**Smart Machines and the Future of Employment**

by

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With the vast increase of technology, human jobs will be replaced by smart machines. Artificial intelligence (AI) is a branch of computer science that focuses on creating systems and machines capable of performing tasks that typically require humans. As AI technology evolves it continues to influence various areas of our lives, from automating routine processes to enhancing complex decision making. With the high efficiency and low costs that comes with the use of AI, industries will look to replace human jobs with these smart machines. However, not everyone agrees that AI can think like humans, making human jobs irreplicable to smart machines. AI is still in the very early stages of development of unlocking the full potential it can have for society. With the evolving landscape of AI and its potential to streamline human capabilities, pushes the economy and society in the right direction for a brighter and more technologically advanced future. Just 23 years ago the internet was still using dial-up connections and mobile phones were used for calls and texts only. In today’s world there is high-speed internet, rise of streaming services, and smartphones as pocket sized computers. AI is the next emerging technology that is becoming a common use in daily lives that makes 23 years ago technology seem like 100 years ago. In this technologically evolving world, AI will replace human jobs because of the automation and efficiency that smart machines bring, AI produces more advantages for the economy, and technology advancement is always a top priority in the world.

AI’s ability to automate routine and repetitive tasks with error free execution allows companies to streamline operations. Automation is the use of technology and machinery to perform tasks without direct human contact. Streamlining refers to the process of optimizing and simplifying workflows and procedures within an organization by eliminating redundant steps to enhance overall productivity. According to Patrick Marshall “the prototype burger flipper can do the work of two or three full-time workers and do it better” (2015, p. 3). Automation is being used in more industries than just manufacturing and is making a big impact as the burger flipper can “grill 360 burgers per hour” (Marshall, 2015, p. 3). Restaurants using automation gain an edge over competitors by expediting production, filling more orders to customers per hour, reducing costs from hiring less workers, and minimizing errors made by fatigue or exhaustion. The positive impacts spread across all industries to increase productivity, higher competition, and safer work environments making automation a major step towards a more sustainable and technologically advanced future.

In the world of communication, using natural language processing allows virtual assistants to understand and execute commands from setting reminders and drafting messages. This not only saves time but also reduces the stress load allowing individuals to focus on higher priority tasks throughout the day. AI is also used in navigation applications to voice commands that optimize travel routes in real time by considering traffic conditions and providing the fastest routes possible. Manufacturing environments, where products are mass produced, may seem like the only jobs that have potential to be replaced by smart machines, but AI can be used in a variety of ways to improve daily aspects of human life. In “one call-center application, Voicesense, detects stress by measuring callers' breathing, tone, and conversation pace and by listening for certain words” (Marshall, 2011, p. 8). This company utilizes the abilities of AI to answer phone calls and analyze the emotional state of the callers to transfer the call to the proper authorities. Employing AI into call centers allows phone calls to be answered 24/7 without the need of additional workers throughout the night and minimizes the chances of an important phone call not being answered, because of having no workers during after-hours, being undermanned, or workers all being occupied with other callers.

AI’s ability to analyze vast datasets and enhance decision making across industries generating efficiency and resource optimization promotes economic growth. Marshall states that AI helps by “making business more competitive in global markets” (2015, p. 12). When businesses are more competitive globally it drives companies to innovate, improve efficiency, and deliver higher quality products or services. This not only benefits consumers, but also promotes economic growth by encouraging companies to invest in research, development, and products that create a ripple effect of advancement. The more companies are competitive with each other the higher the drive is to improve quality of products, which benefits everyone in the economy. Also, having a more competitive business environment can lead to cost reduction to attract investments, benefiting both businesses and consumers, which in turn promotes economic growth.

Having AI replace human jobs can create opportunities for people to avoid having to work 40 plus hours a week and focus more time on personal hobbies that lead to new inventions, community service, or creating new systems that benefit the economy. For example, a group of line workers at General Motors have their jobs replaced by smart machines can spend their extra time assisting the fight against global warming, lend a hand to help clean the oceans, or assist in healthcare clinics by providing accessible medical care to others such as vaccinations. Also, as smart machines replace more jobs, creating extra free time allows people to focus on personal health by exercising and living healthier lives. This eliminates the excuse people use of “not having enough time” to go to the gym, go for a walk, or workout which leads to obesity and more risk of future health problems. Having more people commit to improving their health and helping each other takes steps in the right direction to improving the economy for all of society.

Technological advancement is a top priority for the world and AI represents a pivotal next step in the evolving realm of technology. Advancing technology helps solve complex problems, improve efficiency, and enhance quality of life. It opens doors to new possibilities and enables us to fight against global challenges such as climate change, healthcare crises, and allocating proper resources. Technological progress enhances our ability to understand the world and has more scientific breakthroughs that mitigate economic challenges and drive economic growth. The technological evolution over the last decade shows a shift from what was thought to be achievable to what is now possible because of the impact of AI.

It is imperative to stay ahead technologically of other countries to maintain strategic superiority and ensure national security. Using AI will help enable the development of stronger defensive systems, protective measures, and strategic capabilities against potential threats or enemies. Marshall states that “the military has been a key driver of AI research, especially for AI integration into robots (2011, p. 19). Using AI in the military will help take humans out of hazardous situations and potentially save more lives. Prior to the use of smart machines in war, the Army’s method to explore caves was to send a soldier down into a dark cave with rope tied around the waist to pull the soldier back if someone got hurt (Marshall, 2011, p. 21). Instead of sending a soldier into an unknown area and risking the life of humans, the use of AI and smart machines can replace those roles to investigate dark caves or enemy bunkers without lives being lost in the process. Harnessing the power of AI helps lead the way for a future where machines augment human potential and promote a more risk-free environment for humans to operate.

With the advantages of using AI, some believe that AI robots and smart machines are not able to think the same way as humans do, which causes no reason to worry about any job displacement. Sarah Glazer mentions that “AI bots do not have the capacity for language comprehension that humans have” (2022, p. 8). Smart machines and AI are programmed by algorithms that are made by humans to tell that machine what to do. These algorithms often lead to biased results because these algorithms mostly draw statistical data from the past (Glazer, 2022). AI can be programmed to imitate the way humans act but lacks the creativity and sentiment that humans have. Human decisions are influenced by emotions, experiences, and personal thoughts that go beyond just data processing. AI, on the other hand, makes decisions based on algorithms, data, and patterns. This causes a struggle for AI to cope with unpredictability in human interactions. Jobs requiring deep emotional intelligence, empathy, and interpersonal skills such as therapists, counselors, or social workers would be difficult to replace with AI. Although AI may not be able to have human creativity or emotional intelligence, it can handle many functions with great advantages and very few to none disadvantages, that eliminate the need for humans in many roles leading to a shift in job requirements.

AI has shown great strides in the advancement of technology and has the potential to take human jobs. With the use of automation, AI can conduct repetitive tasks or processes for hours or days without human intervention. This alleviates the need for multiple workers to work long hours on multiple shifts, while still increasing performance and efficiency for the company. Implementing AI or smart machines into industries helps companies compete on a global scale, allowing enhanced customer experience and increased customer loyalty generating more revenue. Companies that produce better quality products at lower costs benefit the entire economy. AI is the next step towards a technologically advanced future by unlocking possibilities that were not within human capabilities before. AI stands as a stepping block that guides humanity towards a future where technology not only compliments but collaborates with humans, pushing the boundaries of what is truly achievable. AI replacing human jobs comes from the unmatched automation and efficiency offered by smart machines, the economic advantages that comes from implementing AI into industries, and the continuous growth in technology to adapt in this ever-evolving world.

**References**

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