced technology could help companies reduce costs in hiring 2process. Furthermore, digital technology is a great tool for organizations to communicate, promote, and share their business on the internet. The convenience of digital technology helps companies/organizations to effectively communicate with their internal employees and management departments. As Huang

explains, “Improved communication among employees across different positions and skill levels helps increase the knowledge and business proficiency of lower-skilled workers, directly increasing labour productivity.”(Huang, 2024, p. 4). Companies use digital technology for sharing knowledge for training their employees, this helps with the company's workflow productivity. After all, digital technology is a part of human society, and we can see that it is directly improving organizations. With the current digital world, companies are utilizing these advanced technologies to improve productivity and communication for their employees, as a result, companies keep growing.

However, there is also a negative impact as well. With the convenience of technologies such as automation and communication, humans tend to overuse these tools in our daily lives, and it could result in decreased interaction between humans. This unintended behavior could lead to many health problems. These digital tools serve their purpose for humans in automation. Over time, we use this convenience almost for everything, and we are relying on it unconsciously, which could lead to a sedentary lifestyle. Since human senses and bodies are developed to be active, this could lead to negative impacts on human health. Johnson stating digital device is links with this health problem “Most everyday digital technologies are sedentary. More extended use of these technologies promotes a more sedentary lifestyle, which is known to have negative health effects, such as contributing to: obesity, cardiovascular disease, type 2 diabetes, premature death.” (Johnson, 2024, p. 6). We realize this negative impact on health, but we feel we cannot do anything because we are already relying on these technologies. The sedentary behavior associated with prolonged use of digital devices could lead to many health issues such as obesity and cardiovascular disease, which could cause a decrease in productivity and increase health-related absences of employees. Shelton & Smith also mention the issue “the ‘always on’ nature of smartphones” that could lead to distraction. We can see that digital technologies affect both sides, good and bad. We must identify and balance suitable uses for these technologies.

Privacy and Security

We have already developed technologies that took lots of years and experience that we could not imagine. We have developed complex algorithms on computers that can think like a human. Our data and current applications are heavily based on cloud computing technology, and this creates another concern and issue with our data and privacy. The fact is that once we access the internet and browse online, we could be a victim of a cyberattack through many subtle attacks. As King’s College London says “Cloud computing and use of the Internet carries the threat of cybersecurity breeches. This can include anything from unauthorized access to personal information and identify theft to exposure

to online threats like phishing scams and malware attacks." (King's College London), It is even more dangerous and vulnerabilities threats that exploits through human psychology and it is very effective tactics that happened very common. Gupta explains that "Social engineering refers to the psychological manipulation of individuals into performing actions or divulging confidential information. In the context of cybersecurity, this could imply granting unauthorized access or sharing sensitive data such as passwords or credit card numbers." (Gupta et al., 2023, p. 8). This combined technological weakness still a ongoing issues and challenges that many cybersecurity companies spend time working on because they affect individuals as well as big corporations, and there is never an ending. Companies are also working hard to integrate advanced technologies like AI to solve these issues related to cyber threats. But this AI also has its own issues as well.

With the new advanced technology that we are still in the developing phase, such as AI chatbots, there are also new problems that we don't know or haven't discovered enough about in the system. These risks create more opportunities for hackers to utilize and exploit users' credentials. An example is point out by Gupta "A significant data breach involving ChatGPT has recently been confirmed, underscoring the urgent need for strength-ened security measures [57]. This breach led to the unexpected exposure of users' conversations to external entities, which clearly violates user privacy." (Gupta). The author point that users often do not have knowledge of cybersecurity and don't realize digital technologies always have security holes, which could lead to exposure of their conversations and credentials when interacting with these AI chatbots. This gives us concern about how digital technologies, like AI tools , also need complex security systems to prevent these cyber incidents. To prevent these cyber incidents, many big tech companies analyze, and research based on real-case data samples that collect from many different users around the world. While researchers use these data samples to identify the challenges and issues that occur with individual/regular users. However, this creates a privacy concern about how sensitive data is being used for the purpose of research. As Skaik and Inkpen, they say the steps to a proper data collection process in a corporation "Their guidelines recommend that researchers need to acquire an ethical approval or exemption from their Institutional Review Board (IRB). Researchers also need to obtain informed consent when possible and protect and anonymize sensitive data when used in presentations or analysis." (Skaik & Inkpen). These guidelines and requirements are a first thing that researchers should remember to the users when collecting the data sample and protecting their privacy in this digital age.

Job's Impact

Our human society has changed a lot since the development of digital technology. We use this advanced technology to utilize it efficiently to save time and money in manufacturing. With the rapid development of digital automation technology, companies are replacing human labor with robotic automation machines because of their task simplification and efficiency. This could lead to a threat to the job market and affect the global economy that reported by the United Nations "Meanwhile, reports by groups such as McKinsey suggests that 800 million people could lose their jobs to automation by 2030, while polls reveal that the majority of all employees worry that they do not have the necessary training or skills to get a well-paid job." (United Nations). Moreover, Frey and Osborne predict that "most workers in transportation and logistics occupations, together with the bulk of office and adminis-trative support workers,and labour in production occupations, are at risk.These findings are consistent with recent technological develop-ments documented in the literature.More surprisingly, we find that a substantial share of employment in service occupations,where most US job growth has occurred over the past decades (Autor and Dorn,2013), are highly susceptible to computerisation." (Frey & Osborne). With the latest advanced technologies, such as AI, which could become as intelligent as many highly educated people, it can be easily integrated into business and manufacturing. From a company perspective, these strategies are very beneficial and cost effective because companies won't have to hire employees and can still have AI that could work for them, but this is also a concern for workers who could lose their job and face a knowledge gap regarding the job requirements.

So, we understand the root cause of job replacement caused by advanced technology. We still cannot deny the fact that these advanced technologies and automation are beneficial for human society, but they still have their downsides as well, such as job replacement and the knowledge gap between humans vs computer intelligence. Recognizing these challenges, the government is trying its best to help match job positions to worker skill levels. As Huang suggest a potential strategy is "the government can provide more public services aimed at enhancing worker skills, with a focus on low-skilled groups to prevent technological unemployment." (Huang). Since the rapid development of AI technologies, humans are gradually being left behind because the convenience and power of computer intelligence are getting smarter and causing job replacement. To prevent this job replacement, the government could provide more opportunities for workers to learn for free to upskill. Simultaneously, the job market creates competitive between humans and, automation, robots, and Artificial Intelligence. Companies are very restrictive in the hiring process because of the need for cost

effectiveness. Over time, highly competitive companies are also increasing the difficulty level of their job requirements, and this brings and attracts more high-quality job seekers, making the company valuable. Furthermore, the factor beside the compensations such as positive company image is also important as well. Lin says “Additionally, a good company image makes these companies more appealing to high-quality job seekers [41]. This, in turn, helps to gain the intellectual capital necessary for tourism companies to import and develop clean technologies.”(Lin et al, 2024, p.7). In this highly competitive environment, many companies are hiring the most talented people who can invent and develop more advanced technology to contribute to human society. However, for low-skilled workers, they will struggle to survive in this current job market because they must compete with high-skilled workers and Artificial Intelligence.

Recommendation

With all these sections and evidence that reveal a trade-off in the digital age, we cannot deny the convenience of the internet that helps human society, but there is also a cost in the form of potential harm to human health, risks to personal identity, a lack of real human connection, and significant privacy and security risks. While the advanced development of AI and automation boosts human productivity and helps organizations and businesses in manufacturing and customer service, there is evidence pointing to negative impacts, such as the concern about cyber threats, job replacement, and effects on human health. Therefore, based on my synthesized evidence from the reviewed base on reliable researchers, this review concludes that exchanging human values for digital convenience is not advisable without proper digital knowledge and safeguards.

References

Frey, C. B., & Osborne, M. A. (2017). The future of employment: How susceptible are jobs to computerisation? Technological Forecasting & Social Change, 114(January), 254–280. https://doi.org/10.1016/j.techfore.2016.08.019

Gupta, M., Akiri, C., Aryal, K., Parker, E., & Praharaj, L. (2023). From ChatGPT to ThreatGPT: Impact of Generative AI in Cybersecurity and Privacy. IEEE Access, 11, 1–1. https://doi.org/10.1109/ACCESS.2023.3300381

Huang, Y. (2024). Digital transformation of enterprises: Job creation or job destruction? Technological Forecasting & Social Change, 208, 123733-. https://doi.org/10.1016/j.techfore.2024.123733

Johnson, J. (2024, February 7). Negative effects of technology: What to know. Medical News Today. Retrieved February 10, 2025, from https://www.medicalnewstoday.com/articles/negative-effects-of-technology

King's College London. (2025). What are the pros and cons of the digital economy? Retrieved February 10, 2025, from https://online.kcl.ac.uk/blog/what-are-the-pros-and-cons-of-the-digital-economy

Lin, Y., Qi, X., & Wang, L. (2024). Digital Transformation and Carbon Intensity: Evidence from Chinese Tourism Companies. Sustainability, 16(21), 9454-. https://doi.org/10.3390/su16219454

Shelton, C. L., & Smith, A. F. (2021). Workplace distractions in the digital era – are smartphones a threat to safety or an essential tool? Anaesthesia, 76(3), 305–308. https://doi.org/10.1111/anae.15234

Skaik, R., & Inkpen, D. (2021). Using Social Media for Mental Health Surveillance: A Review. ACM Computing Surveys, 53(6), 1–31. https://doi.org/10.1145/3422824

United Nations. (2025). The impact of digital technologies. Retrieved February 10, 2025, from https://www.un.org/en/un75/impact-digital-technologies