

Committee: Economic and Social Council

Topic: Securing Job Opportunities with the Advancement of Artificial Intelligence

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Position: Deputy Chair of Economic and Social Council

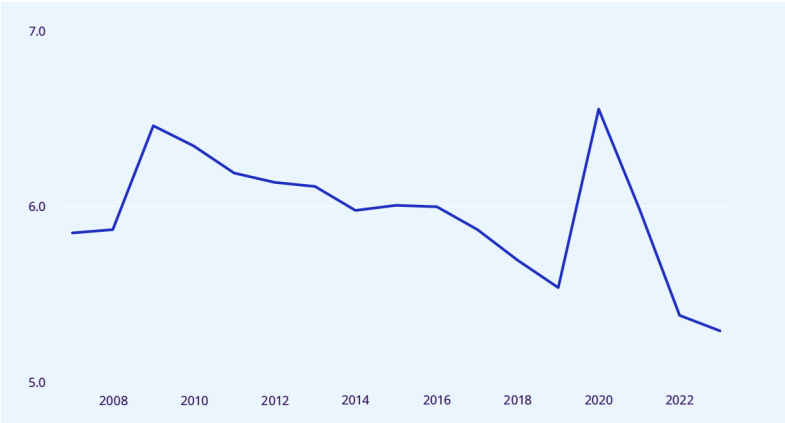
Introduction

From the rule-based AI (Artificial Intelligence) system, which simply follows the direction of programmers, artificial intelligence has developed so quickly that now they can make a decision by themselves. As a result, computer programs made people's lives much more convenient, which conversely took away their workplaces. In 2016, Lee Sedol, a former South Korean professional Go player of 9 dan rank, had already lost the Go game to Alphago, the computer program that plays Go games. This outcome obviously revealed the limitations of humans; the computer program was, and still is, more intelligent than any genius. Not only playing Go games or chess, Artificial Intelligence has influenced people's daily lives and even their way of living.

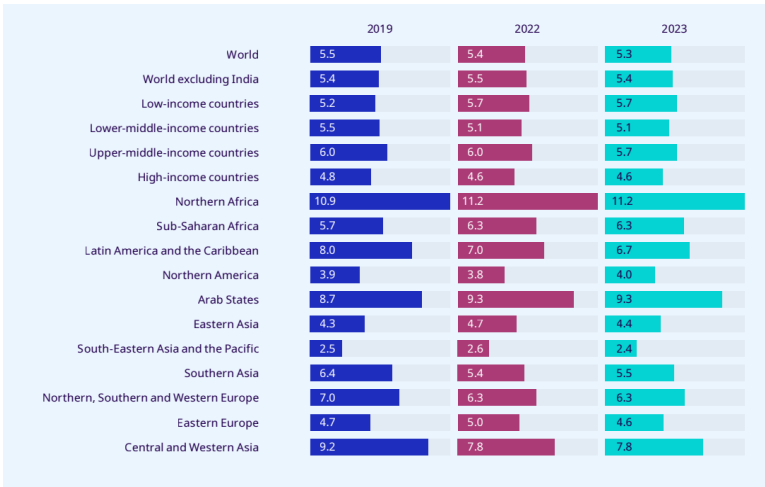
ILO (International Labour Organization) shows that in 2023, the global unemployment rate reached 191 million, which corresponds to 5.3% of the unemployment rate. While the global unemployment rate slightly decreased after the pandemic, low-income countries have not yet recovered the population without a job. For instance, countries in Northern Africa and Sub-Saharan Africa have rated 11.2% and 6.3% each, which are higher than the global unemployment rate.

There are two main reasons for unemployment: structural (people lack occupations because they lack demanding abilities) and cyclical (out of work due to lack of work places). Job replacement due to AI can be applied in both cases. Many citizens of low-income countries have fewer opportunities to get proper computer programming education to utilize in work. Also, many developing countries are economically dependent on repetitive work such as agriculture and manufacturing. Even in developed countries, specialized jobs; doctors, lawyers, and accountants, for example, will certainly be replaced by computers as well. Already in America, AI was responsible for 3,900, or roughly 5% of all jobs lost, making it the seventh-highest contributor to employment losses in May cited by employers, according to CBS (Colombia

Broadcasting System). The threat of job replacement by AI is approaching even quicker than ever; thus, it is time for us to seek for realistic solutions.



Global Unemployment Rate (International Labour Organization; 2007 to 2023)



. Unemployment rates, world and by (sub)region and country income group,(ILO, 2019, 2022 and 2023)

Definition of Key Terms

Job replacement

This occurs when new techniques are invented such as machines and artificial intelligence. Today, repetitive or rule-based jobs are thought to be highly damaged by replacement. However, job replacement will occur in almost all industries. While workers lose their workplaces, replacement to AI (Artificial Intelligence) enhances the efficiency and accuracy of the work.

Artificial intelligence

Computer-controlled robots that can think and conclude, such as humans. John McCarthy, an American computer scientist, coined the term artificial intelligence. AI systems generate massive algorithms based on the data programmers provide, and this process is called machine learning.

Automation

The technique of doing repetitive jobs, especially manufacturing, automatically without any delay. Machines and robots have learned to self-govern the whole process, and they operate much better than humans. Therefore, this is the field that has the most possibility of being replaced by artificial intelligence. For example, many artisans lost their jobs during the first industrial revolution due to the emergence of machines.

Deep-learning

Deep-learning is a subset of machine learning, which teaches AI to observe large amounts of data by stimulating the human brain. Computers follow stages during deep learning. Through these processes, AI can help to develop what we just imagined such as automated cars, medical devices, and satellites.

Technological unemployment

A situation in which workplaces such as companies refuse to hire workers who lack certain skills, abilities, or knowledge. Since the knowledge related to artificial intelligence is specialized, it often requires a deep

understanding of mathematics, computer science, and machine learning principles to get jobs. In this case, workers that are skilled will gain the workplaces, but people who aren't won't. For example, companies will prefer to hire employees aware of AI rather than those who are not. Eventually, upskilling and retraining the workforce became one of the initial tasks to secure job opportunities.

Industrial Revolution

The Industrial Revolution refers to periods in which industries altered in socioeconomic and technological ways. In each stage, many employees lost and gained their jobs due to circumstances. There are four stages in total, and each stage displays unique characteristics.

During the first Industrial Revolution, mechanization appeared. Techniques to enhance the quality of machines such as steam power and water power were introduced. In the second stage, mass production was vitally utilized, which extremely increased the number of supplies. Then, in the third stage, computers and the Internet were invented. Based on the developments during this period, the fourth industrial revolution thrived, which is about AI, big data, and IoT technology.

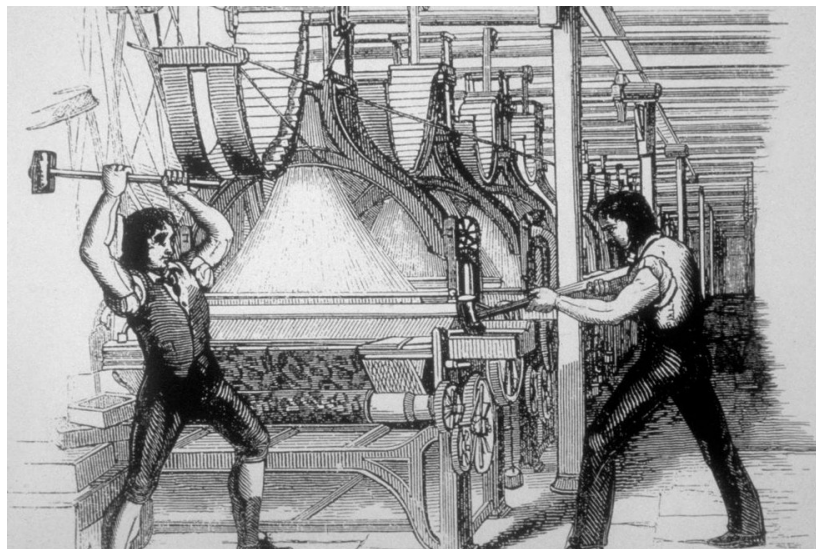
Background Information

History of Job Replacement

Artificial Intelligence is more accurate, clever, and speedy. Since the first industrial revolution, machines have started to automate the tasks people used to complete, such as manufacturing. In the 19th century, there was a rapid demand for cotton in the United Kingdom, where the first industrial revolution emerged. Cotton was made in two ways: handmade or manufactured. Both methods could be operated mainly by people. When the number of cotton workers who could manage suddenly increased, companies began to adopt machines. Consequently, the original methods were steadily replaced by the machinery industry. This caused the indelible English protest, the Luddite Movement.

Traditionally, all peasants shared the land. They took the wood, bred herds of sheep, and farmed together in the shared lands. However, the government established a policy to assign the owner of the land, which is

called an enclosure. As a result, most peasants moved to cities and fell as impoverished factory workers. Also, the artisans who led various fields of the industry in the United Kingdom had to work as factory workers with extremely low wages. The poor working conditions as well as the lack of workplaces due to the replacement ignited people's madness. Factory workers from different regions destroyed the machines, and in some cities, people even killed the factory owner as well. The Luddite Movement shows how employees of the past reacted to the replacement of machines, and questions how we would overcome a similar situation.



People destroying machines, Getty images

‘GPT’, which stands for ‘Generative Pre-trained Transformer’, is a NLP (Natural Language Processing) program started by OpenAI. Chat-gpt is a unique chatbot because it interacts extremely fluently with people. To train this AI, OpenAI used ‘unsupervised learning’. This technique helped Chat-gpt to learn a tremendous amount of text data from the Internet. Chat-gpt not only enhanced the communication between AI and humans, but also between people. Unlike other language translating applications, the AI accurately responds to the context. Therefore, many organizations are already deploying Chat Gpt in global customer service and education.

Also, it still has numerous flaws, which may cause misunderstandings if applied in industries. The main limitation of Chatgpt is that it isn't accessible online. When people ask about the current gold price, weather

forecast, or the current president of the country, the AI model refuses to explain or provide wrong information. Since Chatgpt was programmed with information up until September 2021, it can't provide any real-time results after that period. In other words, Chatgpt can generate countless practical solutions, but it can't offer faultless answers. Likewise, such as other robots, Chatgpt lacks emotional intelligence. Chatgpt doesn't affect the job opportunities of people directly. However, it is evident that the intelligent and fluent robot will replace most jobs in several years.

It is true that the development of technology has taken over people's workplaces but also made new jobs related to technology in the past. In fact, when many artisans were simply 'replaced' by manufacturers during the first industrial revolution, not being unemployed. Therefore, some professors, including Jakob Nielsen, declared that extinct jobs will simply be replaced by new-born jobs, which eventually maintains the demand for workers. On the other hand, unemployment caused by AI still threatens most people. Jobs related to AI mostly require specialized techniques in order to get jobs. For example, people could run machines easily, but workers today should learn from several months to years to get properly employed.

Increased gap between the rich and the poor

In 2022, ILO shows that approximately 214 million workers are living in extreme poverty globally (earning less than US\$1.90 per day per person in purchasing power parity [PPP] terms). This indicates that the number of people suffering from working poverty is similar to the population of Brazilians (216 million in 2023). With the job replacement to AI, more workers would receive even lesser incomes.

The dissimilarity of AI development also leads to polarization among countries. Lack of education is the most obvious reason. Initially, lower-income countries lacked AI experts to educate people. Also, many students don't receive even basic education. For instance, nearly 37 percent of Vietnamese children are not enrolled in upper secondary school. Therefore, even though the school provides courses related to AI, the students can't learn. On the other hand, the United Kingdom is the country with the best AI education. This further encourages students to learn AI, which results in the jump in the number of applications in computing.

In addition, developing countries have industries that are vulnerable to AI replacement. The IMF (International Monetary Fund) explains there are three fields that are endangered in developing countries: manufacturing, the service sector, and agriculture. While citizens of developed countries can receive

support or join employment programmes, most less economically developed countries lack those policies. Thus, the citizens of lower income countries will be impacted worse. Consequently, the rich who are ready for the replacement gain are richer, and the poor hopelessly lose their workplaces.

Creative Robots and emerging ethical concerns

Chat gpt writing a piece of poem, AI drawing a piece of masterpiece right after people request are common for us. In 2022, Jason Allen's work generated via artificial intelligence, "Théâtre D'opéra Spatial", won the first prize in the digital category at the Colorado state fair. This was shocking because the prize means that none of the professionals who gave the prize recognized that it was drawn by AI. Creativity is not a field that only humans can achieve anymore.



Jason Allen's A.I.-generated work, "Théâtre D'opéra Spatial"

The problem is that artificial intelligence reads thousands and millions of articles, scam masterpieces, and generates the algorithm based on those unlicensed sources. In fact, 'Nobel AI', which generates a piece of drawing based on some word requester suggested, got sources to educate AI from Danbooru. Danbooru is where users can upload and download drawings freely, which means there are numerous ones shared without authorization. Therefore, many artists claim that educating computers with human drawings and taking over their jobs is both unethical and controversial. Moreover, copyright of AI generated drawings is

one of the raising concerns as well. Unlike in the past, which recognized AI as a tool of drawing, today, AI autonomously contributes to the creative process. As a result, policy for copyright of AI differs among countries and unions.

Related issues are found in the field of actors and writers as well. On June 14th this year, SAG-AFTRA (American Federation of Television and Radio Artists) joined the strike with WGA (Writers Guild of America). Actors and writers claim that the AMPAS (Alliance of Motion Pictures and Television Producers) provides low quality of the working environment and is replacing AI. In reality, after the emergence of Chat-gpt, writers were directly impacted. Through employing script-writing Chat-gpt, the huge companies that provide OTT (Over The Top) services can save money by giving wages to script-writers. For actors and actresses, the deep-faking technology caused them to be unemployed. As such, AI is at the center of the controversy between companies and artists about what should be more considered: the industry's enhancement or each employee's workplace.

European Union (EU) establishes the first Artificial Intelligence regulation

The 'EU AI Act', the first comprehensive set of regulations for the use of AI, was established by the European Parliament. Initially, the European Commission proposed the first meaningful AI framework. The Parliament then approved it on June 14th 2023. The main theme of this regulation is to classify AI and assign the strength of limitation based on three risk levels: high, unacceptable, and generative.

High risk AI is used in products under the EU's product safety legislation or in specific areas such as education. AI at this level is totally banned without exception. The unacceptable risk includes systems that potentially cause a threat to people, and can occasionally be permitted to use. In particular, AI shows cognitive behavioral manipulation targeting vulnerable groups, social scoring based on personal traits, and real-time biometric identification. Lastly, generative AI, such as Chat-gpt, only needs to meet transparency requirements, preventing them from generating illegal content in particular.

On the other hand, European companies from Renault to Heineken stand against this regulation, stating that the regulation on the smart robots would jeopardize Europe's competitiveness.

A Letter on Future of Life Institute

On March 22 this year, an open letter titled: “Pause Giant AI experiments” was published on the website of Future of Life Institute. As a non-profit organization, they mainly work on ways to be benefited by technology rather than get damaged.

The letter also contains similar contents, to pause developing any artificial intelligence more powerful than GPT-4 for six months. The letter explains that AI carries significant risks such as automation and job replacement, a situation which most people aren’t prepared for. As a matter of fact, all AI labs and experts should establish protocols and standards for AI development in six months. Also, those people should collaborate with policy makers to develop robust AI governance systems for an idealistic future with AI.

This sensational letter became famous because influential people, Elon Musk, Yval Noah Harari, for example, had signed the letter. This indicates that many experts, who understand AI more than anybody else, are alarmed about the aftermath of AI utilization if the development continues.

Possible solutions

Educating existing workers

Because the knowledge of computer programming is highly complex, people should get sufficient education. Instead of children who have enough time to study AI deeply, workers that are already in certain industries should be educated first. Since the level of education varies between countries, solutions can be different.

For developed countries, governments can establish open-organizations to educate people who lack resources to get an education. By giving free education on AI for those people, the gap between the rich and the poor within the country will decrease. Most citizens in developed countries receive common education from elementary to secondary, and they contain AI education as well. As a result, the government needs to use a small amount of money, which is cost-effective. In developing countries, it is more arduous to educate people, mostly due to the absence of professional educators. To solve this problem, governments

can provide scholarships for limited students to send them to countries that have highly developed AI . Then, they can encourage the students as educators to educate other students again. In addition, private institutions

Establishing policies on Artificial Intelligence

Even though some regulations are established, they hardly contain information about using unlicensed sources for machine learning. In reality, many AI-drawing programmes reveal the number of paintings that people draw without permission. Therefore, the regulation should include which source programmers should use and how the trespasser will be punished. This regulation can be established globally through an institution. Consequently, this policy will seek a balance between developing creative AI and maintaining artists' job opportunities.

Major parties involved

ILO (International Labour Organization)

The International Labour Organization was established in 1919, and became a specialized agency of the newly formed United Nations in 1946. ILO actively encourages people to establish policies and programmes for workers. Eventually, this organization aims to support employers to have equal voices with governments. With the problem of job replacement for AI, ILO conducted different studies.

United States of America

Since the term 'AI' was first coined at Dartmouth College of the United States, the history of AI and America is long. Until today, the United States remains one of the most developed countries on AI . Highly influential firms such as OpenAI and Google are American. Additionally, the United States provides high quality education for students. There are the world-best educational institutions, Massachusetts Institute of Technology(MIT), for example. The AI education system applies to teenagers as well. On the other hand, the advancements caused workers to be unemployed.

Republic of India

Even though India is classified as a developing country, they lead in the AI industry. From people who are students, Indians study to get into the IIT (Indian Institute of Technology), the best university in the country. These universities of technology generated numerous expertise related to Artificial Intelligence. Also, Indians in other industries also utilize AI adequately, which enhances productivity. In a survey conducted on over 2,000 desk workers, 75% of them were applying AI to their work. However, since agriculture employs 59% of the workforce in the country, the replacement is likely to widen the polarization between the rich and the poor in India.

Kingdom of Sweden

In 2019, AI Sweden was established, and mainly funded by the Swedish government. In this organization, they establish various strategic initiatives for decentralized AI, application of AI in natural language understanding, and more. Additionally, they are supporting the best AI start-ups, and contributing to the application of AI in Sweden.

Republic of Singapore

In the Government AI Readiness 2021 Index conducted by the Oxford Insights, Singapore ranked second, behind the United States. Singapore's scores stand out in indicators measuring Government Promotion of investment in emerging technologies. In other words, the government of Singapore is putting huge emphasis on developing AI. In fact, the National AI office is under the Prime Minister's Office, the core of the government. Singapore is also one of the countries that conducts AI education for students, and actively applying AI in schools. These will further advance Singapore much more.

Federal Republic of Germany

In 2018, the German Federal Government launched its AI strategy, and in 2022, it adopted an Updated AI strategy, which influences German society until today. Initially, German strategy demonstrates a comprehensive approach to fostering utilization of AI while ensuring a high quality of education and skills training. They would invest in the AI campus to expand learning platforms, and encourage initiatives such as Helmholtz Information & Data Science Academy to upskill and reskill employees. The strategy identifies current standards and further regulation needs in the future. For instance, it is working on

sector-specific regulatory regimes for AI, as well as establishing legislations for usage of non-personal data and copyright.

Japan

To be competitive, Japan developed its own model compatible with Japanese such as NTT (Nippon Telegraph and Telephone Public Corporation), Softbank, and others. These AI models are expected to enhance productivity in fields related to writing emails and documents.

On the other hand, Japan is also one of the countries that suffer the most from automation. In a study conducted by Mckinsey Global Institute, Japan ranked as the country where the potential for automation is highest in asia. Japan has an overall potential of 55% of hours worked, compared with 46% in America. The difference is made due to Japan's manufacturing sector at 71%, which is an especially high automation potential. Japanese manufacturing has a larger concentration of working hours in production jobs and office and administrative jobs. Both of these jobs have relatively high potential for automation to robots and AI .

The Countries Where the Potential for Automation Is Highest

Percentage of work activities that could be automated by adapting current technology.

AFRICA		ASIA/AUSTRALIA		EUROPE		NORTH AMERICA		SOUTH AMERICA	
Kenya	51.9%	Japan	55.7	Czech Rep.	52.2	Mexico	51.8	Peru	53.2
Morocco	50.5	Thailand	54.6	Turkey	50.4	Costa Rica	51.7	Colombia	53.0
Egypt	48.7	Qatar	52.0	Italy	50.3	Barbados	48.7	Brazil	50.1
Nigeria	45.7	South Korea	51.9	Poland	49.5	Canada	47.0	Chile	48.9
South Africa	41.0	Indonesia	51.8	Spain	48.5	U.S.	45.8	Argentina	48.2
		India	51.8	Germany	47.9				
		Malaysia	51.4	Greece	47.8				
		China	51.2	Austria	47.4				
		Russia	50.3	Switzerland	46.7				
		Philippines	47.9	Sweden	46.0				
		U.A.E.	47.3	Netherlands	45.4				
		Oman	46.8	France	43.1				
		Bahrain	46.1	U.K.	42.8				
		Saudi Arabia	46.0	Norway	42.4				
		Australia	44.9						
		Singapore	44.2						
		Kuwait	41.1						

SOURCE MCKINSEY GLOBAL INSTITUTE

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MCKINSEY GLOBAL INSTITUTE, countries with the highest potential for automation (2017)

Timeline Of Events

Following the format shown below, you must describe the events with short sentences.

Date

Description of Event

18th century	the first industrial revolution, the Luddite movement
1919	International Labour Organization (ILO) founded
2021/04/28	Nobel AI released
2022/12/30	Chat gpt released
2023/03/22	‘Pause Giant AI experiments’ released
2023/07/14	EU AI act published and American Federation of Television and Radio Artists (SAG-AFTRA) joined the strike with Writers Guild of America (WSG)

UN Involvement, Resolutions, Treaties and Events

- Creating full and productive employment and decent work for all as a way of overcoming inequalities to accelerate the recovery from the COVID-19 pandemic and the full implementation of the 2030 Agenda for Sustainable Development : resolution / adopted by the Economic and Social Council (E/RES/2023/14)
- Developing an Artificial Intelligence Strategy: National Guide (E/ESCWA/CL4.SIT/2020/TP.8)

Employment after the pandemic

The resolution published on 15 June 2022 by the Economic and Social Council promotes a better environment for workers. For instance, the resolution encourages people to establish policies on employer's rights, to support women to gain jobs, and to foster common well-being after Covid-19. The two most crucial clauses are:

4. Recognizes the need for strengthening international cooperation to provide necessary financial assistance, technical support and capacity building to developing countries for attaining Sustainable Development Goals related to social development, by creating full and productive employment and decent work for all;

16. Encourages governments to incorporate the provision of digital competencies, including but not limited to entrepreneurship and complementary soft skills, in formal education curricula and lifelong learning initiatives to address the implications of fundamental changes in the digital economy and industry 4.0 for labor markets;

National Guide in developing Artificial Intelligence

In 2020, the Economic and Social Commission for Western Asia (ESCWA) established the national guide for artificial intelligence development. The report was written upon the concerns about the harms that AI uses in daily life, and how to overcome these challenges. These are the key messages of the report:

3. AI is the amalgamation of several fields and resources, and the result of a virtual ecosystem sustained by Government, the private sector and non-governmental organizations. AI should not be seen independently from the robotic process automation of repetitive tasks, where human involvement can be completely eliminated;

6. AI will eliminate jobs but not work. Countries must therefore update school curriculums to include coding skills and skills that cannot be replicated by machines, such as critical thinking, cooperation and team-building, and social and emotional skills;

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