Potential and Challenges of Artificial Intelligence (AI) and Future Consequences

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Abstract

Artificial Intelligence (AI) allows computer programs to learn from experience through iterative processing and algorithmic training and represents human intelligence. Now, AI has become a hot topic and important debates have risen like, how it might affect the job market and what is the end of global civilization. Many people will lose their jobs due AI. On the other hand, few technology lovers think that it will lead to the creation of lots of diversified and interesting jobs. Many experts think that it will have a big impact on the workplace and all aspects of human life in the near future. In reality, AI can make jobs more creative, lucrative, and flexible, and will lead definitely to a more creative and skilled economy. However, history says, that advanced technologies are usually starting to take away more jobs than they create, and unfortunately, this trend will continue. Nowadays, there have been many ideas for how to solve this problem, and there should be updated education and skill develop program with new schooling system and that need to be introduced very soon. As there isn't enough work for everyone in the world, so the whole lifestyle and education system needs to be changed and to reorganize every aspect to make total human resource development system more purposeful. It is an analytical paper to analyze the potentials and challenges of AI along with the consequences of global future and way forward.

Key Words:
AI, ML, algorithm, robot, singularity

1. Introduction

AI is basically a simulation of human intelligence by machines, especially by computers, to do tasks that usually require human intelligence, like seeing, hearing, making decisions, and translating between languages. Sire by Apple, Alexa by Amazon, Google Maps, and ChatGPT by OpenAI are all examples of AI that people use every day (CSU2021). Since this can be done quickly; far quicker than a human could. Today, people realize, AI-controlled self-driving cars (KeremGulen2022), are a sign of fact, the future of AI is getting closer, and the concept of a driverless car is no longer the stuff of science fiction. Recent studies say that by 2040, there will be about 33 million cars that can drive themselves by using AI. On the other hand, AI in healthcare is become a popular term for the use of ML algorithms and software. Again, AI is going to imitate perfectly human cognition in the analysis, evaluation, calculation, presentation, and understanding of complex physical, medical, mental, and healthcare data, or to go beyond human capabilities by giving new ways to diagnose, choose drugs, treat, or prevent disease (Mullainathan2022). AI has the ability of computer programs to draw close conclusions based only on the data they are given. AI can examine connections between various types of clinical data and final patient outcomes (Coiera1997).

AI now affects almost every part of our lives, from choosing what books, goods, electronic household items, or flights to buy online to deciding if our job applications are accepted, if we get a bank loan, and even what care we get for cancer or other diseases (Hossain 2023a&f). A lot of big tech companies, like Amazon, Facebook, and Microsoft, have opened new study labs for AI. It's not much of a stretch to say that software now means AI (BBCFuture 2017). Peter Norvig, Google's director of research and a pioneer of ML said, 'AI has shown that it can do a lot of useful things, like label photos, understand spoken and written natural language, and help find diseases. For example, today, Google Maps' usefulness to travelers is mostly due to AI. It has allowed us to create detailed road maps in a fraction of the time of any part of the globe. Many in the financial sector see a bright future for AI, particularly in the banking sector (Brynjolfsson 2017). We may also rely on AI-powered apps to keep us safe and comfortable while we ride bikes, stroll, or take public transportation.

AI is revolutionizing modern life, but some experts are concerned that it will one day take over the world or threaten human jobs. AI technology has the potential to give benefits to many income chooses and to bring momentous gains to almost all countries around globe (Johnny2020). AI has the distinct prospect to create new and innovative job opportunities, leading to a more productive and efficient financial system (Pablo 2023). Automation can help companies do better by reducing mistakes, better productivity improving quality and speed. In the future there will be vast changes in all professions (Johnny 2019).As a result, our education, skill, and life style need to change and develop in line of global requirements. On the other hand, technologies of today are beginning to eliminate more employment than they create. In reality, the world will become more complex and self-centered in the future, and there will not be downsize the jobs market (Michael 2019).

Advances in AI and related forms of automation technologies have led to growing fears about job losses and increasing disparity (Korinek 2019). Extensive use of AI will also threaten the progress made in reducing poverty and inequality in society. It has been found that economic theory warns that growth in technology is likely to make both winners and losers (Hossain 2023b&g). As long as the winners and losers from technological progress are located within the same country, there is at least the possibility that domestic policy measures can compensate the losers. However, when technological progress deteriorates the terms of trade and thus undermines the comparative advantage of the entire world, then entire nations may be worse off except if the winners within one country compensate the losers in other countries, which seems politically very difficult (Mr Anton 2021). It is an analytical paper to analyze the potentials and challenges of AI along with the consequences of the global future and find how to prepare ourselves to mitigate those. There will be an evaluation to depict the way out to mitigate future challenges.

Figure 1. Robots and humans working in industry side by side[Egf2022]·[Alamy2023]

2. Potential and Multipurpose Use of AI

There are also thousands of successful AI applications used to solve problems for specific industries or institutions. A few examples are energy storage, deepfakes, medical diagnosis, military logistics, foreign policy, or supply chain management. AI will have a greater impact on technology in the future, by influencing every sector, machinery, equipment, and devices. With a 99% accuracy rate, AI has been applied in facial recognition systems. For example, of such are Apple's FaceID and Android's Face Unlock. Those two are employed in the protection of mobile devices. Google has utilized image labeling to detect products in photographs and to allow customers to search using a photo. It has also been shown to generate speech in order to describe visuals to blind persons (Heath2020). It can predict or simplify the behavior of customers from their digital footprints (Hossain 2023c&g). Online gambling companies use AI to improve customer targeting (Busby 2018). AI has been used to customize shopping options and personalize offers. Intelligent personal assistants use AI to understand many natural language requests in other ways than elementary commands. For example: Apple's Sire, Amazon's Alexa, and a more recent AI, ChatGPT by OpenAI (Rowinski 2013). ML can be used to fight against spam, scams, and phishing. It can scrutinize the contents of spam and phishing attacks to identify any malicious elements.

AI has been used to automatically translate spoken language and written content. Additionally, research and development are in progress to interpret and conduct animal communication. While no system provides the ideal of fully automatic high-quality machine translation of unrestricted text, many fully automated systems produce

reasonable output. AIs is going to produced superhuman in near future results in many games, like chess, Jeopardy (Watson), Go (AlphaGo), poker , E-sports (StarCraft),AlphaZero, MuZero),etc. AI has replaced hand-coded algorithms in most chess programs. However, poker lacks the perfect information of go or chess. Therefore, a poker playing program must be able to reason while facing unknowns. Players in the general population function based on information provided by the game system, rather than on the rules themselves. Institutions using AI to address global economic and social concerns are being supported by a new ITU effort called AI for Good. The University of Southern California has established the Centre for AI in Society to apply AI to social issues like homelessness. AI is being used by Stanford University to analyze satellite photos in search of pockets of concentrated poverty. In agriculture, AI has helped farmers identify areas that need irrigation, fertilization, pesticide treatments or increasing yield. Today, agronomists use AI to conduct research and development (Hossain 2023d&h). AI has also been used to predict the ripening time for crops such as tomatoes, monitor soil moisture, operate agricultural robots, conduct predictive analytics, classify livestock pig and cow call emotions, automate greenhouses, detect diseases and pests, save water, etc. In future AI will be used to completely automate most cyber security operations over time (Venture 2020).

AI can create a dysfunctional situation with revenge effects (Anabel2020), like technology that hinders students' ability to stay on task. AI can provide early prediction of student success in a virtual learning environment (VLE) like Moodle (Chen 2022). In the education process, students can personalize their training with the help of AI. And for teaching professionals, the technology provided by AI can improve the quality of the educational process and teaching skills.AI is used to aid investment decisions at large financial firms. Aladdin, BlackRock's AI engine are used by the firm and its customers alike to make better investing choices. SQREEM (Sequential Quantum Reduction and Extraction Model) is a data mining tool used by financial institutions like UBS and Deutsche Bank to create client profiles and better tailor wealth management offerings to individual clients. Its functions include the use of natural language processing to analyze text like, news, broker reports, and social media feeds. Banks use AI to organize operations, for book-keeping, investing in stocks, and managing properties. AI can react to changes when business is not taking place (Hossain 2023e&k). Today, AI is used to combat fraud and financial crimes by monitoring behavioral patterns for any abnormal changes or anomalies (Chapman 2019). The use of AI in applications such as online trading and decision making has changed major economic theories. For example, AI-based buying and selling platforms estimate individualized demand and supply curves and thus enable individualized pricing. AI machines reduce information asymmetry in the market and make markets more efficient. Many banks, funds, and proprietary trading firms now have entire portfolios that are AI-managed. Automated trading systems are typically used by large institutional investors but include smaller firms trading with their own AI systems (Investopedia 2005). There is a large array of applications where AI is serving common people in their day-to-day lives.

Today, the adoption of AI and its impact on businesses and society around the world stands at a turning point. The global AI adoption rate grew steadily and now is more than 35%. And in some industries and countries, the use of AI is practically everywhere and every sectors. AI is rapidly providing new benefits and efficiencies to organizations around the world through new automation capabilities, predictability greater ease of use and accessibility, and a wider variety of well-established use in all cases. AI is both being applied through off the shelf solutions like virtual assistants and embedded in existing business operations like IT processes. Encouraging evidence found about the importance of accessibility. Now, 44% of organizations are working to embed AI into current applications and processes (Hossain 2023f&l). The IBM Global AI Adoption Index has provided insights into overall AI adoption around the globe, the barriers and challenges that are hindering AI from reaching its potential, and the use cases; sectors, industries and countries where AI is most likely to thrive. Today, AI offers a playbook for 42% of companies that report exploring the use of AI and a window into the AI trends and challenges that are likely to come. The data, commissioned by IBM, sheds new light on the deployment of AI across 7,502 businesses around the world. From where, 500 in each country, United States, China, India, UAE, South Korea, Australia, Singapore, Canada, UK, Italy, Spain, France and Germany; and 1,000 in Latin America like, Brazil, Mexico, Colombia, Argentina, Chile and Peru. The polling was conducted online through Morning Consult's proprietary network of online providers from 30 March through 12 April 2022 (IBM Global AI Adoption Index 2022). As we know that, IBM led the industry in the number of AI, cloud, quantum computing and security-related patents granted. However, Darío Gil, Senior Vice President and Director of IBM Research have said that. 'The world needs scientific thinking and action more than ever. IBM's sustained commitment to investing in research and development, both in good and in challenging times, has paved the way for new products and new frontiers of information technology that have greatly benefited our clients and society' (PRNewswire 2021).

4. Challenges, Risk and Consequence of AI

The prime challenge of AI systems is that, it is usually so complicated that it is hard to figure out or understand why they do, what they do and how they do? Today, the way AI works is built on a very successful method called ML. Interestingly, we can't lift the lid and see how it works. So, we have to believe it. So, the task is to come up with new ways to keep an eye on or check up on the many places, where AI is now so important and no way to avoid it. Jonathan Zittrain, a professor of internet law at Harvard Law School and has said, 'There is a risk that the increasing complexity of computer systems could keep them from getting the scrutiny they need.' I'm worried about the loss of human freedom as our systems become more complicated and interconnected with the help of technology. He also said, 'If we set it and forget it, we may regret how a system changes and that there is no clear place for an ethical dimension to be considered.' Missy Cummings, who was one of the first female fighter pilots in the US Navy and is now an expert on drones, is the head of the Human and Autonomy Lab at Duke University in North Carolina. She has said, 'How will we be able to certify these systems as safe?' AI will need to be watched over, but how that should be done is not clear yet (Hossain 2023g). At the moment, there are no methods that everyone agrees on. Cummings also said, 'Without an industry standard for testing these kinds of systems, it's hard for these technologies to be widely used.'

In a fast-paced world, regulatory organizations frequently find themselves playing catch-up. Companies are already investigating the effectiveness of utilizing AI to make parole decisions or detect sickness in several critical areas, like the criminal justice system and healthcare. But, by delegating decision-making to computers, we risk losing control; we are to say that the system is making the correct judgment in each of these cases? Principal researcher at Microsoft Research Danah Boyd said that 'there are fundamental problems about the values that are being programmed into such systems and who is ultimately responsible for them' Regulators, civil society, and social theorists all want new technologies to be fair and ethical, but these conceptions are hazy at best.' The workplace is one arena filled with ethical quandaries (Hossain 2023h). AI will let robots, do more complicated jobs and displace more human workers in future. For example, China's Foxconn Technology Group (Foxconn2023), which supplies Apple and Samsung, has announced that, it aims to replace 60,000 factory workers with robots. Ford's factory in Cologne, Germany (Wilkins 2011) puts robots right on the floor alongside humans.

The details about who sits on Google's ethics board and what it actually does remain insufficient but in September 2022; Facebook, Google, and Amazon launched a consortium that aims to develop solutions to the jungle of pitfalls related to safety and privacy AI poses (The Guardian 2016). Again OpenAI is an organization dedicated to developing and promoting open-source AI for the benefit of all. 'It's crucial that machine learning be researched freely and distributed via open publications and open-source code, so we can all share in the rewards,' said Google's Norvig. In reality, OpenAI is a non-profit AI research organization (Hossain 2023h&k). Their purpose is to enhance digital intelligence in the most likely method to serve humanity as a whole, without regard for financial gain. Because their study is free of financial constraints, they may concentrate on making a beneficial human impact (Openai2023).Creating a brain trust of ethicists, technologists, and corporate leaders is essential if we are to develop industry and ethical standards and gain a comprehensive comprehension of what is at stake. It is a matter of utilizing AI to improve what humans are already good at. Zittrain also stated, 'Our work is less concerned with a science fiction robot takeover and more concerned with how technology can be used to aid human reflection and decision-making, as opposed to completely replacing it.'

A super-intelligence or also known as hyper-intelligence is a hypothetical agent that may also refer to the type or level of intelligence possessed by such an agent (Roberts 2016). If research into AGI produced sufficiently intelligent software, it might be able to reprogram and improve itself and that leading to recursive self-improvement. Science fiction writer Vernor Vinge named this scenario the 'singularity'. It is difficult or impossible to know the capabilities of super-intelligent machines and that known as the technological singularity and is an occurrence beyond which events are unpredictable or even unfathomable. ML AI is also able to design tens of thousands of toxic molecules in a matter of hours (Hossain 2023g). ML AI is also able to design and build such robots, which can take over the control of nuclear weapons of the military of any nations. And that will be the great danger of entire civilization. Robot designer Hans Moravec (Moravec1999), cyberneticist Kevin Warwick, and inventor Ray Kurzweil has predicted that humans and machines will merge in the future into cyborgs and that will be more capable and powerful than either. This idea, called trans-humanism (Moravec19880), Edward Fredkin (Dyson 1998) argues that 'AI is the next stage in evolution.' A survey of economists showed disagreement about whether the increasing use of robots and AI will cause a substantial increase in long-term unemployment, but they generally agree that, it could be a net benefit if productivity gains are redistributed (IGM Chicago 2017).
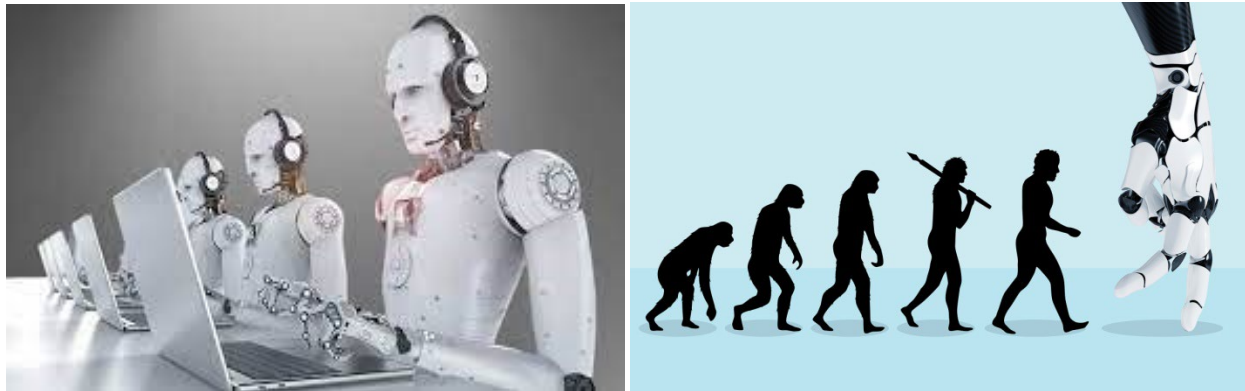
Figure 2. Machines may rule over humans in future (Quora2023) both certainty and uncertainty of life (Time2023)

Michael Osborne and Carl Benedikt Frey estimate 47% of U.S. jobs are at 'high risk' of potential automation, while an OECD report classifies only 9% of U.S. jobs are 'high risk. However, many middle-class and white-color jobs may be eliminated by AI. On the contrast, job demand is likely to increase for service and care-related professions. Whatever the case; AI, IoT, ML, and automation will definitely shrink the labor force/market. Advanced AI can make centralized decision making and more competitive with liberal and decentralized systems like markets. Terrorists, criminals and rascal states may use other forms of weaponized AI like, advanced digital warfare and lethal autonomous weapons (National Research Council1999). Battlefield robots are coming soon. Health equity issues may also be worsen when many-to-many maps are done without taking steps to ensure equity for populations at risk for bias. However, until AI and robotics systems are demonstrated to be free of bias mistakes, they are unsafe. Criticism has been raised about whether and to what extent the works created with the assistance of AI are under the protection of copyright laws. The regulatory and policy landscape for AI is an emerging issue in jurisdictions globally (Law Library of Congress U.S.2019). In 2023, OpenAI leaders published recommendations for the governance of superintelligence, which most of the countries have believed that, it may happen in less than 10 years (Hossain 2023h).
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Computer scientists and philosophers have suggested that AI may become an unpredictable risk to humanity, if its rational capacities are not steered towards benefit to the humankind. Economists have highlighted the risks of redundancies from AI, and speculated about unemployment if there is no adequate social policy for mass/general employment. The term AI has also been criticized in the eyes of lawyer/legal community. Two sources of concern are the problems of AI control and alignment: that controlling a superintelligent machine, or instilling it with human compatible values, may be a harder problem than honestly supposed. Many researchers believe that, superintelligence would resist attempts to shut it off or change its goals; as such an incident would prevent it from accomplishing its present goals and that it will be extremely difficult to align super-intelligence. In contrast, skeptics argue that superintelligent machines will have no desire for self-preservation. And it is not the reality (Dowd 2017). Again sudden 'intelligence explosion' might take an unprepared human race by surprise. However, in future jumping from subhuman performance in many areas to superhuman performance in virtually in many domains is possible like, AlphaZero in the domain of Go show that AI systems can sometimes progress from narrow human-level ability to narrow superhuman ability extremely and rapidly. We can do math without having to picture the universe of numbers, and we can figure out how gravity works in a different galaxy without having to step on it and to say that we have felt and measured it (Quora2022).

As technological advances continue, some skills are becoming obsolete while demand for other new technology-related skills are rising. Such paradigm shifts are creating new and different jobs. At the same time automation, IoT, ML and AI are also removing the need for human input from some lower-skilled roles (Hossain 2023c&f). As a result, many people are at risk of being left behind, mostly low-skilled workers, who usually perform administrative, routine and repeated tasks that will be automated totally in near future. This picture is alarming for poor, LDC and developing countries. Even developed countries under OECD are around 14% of jobs fall into this category, with another 32% at high risk of being at least partially automated. So, around 1 in 2 people is likely to be affected in any way. Robot suits and other automated machinery and equipment were introduced in many industries and workers need to learn how to work with them/those. Again, about 40% of new such technology related jobs were created between 2005 and 2016. But 6 out of 10 workers in OECD countries lack basic computer skills were in digitally intensive sectors and that is

around 40%. At the same time, Manufacturing and service sectors are using new technologies to do their jobs more efficiently, quickly and find work through online platforms, and collaborating in new ways with age groups across different countries around the globe. According to the OECD Digital Economy Outlook (OECD 2015) the ICT sector is a key driver of economic growth in OCED countries. Between 15 and 52% of all investments in OECD countries were related to the ICT sector between 2008 and 2013. Moreover, after a slack in the sector's contribution to employment growth during the economic crises, the share of jobs created by the ICT sector in OECD countries amounts to 22% in 2013 (M Arntz2013).

According to a recent World Economic Forum survey, 40% of SMEs halted operations during the pandemic, resulting in layoffs and other cost-cutting measures. In today's unpredictable world, leaders must make challenging decisions that have a significant influence on their workforce and employee well-being. With the massive volume of data collected on the internet, new hazards have evolved, such as increasingly frequent and costly cyber-attacks (Weforum 2022).Business leaders are already using new computational and AI tools to aid strategic decision-making. This software will become increasingly powerful during the next decade and will be used in new and diverse scenarios. AI technologies, which are based on game theory mathematics, leverage the computing advancements that power chess engines. The physical office has been significantly supplanted by digital infrastructure, allowing CEOs to develop a more efficient, balanced workforce with asynchronous work schedules. In the world of venture capital, technology has leveled the playing field by removing bias that might otherwise have worked against founders and funders. The next challenge will be to continue to establish a shared purpose while leveraging technology to enhance human insight and skill (Questrom 2017).

MIT physics professor and leading AI researcher Max Tegmark in 2018 has said, 'The real threat from AI isn't malice, like in silly Hollywood movies, but competence AI accomplishing goals that just aren't aligned with ours.' Another AI expert Laird's has said 'I definitely don't envision the situation where something wakes up and says it wants to take over the world. I think that's science fiction, and that's not how things will turn out.' Laird's biggest worry isn't about evil AI, but about 'evil humans using AI as a kind of false force multiplier' to do things like rob banks and steal credit cards, among many other crimes (Hossain 2023g&l).. So, even though he gets upset with how slowly things change, AI's slow growth may be a good thing. He also said, 'Maybe what we need is time to understand what we're making and how we're going to work it into society.' But no one really knows. In fact, there need to be several big breakthroughs, and they could happen very quickly. In 1917 Ernest Rutherford, a British scientist, has said, 'It's very, very hard to say when these conceptual breakthroughs will happen' (Ernest 2023).

6. Consequence of Global Future

AI is shaping the future of humanity across nearly every industry. AI is already the main driver of emerging technologies like ML, big data, robotics and IoT and those are generative AI, with tools like ChatGPT and AI art generators garnering mainstream attention and it will continue to act as a technological innovator for the foreseeable future. Roughly 44% of companies are looking to make serious investments in AI and integrate it into their businesses. And of the 9,130 patents received by IBM inventors in 2021, 2,300 were AI-related (IBM 2021). Very recently Elon Musk has said that the robot will be friendly, standing at a height of 5' 8" and reaching speeds up to five miles per hour. But if its creation goes to plan, it will take many people's jobs. While Musk's robot has not yet taken over, businesses across the country have turned to automation rather than paying humans for work. For example, Insider previously reported that restaurants struggling to hire workers, they have turned to QR codes where diners can view menus, rather than having a waiter bring them one (Hilary 2021). For example: Cracker Barrel rolled out a mobile app that lets customers pay for meals; McDonald's started testing automated drive-thru ordering at 10 Chicago locations; and Dave & Buster's plans to expand its contactless ordering, effectively getting rid of many restaurant jobs humans once did (Business insider 2021).Today all big giant companies spending billions of dollars on AI products and services annually. Global AI spending has already reached US$ 434 billion in 2022. And the market is expected to break the US$ 500 billion mark in 2023, as reports International Data Corporation (IDC) (Tech News 2022). For example, tech-giants like Google, Apple, Microsoft and Amazon spending billions to create those products and services, universities making AI a more prominent part of their curricula and the U.S. Department of Defense upping its AI game, big things are bound to happen.

With every new use of AI comes the scary question of whether or not robots will put people out of work. The judges haven't made up their minds yet. Some experts strongly disagree with the idea that AI will automate so many jobs that millions of people will be out of work. Other experts, on the other hand, see this as a serious issue. Social experts and

people who think about AI thought that the organization of the workforce was changing, and that AI was basically taking over jobs. It lets us really build a market based on knowledge and use that to make better automation for a better way of life. It might be a bit abstract, but we should be worried about AI and robots taking our jobs (Müller 2016). Some experts, however, has speculated that algorithms are to blame for the loss of white-collar jobs like business analysts, hedge fund managers, and lawyers. Again, there is some disagreement on how the rise of AI will affect the workforce, but experts agree on several themes to look for. On the other hand, some experts feel that, when AI is integrated into the working, it will actually create more jobs; at least in the medium term. Wilson believes that the change to AI-based systems will cause the economy to add occupations that will help with the transition. Some additional specialists in AI will generate more riches than it consumes. However, it may not be dispersed equitably at first. The changes will be felt subliminally and will not be visible (Hossain 2023h). A tax accountant will not get a pink slip and meet the robot who will now sit at her desk. It is possible that the next time the tax accountant searches for a position, it will be more difficult to locate the same one. Few optimistic analysts predict that, AI in the workplace will fragment longstanding processes, resulting in the creation of many new human occupations to combine those workflows and offer satisfaction and progress.
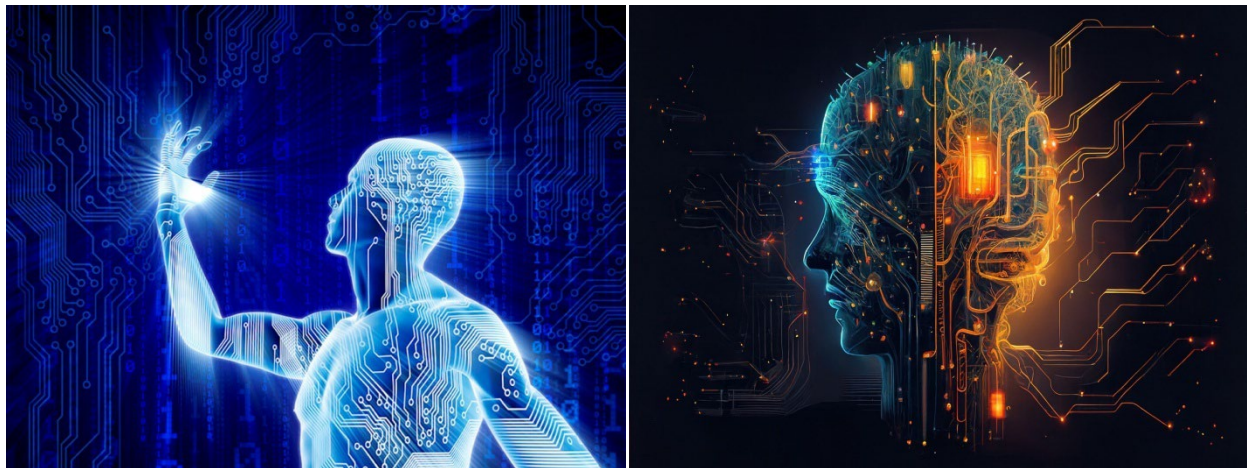

Figure 3. AI and Singularity: A threat to humanity or a promise of a better future (AI Singularity 2023, Techinnowire 2023)

The age of AI in the age of 4IR is a transition, and it could take years or even decades for different parts of the workforce and almost every part of life to get used to it. So, these predictions are harder to make, but few gloomy experts worry that once AI is everywhere, these new jobs and the ones that were already there may start to go away. So, they wonder what will happen to those people in the long run. As we've seen in the past, there were ways to move from farming to making things to providing services (Oberdiek 2019). Now, that isn't true. Now, the burning questions are: what will happen to most people who work if all jobs are taken over by robots? As we've seen, does technology make more sense from a business point of view? For example, self-driving cars and AI concierges like Sire and Cortana could take away up to 8 million jobs in the U.S. alone as these technologies get better. What about the rest of the world? When all these jobs start to go away, we'll have to ask ourselves, 'What makes us useful (Yudkowsky 2008)?'How do we define productivity? We must face the ever-evolving reality and rethink the foundations upon which our civilization is built. What is that, by doing that we may contribute to society and make us valuable as individuals. Since technology won't wait for us, we need to have this discussion to the end. It's time for us to develop a moonshot mindset (X-Timeline 2022).To build inclusive, 'decentralized intelligent digital networks imbued with empathy (Dharmaseed 2015)' that help humans aggressively ensure that technology meets social and ethical responsibilities (The Shilling Times 2022). We need some effective and new level of regulatory and certification processes to ensure the best use of AI for the entire human race (EU AI Strategy 2021).

AI could be data-driven as well as knowledge-driven. The next-generation AI breakthrough is knowledge inference and its application to all contexts. Several significant concerns with machine learning in 5G and future networks may give rise to new areas of research and extensions of present standards to support future networks (5G-MoNArch2022). So, if AI is going to be used by a lot of people and get better, there needs to be a strong guarantee of security. Since AI will be used in transportation and health care in the coming years, it must be presented in a way that builds trust

and understanding and protects human and civil rights (AI HLEG2018).Policies and protocols, on the other hand, should handle ethical, privacy, and security concerns (Hossain 2023h&l). As a result, multinational communities should work together to push AI to progress in a way that benefits humanity. As AI becomes more incorporated into the workforce, it seems doubtful that all human employment will be eliminated (Acemoglu 2020). Instead, many experts believe that the workforce will become increasingly specialized in the future. These professions will necessitate more of what automation cannot currently deliver, such as creativity, problem-solving, and qualitative skills (Gunning 1995). Essentially, there will always be a need for people in the industry, but their responsibilities may change as technology advances. Specific skill sets will be in higher demand, and many of these professions will require a more advanced, technical skill set.

7. Conclusion

AI is allowing us to maximize productivity across all departments and sectors and make better use of our resources. In fact, there is a great deal we can do by using AI to improve the quality of our service and the success of our business, company, or organization. Today, AI is shown to be a real game-changer in the health care field. It is improving almost every part of the business, from keeping private records safe to using robots to help with surgeries. Increasing automation in manufacturing could cause wage gaps to widen, labor demand to drop, and skill premier to rise in most countries. However, the worst-case situation is that most of the progress made in development and reducing poverty over the last 50 years will be lost. In the past, new technologies led to more shared wealth and more equality between and within countries. However, new technologies may lead to more inequality on both fronts if policies aren't put in place to counteract them. The new era will be governed by different norms and necessitate as rural economies are vastly different from those in the models of a manufacturing economy that dominated the middle of the 20th century.The competitive equilibrium paradigm may be even less applicable to the AI economy of 21st century than it was to the manufacturing economy of the 20th century. AI, robotics, and automation advancements have rushed during the pandemic. Jobs lost during the pandemic are being rapidly replaced by robotics and AI. Demand for digital, IoT, AI, and ML skilled individuals will continue to rise as digitization and the smart world advance across all industries and service sectors. While digital, automation, and economic changes may result in the abolition of many current occupations, new ones will develop in the monarchy of digital and smart technology.

There will be a high degree of uncertainty regarding the conceivable technological development scenarios and their effects. This is the biggest challenge of extensive use of AI in future. In the near future, unskilled, administrative, and white-collar jobs of middle-class society will be threatened due to excessive use of AI. On the other hand, service and care occupations are expected to see a rise in demand. There is no doubt that AI, IoT, ML, big data and automation will reduce the need for human workers as well as the size of the economy. Repeated jobs, monotonous task, mass production, line production, laborious job, will be taken by robots or AI used machinery, equipment, households, system, etc. The challenge of AI in general and AGI in particular will be more distinguishing and alarming in the future. Again, the extreme challenge of AGI is 'Singularity' in which AI machines take over and fundamentally alter human existence either by making us dependent on them or eliminating us altogether. The end of humanity is possible at any time, if superintelligent robots gain access to nuclear weapons or develop biological or chemical agents on a mass scale. Those devastating or horrifying tasks could be carried out at any time, either by super clever robots themselves or by some ignorant or criminal acting out of anger or malice or stupidity. There should be global coordination, regulations, rules to guide AI use and advancement in a positive humane path. Future employment will dictate digital and smart abilities ranging from beginner to advance. Actually, in the field of creativity, complicated problem-solving and qualitative abilities, advanced AI or superintelligent robots cannot replicate, and there will be more demand of human in these positions. So, there will always be some demand for workers, though their specific functions may change as technology improves. There will be a shift in the kinds of talents that are in demand, and many of these positions will call for a higher level of technological expertise.

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