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ROLE OF ARTIFICIAL INTELLIGENCE IN THE CREATION OF EMPLOYMENT OPPORTUNITIES

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ABSTRACT

It is often assumed that artificial intelligence would eliminate jobs and raise unemployment. The same was assumed when the Internet was in its early stages, but the internet opened far more new doors and provided individuals with new work prospects that no one could have imagined at the time. With the progress of Artificial Intelligence, we can say the same thing is possible. This paper is an attempt to identify all the credible evidence to support the assertions that AI will generate advantageous employment prospects and not just increase the degree of unemployment in countries. For this purpose, secondary data sources are utilized. The study revealed that there will be increase in job opportunities for AI development and maintenance workforce, technicians skilled in AI powered healthcare, robotics professionals and engineers. Advancement in AI will also impact industries like gaming, transportation, sales and marketing. AI will also provide opportunities to humans to be more creative and focus on innovation and problem solving. New industry would emerge with millions of employment opportunities such as Big data, the Internet of Things, Cloud Computing, Cybersecurity, Data Science, Data analysis, Software development and Specialization in social media. It can be concluded that a hybrid team of man plus artificial intelligence is required in the present scenario to get the best results.

Keywords: *Artificial Intelligence, Employment Opportunities, Job Creation.*

Introduction

Artificial intelligence (AI) is a combination of technologies that allows computers to perform a wide range of advanced operations, including observing, understanding, and translating spoken and written language, analyzing data, making suggestions, and so on. AI is the foundation of current innovations, creating value for consumers and organizations. Artificial intelligence is a branch of research concerned with creating computers and machines capable of reasoning, learning, and acting in ways that would ordinarily need human intelligence or that use data on a scale that people cannot examine. AI is considered as AI is a vast discipline that includes computer science, data analytics and statistics, hardware and software engineering, languages, philosophy and psychology.

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AI has the ability to automate workflows and procedures as well as work independently and autonomously from a human workforce. By automation and algorithms that follow the same processes every time, AI may remove manual errors in data processing, analytics, manufacturing assembly, and other job. AI can be used to automate repetitive operations, allowing human resources to focus on higher-impact issues. AI can also be used to automate operations like as document verification, phone call transcription, and answering simple client questions etc. Robots are frequently employed to replace humans for repetitive tasks or dangerous tasks. AI can analyze more information faster than humans, detecting patterns and uncovering links in data that humans may overlook. AI is not constrained by the time of day, they don't get tired and therefore don't even need breaks. They don't get frustrated and have no emotions which can impact their productivity. While running in the cloud, AI and machine learning can be "always on," working on their assigned duties indefinitely. The ability to quickly evaluate large amounts of data can lead to faster breakthroughs in research. It is very clear that AI is fast, effective and resolves many problems and hurdles faced by human workforce.

Artificial intelligence mines data to foresee specific outcomes with great precision. For the purpose of business intelligence, AI look for patterns and linkages in data. AI scans networks for cyber assaults and dangers on its own. Artificial intelligence algorithms are made in a way to make conclusions based on data that is often based on real time. They combine information from many sources using sensors, digital data, or remote inputs, instantaneously analyze the material, and act on the insights gained from that data. As such, they are purposefully built by people and draw conclusions based on their immediate analysis. Advances in computer storage limits and speeds have recently opened up new options for AI study and deployment, such as assisting in scientific research and creating new routes in medical for patient diagnosis, robotic surgery, and drug discovery. AI has several advantages but there are several drawbacks which are also talked about such as high cost of implementation, creating unemployment, being emotionless, risk of overtaking humanity, making humans lazy, big tech domination, lack of regulation and security related problems and so on.

Nowadays, we tend to think of technology as having superpowers that can either solve every problem we have now or will encounter in the future or, on the other hand, as having some of the worst problems we could have imagined. Notwithstanding the fact that such predictions are far too early, and computers are still a long way from becoming the primary threat to our future well-being, it is crucial to emphasize that artificial intelligence is not without negatives. The most talked about risk and challenge is increasing unemployment due artificial intelligence entering every business and profession in some or other way. According to the Gartner, Inc. 2019 CIO Survey, the number of organizations employing artificial intelligence (AI) has increased 270 percent in the last four years and tripled in the last year (Gartner Survey Shows 37 Percent of Organizations Have Implemented #AI, 2019b). Businesses have started incorporating Artificial Intelligence in their working. AI will handle 95% of client interactions by 2025, according to Servion Global Solutions (2021). AI will slowly replace men which will result in degrading many people's level of living by producing mass unemployment as robots replace people. AI robots, software and hardware are becoming comparatively less expensive and do not get tired or unproductive, they do not require leaves, sick leaves, lunch breaks, bathroom breaks, health insurance, pay raises, promotions, and performance reviews, this is a dream come true for any employer. As a result, it is predicted that AI would result in massive unemployment for economies worldwide.

However, this is simply one point of view; another argues that robots and artificial intelligence will offer more job opportunities than they will eliminate. The supporters of the argument that AI will create more job opportunities argue that the rise of Artificial Intelligence is analogous to the advancement of the internet. Many were afraid of the Internet because they believed it would eliminate many occupations, but instead it offered up new avenues for people to explore and earn. With the advancement of internet people got opportunity to expand their business through online mode, people started making vlogs and writing blogs to make money, small businesses started selling through social media platforms, cloud kitchen emerged, online education industry evolved, online selling giants like Amazon, Flipkart, Alibaba came into existence. People began generating vlogs and writing blogs to make money as the internet advanced, small businesses began selling through social media platforms, cloud kitchen formed, the online education industry emerged and expanded, online selling giants such as Amazon, Flipkart, and Alibaba came into existence. As a result, proponents of AI argue that it is too early to conclude that advancement in AI would simply result in job losses; rather, it is possible that it may result in new career prospects.

In this paper, the authors will attempt to identify, comprehend and describe all of the aspects that support the assertions that AI will generate advantageous employment prospects and not just increase the degree of unemployment in countries.

Review of Literature

Jaiswal, A., Arun, C. J., & Varma, A. (2021). Proponents of artificial intelligence anticipate a scenario in which intelligent machines do regular human tasks, freeing individuals up to pursue creative endeavours. While broad concern exists. Despite job losses, organizational think tanks advocate for the synergistic convergence of human-machine competencies. The report contends that the introduction and acceptance of AI needs employee upskilling through utilizing dynamic skill, neo-human capital, and AI job replacement theories. In this study, the researchers interviewed 20 experienced professionals from global firms in India's information technology sector to determine the fundamental skills deemed critical for employee upskilling. Five critical abilities for employee upskilling were revealed using Gioia's qualitative research technique: data analysis, digital, complex cognition, decision making, and continuous learning.

Damioli, G., Van Roy, V., & Vertesy, D. (2021). The impact of artificial intelligence on labor productivity. Eurasian Business Review Recent research suggests that artificial intelligence and robotics patenting activities have increased in recent years, implying that solutions based on AI technology may have begun to have an effect on the economy. The authors investigated this question using a global sample of 5257 companies that filed at least one AI-related patent between 2000 and 2016. After adjusting for other patenting activities, this study demonstrates that AI patent applications have an extra-positive influence on company labour productivity. The effect is concentrated in SMEs and service industries, implying that the ability to swiftly modify and implement AI-based applications in the manufacturing process is a key determinant of the impact of AI observed thus far.

Bonsay, J., Cruz, A. P., Firozi, H. C., & Camaro, A. P. J. C. (2021). This study investigates the relationship between GDP and high-technology exports, GDP per employed person, and unemployment rates in various countries (China, India, Japan, and Singapore). According to recent concerns about technological unemployment, artificial intelligence affects the labour market, reducing employment over time. Utilizing multiple regression analysis, this study demonstrated that Japan has a higher utilization of AI and labour productivity, since all independent variables had a significant impact on GDP. Labor productivity is positively connected to GDP in all countries. As technological unemployment occurred, China and India demonstrated evidence of poor AI utilization. China's unemployment rate is small in relation to GDP, whereas India's unemployment rate is positively related to GDP, resulting in jobless growth. The insignificance of high-tech exports to GDP in Singapore is attributed to a recent paucity of research and development investments. The findings suggest that AI accelerates growth through proper trade liberalization, as practiced by Japan, because it allows the economy to be open and flexible to various free trade agreements, which facilitates technological progress and enables the opening of new markets for growth and expansion, particularly of artificial intelligence, which attracts and encourages foreign direct investments that cater to technology transfer, the creation of new jobs, and economic growth.

Koperniak, S. (2020, December 17). According to this analysis, recent predictions about AI causing mass unemployment are unlikely to be realized. Instead, it is expected that, like with earlier labor-saving technologies, AI will enable new industries to arise, creating more new employment than it will eliminate. Furthermore, even while AI is quickly advancing, it is believed that it will take many decades away from the day when computers will have complete, human-level artificial intelligence. For the foreseeable future, the most exciting applications of AI will not involve computers replacing people, but rather people and computers collaborating as "super-minds" to do cognitive and physical activities that could not previously be performed.

Ernst, E., Merola, R., & Samaan, D. (2019). The present wave of technological change based on advances in AI has produced widespread concern of job loss and increased inequality. This study examines the reasons for these anxieties, emphasizing the unique character of AI and contrasting prior waves of automation and robotization with the current breakthroughs made possible by widespread AI use. It contends that enormous prospects for increased productivity, including for developing countries, can result from the vastly decreased capital costs demonstrated by various applications and the potential for productivity increases, particularly among the poorly

skilled. Simultaneously, issues such as additional rises in inequality must be addressed if the benefits of AI-based technical growth are to be broadly shared. Skills policies are vital but insufficient for this. Furthermore, new forms of digital economy regulation are required to prevent further increases in market concentration, ensure proper data protection and privacy, and help share the benefits of productivity growth through a combination of profit sharing, capital taxation, and reduced working time. The study advocates for a modestly optimistic stance on the opportunities and hazards posed by AI, given that governments and social partners consider the unique characteristics of these new technologies.

Objective

- The objective of this study is to understand new arising opportunities to employability due to advancement and adoption of artificial intelligence in businesses and professions.

Research Methodology

This paper is descriptive in nature. For the purpose of the study secondary data sources are used. Various peer reviewed research papers, web-articles, news reports, expert onions are studied thoroughly related to the topic “Artificial intelligence creating employment opportunities due to advancement and adoption of it into various professions and businesses”. The available data is studied and various grounds are explained why artificial intelligence will facilitate employment in various countries.

Limitations

- This study is based on secondary data, which is one of the limitations of the study.
- Another limitation of this study would be time constraint as it is completed in limited time frame.

Results and Discussions

- **Opportunities of Employability Due to Artificial Intelligence**

All of the considerations listed below support the notion that AI will provide more job opportunities than it will eliminate.

- **Increase in Job Opportunities of AI Development and Maintenance Workforce**

Artificial intelligence is assisting businesses in the seamless operation of their operations and teams, including areas such as customer service, automation, and so on. When AI is implemented in every field and industry, the demand for an AI development according to need and purpose as well as maintenance staff will skyrocket. Businesses would need AI engineers and developers to assure the system's functionality and to repair it when it falls down. As a result, new employment opportunities will develop for people to choose and thrive in that industry.

- **Need of Man-Machine Hybrid Team**

Hybrid workplaces are the way of the future. Better business outcomes can be achieved by combining humans and AI. Precision, speed, scalability, computing, and other quantitative characteristics are among the advantages of artificial intelligence. Humans have abilities such as creativity, leadership, teamwork, emotional intelligence, empathy, judgement, and so on. Because AI lacks emotions and ethics, human interaction will allow a complete team to work efficiently with ethical ground. The hybrid paradigm has been embraced by Google, Microsoft, and many more firms.

- **Increase in Demand of Technicians Skilled in AI Powered Healthcare**

AI would benefit the healthcare industry significantly. It is anticipated that there would be a significant increase in job possibilities in the health industry. AI can be utilized in drug screening, drug development, psychiatry, dermatology, telemedicine, and medication interactions. Technicians with experience in AI-powered healthcare would also be required.

- **Global Companies and MNCs will Increase Employment Worldwide**

Companies that embrace automation and technology can increase their earnings, market share, employee wages, productivity, efficiency, and technological tools. With success, they can create more money. Companies with such financial means can expand their reach, perhaps leading to global enterprises and MNCs. This will enhance the global level of employment even more.

- **Increase in Demand of Robotics Professionals and Engineers**

AI-powered robots are increasing the curiosity of enterprises day by day all around the world. AI provides computer vision to robots, allowing them to navigate, sense, and calculate their responses accordingly. Machine learning, a component of computer programming and AI, teaches robots how to execute tasks. In today's world, we have stationary robots, nonhumanoid robots, and fully automated aerial drones. All of this necessitates the use of robotics professionals and engineers.

- **Increasing Craze of AI in Gaming Industry**

AI is extremely important to gaming firms. AI is being used extensively in this field. Artificial intelligence is utilized in game design, game operations, and game maintenance. AI-powered games have helped many gaming businesses raise millions of dollars in funding. Developer with creativity and expertise in this area and required skill set are highly be demanded by these companies.

- **Role of AI in Automated Transportation**

AI is already playing a significant role in the automated transportation sector. Corporations such as Uber and Google are pouring money into developing self-driving and autonomous vehicles. This increases the demand for AI and machine learning engineers. According to P &S Market Research, the global market for artificial intelligence in transportation is predicted to reach 3.5 billion dollars by 2030. Tesla from the very beginning is working in the direction of self-driving vehicles. With so much demand for advancement and improvement in this field the requirement and talented workers are required by top companies of the world.

- **Role of AI in Marketing and Sales**

AI can aid in marketing and sales by assisting in the development of large-scale sales forces. AI can be used to boost sales with relevant customer experience and make data actionable. AI analytics enable sales and marketing teams to tailor and scale messages. AI will never entirely replace the marketing team. Humans can analyze several other things that AI cannot. AI will not understand human emotions associated to the purchasing of any product or service. As a result, with the assistance of AI, the marketing team can make smarter selections. Therefore, marketing experts with ability to understand and analyze AI's algorithms and suggestions are demanded by companies.

- **Opportunity for Creativity**

Work that is monotonous and repetitive in nature is easily done by AI. This give opportunity to human beings to have more time for creative work. They can save their time and energy from doing tedious work. AI can easily handle such work and provide ease to humans. With free mind and energy humans can come up with better ideas, plans, strategies and their overall quality of work will improve. AI-powered devices will handle routine chores, allowing workers to focus on more creative tasks.

- **Removes Work Related Boredom**

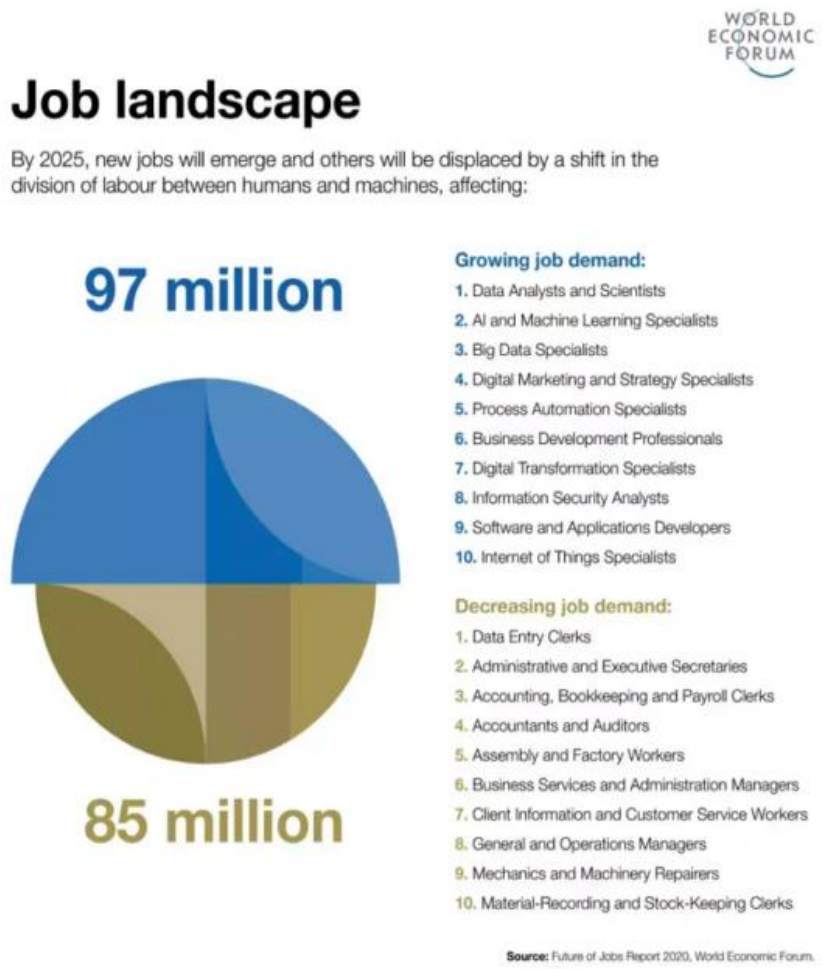
AI can assist in the elimination of work-related boredom and allow humans to pursue jobs that provide a greater feeling of meaning and well-being. AI is expected to produce 97 million employment as it becomes more extensively deployed, and it is expected to have a $15.7 trillion beneficial influence on the economy by 2030. With the introduction of AI, businesses will be able to establish more employment that focus around creativity rather than routine chores.

- **Increase in Innovation and Problem Solving**

Companies are utilizing artificial intelligence to increase staff productivity. One of the advantages of artificial intelligence for business is that it performs monotonous activities across a company, allowing individuals to focus on innovative solutions, complicated problem solving, and effective work. Employees will think more clearly and come up with fresh ideas as they have more spare time from repetitive work. Careers that involve problem solving and critical thinking will become more popular.

- **New Industry Needs**

Several areas will continue to rely on humans for quite some time. Indeed, the World Economic Forum predicts that artificial intelligence will produce 58 million new employment by 2022 (Chowdhry, 2018). Some of the new industry would be related to Big data, the Internet of Things, Cloud Computing, Cybersecurity, Data Science, Data analysis, Software development and Specialization in social media.



Source: Future of Jobs Report 2020, World Economic Forum

On the plus side, AI is expected to generate a large demand for 97 million knowledge workers in the roles of analysts, specialists, professionals, and developers. As a result, while AI may reduce demand for some vocations, it will increase demand for others, and new job opportunities will develop as AI usage grows. Most crucially, the future of work will leverage the talents of both digital and human labour. Machines driven by AI are quick, accurate, and consistently reasonable. Humans are intuitive, empathetic, and capable of abstract, critical thinking. AI and humans will work together to create a fully augmented workforce.

Conclusion

According to this analysis, current warnings about AI increasing unemployment is unlikely to be realized. Instead, like with previous labour-saving technologies, AI is expected to encourage the emergence of new industries, producing more employment opportunities than it eliminates. It is also providing men with the opportunity to be innovative and creative by doing all the monotonous and repetitive work. Furthermore, while AI is rapidly progressing, it is estimated that it will be many decades before computers achieve complete, human-level artificial intelligence. For the foreseeable future, the most intriguing applications of AI will include people and computers working together to perform mental and physical labour that could not previously be accomplished. Machines powered by AI are quick, accurate, and consistently reasonable. Humans are intuitive, sensitive, and capable of abstract and critical thinking. Humans are emotional beings who work with ethics and principles. AI and humans will work together to create a fully augmented workforce. It's time to operate as a hybrid team to accomplish what couldn't be done before.

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