International Journal for Multidisciplinary Research (IJFMR)
E-ISSN: 2582-2160 ● Website: www.ijfmr.com ● Email: editor@ijfmr.com

Impact of Artificial Intelligence (A.I.) on Employment of Indian Workers

Dr. Keshav Mishra[1], Aparna Srivastava[2]

[1]Assistant Professor, Department of Management and Commerce, Institute of Management and Research Technology Imrt- Business School, Lucknow, India
[2]Assistant Professor, Modern Girls College of Professinal Studies, Lucknow, India

Abstract

Artificial Intelligence (AI) is a fast emerging technology that can boost worker productivity and efficiency and encourage innovation in a variety of industries. The impact on employability could indicate either a benefit or a drawback, though. In India, artificial intelligence is predicted to start a new industrial revolution that will cause a large number of job losses. Artificial Intelligence (AI) has the power to revolutionize the global labor market drastically, even as it also has the potential to automate existing jobs and worsen inequality and prejudice. This study examines the opportunities and challenges that artificial intelligence (AI) robots may pose to employment across a range of industries. The study looks at how AI will impact jobs by reading reputable blogs, trade journals, and academic research. The research report offers a comprehensive analysis that makes clear how AI affects jobs in India while taking into consideration how the country's economy is rapidly changing as a result of international concerns. India's IT industry has expanded at a remarkable rate, contributing to technologies that have improved people's lives in several ways. Due to its consistent commitment to skill development, economic change, and job creation, this industry is currently leading the way in the country. quest of advancement and change. This research examines how AI has an impact on employability in India and addresses several significant subjects. In the first place, it highlights the programs for upskilling and the demand for new job categories Other sectors that have developed as a consequence of the application of AI. It also examines how AI is transforming existing jobs. areas and emphasizes the need for retraining in light of AI-driven enterprises.

In order to improve productivity and efficiency, it also discusses the possibility of human and AI cooperation in the third section. It additionally looks at the AI's economical implications, including potential closures enhance economic growth and close the skills gap. Lastly, ethical concerns are covered in a segment of the conversation. Stressing the need for regulations, equity, and standards clear communication to protect workers' rights.

Keywords: Artificial Intelligence, Discretion, Reasonable, Data Privacy, Discriminatio National Association of Software and Service Companies, Employment, CRM (customer relationship management), and Transformation.

Introduction

Artificial intelligence (AI) is a fast-growing field that combines "artificial" and "intelligence" components. Identifying the exact "Intelligence" has been defined as an incredibly challenging undertaking over time. The Details Indian technology (IT) services industry, which is regarded as one of the leading worldwide sourcing locations, has a considerable cost advantage over the US market—about three to four times less than that of the an alluring proposal. Additionally, India provides source nations. access to a sizable number of highly qualified technical graduates at a noteworthy 60–70% reduction in cost. However, the increase in automation begs thequestion
of the sustainability of the conventional Indian paradigm for the IT sector. Empirical data currently available reveals the important AI's impact on Indian employment.The World Economic Forum released a detailed report that states that automation and artificial intelligence (AI) are expected to eliminate about 5.1 million jobs by 2025 in India. The sectors that are anticipated to The industries most impacted are manufacturing, retail, and conveyance. However, the report also observes that the AI applications could lead to the creation of 2.3 million jobs. new jobs in India, primarily in the high-tech the fields of industry, energy, and healthcare. Additionally, a thorough examination of the AI environmental studies in India were conducted by the National Association of Service and Software Providers (NASSCOM).
In India, the AI market is anticipated to grow at a robust 30% compound annual growth rate and reach a substantial valuation of $25 billion, per the report. prior to 2025. This extraordinary trajectory of growth is spurred by the growing application of AI in significant such as the financial, healthcare, and e-commerce industries. Additionally, the report emphasizes how AI could expand efficiencies in specific sectors, with an estimated 15- An efficient AI implementation might result in a 20% gain.
However, India still has to overcome barriers to enable AI to realize its full potential. One major barrier is the dearth of knowledgeable specialists in AI-based technology. As stated in an article released in According to Analytics India Magazine, there's a big scarcity of experts in AI in India—roughly 200,000—which emphasizes how crucial finance is projects aimed at upskilling and education. These such programs are necessary to create a skilled workforce capable of driving AI innovation and its seamless implementation.The picture of AI's impact on employment in India is nuanced. While AI may result in job losses in some sectors of the economy, it also creates new prospects for employment growth and economic expansion production. India needs to bridge the existing skills divide and making large financial commitments to develop a powerful AI ecosystem. Through this action, the nation will be able to capitalize on the revolutionary potential of AI and move forward into a promising future.
This study aims to investigate the potential effects of AI on job possibilities in India , as well as the associated opportunities and challenges that may arise. This research attempts to provide insights about

the changing Indian workforce by investigating the intricate implications of AI on work.

Review of Letrature

According to Capgemini's (2017) research, which was based on a comprehensive survey conducted in nine countries, including India, the country with the highest percentage of companies (58%) was India.polled individuals already using AI) is theworld pioneer in large-scale AI implementation,Italy and Australia (49%) came next. Deutschland (42%) and (44%).,US (32%), the UK (35%), and cent). The paper states that the primary factors that could drive India to leadershipconsist of the creation of numerous AI-focused research centers by organizations and the existence of a supportive regulatory environment thanks to government programs like "Digital India.

According to CIS (2018), in its study titled "AI and the Manufacturing and Services Industry in India," it has It has been calculated that "employment Opportunities will rise from 38 million to increasing to 46–48 million in the planned the manufacturing and services industry with the increase in artificial intelligence technologies.

According to Meit Y(2019), digital interventions, such as artificial intelligence (AI), would result in the redeployment of roughly 40–45 one million workers (by way of retraining and retraining), and generate over 20 million new jobs fresh employment opportunities in India. the principal industries .

The 2019 Microsoft and IDC report was based on a survey of 202 Indian workers and 200 business leaders. (affiliating with different verticals, such agricultural, manufacturing, and healthcare automobile, retail, services, and so forth), discovered that laborers and company executives in India hold favorable opinions on the effects of AI on the employment landscape of the future. Greater than half (64 sixty-three percent of corporate executives and of workers) think AI will either to do their current duties more effectively or to cut recurring daily duties. When the time arrives sixteen percent when it comes to adding or removing jobs business executives think artificial intelligence will generate additional employment, yet 18% believe that automation will supplant human labor. Interestingly enough, Employee optimism is higher, with only 4 % anticipated.

According to an ICRIER (2020) study, econometric estimation revealed a favorable and substantial relationship between businesses employing AI and Total TFP increase, or factor productivity. As the computed that a rise of one unit in The strength of AI will boost TFP growth by 0.05%. A unit increase was discovered. in AI intensity by businesses utilizing AI can reimbursement of USD 67.25 billion, or 2.5 percent GDP contribution to the Indian economy in the in the near future. Concerning the employment situation, the study claimed that "the current AI applications do not possess the capacity to substitute all responsibilities performed by collective work, but only those regular and non-cognitive tasks.

The "impact on" of "Responsible AI" (NITI, 2022) has been taken into account by NITI Aayog. among the "societal" factors are "jobs." even as you recognize the general Principles an AI that is Responsible. Furthermore, it acknowledged saying "AI's explosive growth has resulted in the automation of several menial tasks. It further said that this field needs more thorough investigation and, as a result The actions that were suggested to be conducted as soon as possible.

Shen and Zhang, 2024) focusing only on single intrinsic mechanism problems, and failing to satisfy the complex causality and antecedent variable asymmetry that exists in actual entrepreneurial practice.

Problem of the Study

Recognizing AI as employer and employee in India has also some demerits. They include loss of work for workers and there will be problem of discrimination in appointment of employee by AI and the data privacy of the employees are affected when the employer itself an AI. So, these problems should be considered before recognizing AI as an employer or employee in Indian Society.

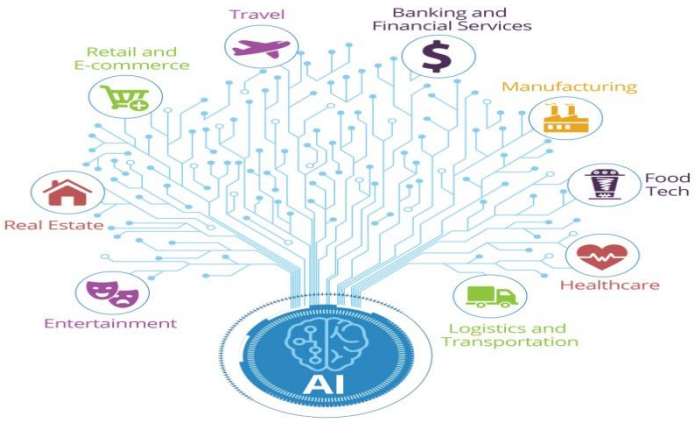
Objective of Research

- To enhance knowledge of artificial intelligence's (AI) complexity.
- To investigate in detail the substantial impact of AI on employment prospects across several Indian industries.
- To recognize and understand the challenges that artificial intelligence (AI) poses for occupations across a range of industries that need varying degrees of skill—from low to high.
- To examine how India's usage of AI is creating a wide range of job opportunities

Research Methodology

A combined method is used for a comprehensive analysis of the impact of artificial intelligence on employment. This approach combines quantitative analysis of secondary data and qualitative research through literature review and case studies.The systematic collection and analysis of secondary data is part of the research methodology used in this study. With respect to the research question, the researcher examined several published articles, reports, and along with articles and use defferent websites. Following a comprehensive screening process with 80 articles, 45 of which are directly in line with the study's objectives, which were comprised.

The impact of Artificial intellegence on employability in a variety of industries



Industriale sectors: Data and AI might add $ 450 billion to $500 billion to India's GDP by 2025. It is projected that the retail and consumer goods, banking and finance, and agriculture sectors will contribute roughly 45% of the total value. Due to its ability to improve yield and production planning, AI has the potential to greatly boost farmers' profitability in agriculture. Similar to how the banking and financial services sector may utilize AI for credit underwriting and financial risk modeling, the retail and consumer goods sectors can benefit from targeted marketing and focused campaigns.

Agricultural sectors: Artificial intellegence has the ability to drastically change Indian agriculture by addressing problems including farmers' lack of infrastructure, resources, and knowledge.Weather forecasting, robotic agriculture, precision farming, drone-assisted crop health assessment, robotic agriculture, identification of pests and weeds, soil monitoring, and agricultural robots are just a few of the uses of AI in agriculture. Artificial Intelligence is expected to alleviate stress in the agriculture sector and promote data-driven farming, which will increase output. There are over 72 AI in agriculture companies in India, and many different organizations and startups are using AI in agriculture. Increased use of the internet and government support and efforts are driving the growth of technology-assisted agriculture. It is anticipated that the Indian agritech industry will be worth between US$30 and US$35 billion by 2025, attracting significant investments from private equity and venture capital firms. With the government's support, growth is expected to be stimulated throughout India's whole agricultural value chain.

Health care sectors: Artificial intelligence is transforming India's healthcare sector, and it is predicted to grow significantly in the next years. Predictive analytics, remote monitoring, customized treatment, diagnostics, and enhanced patient experiences are a few uses for artificial intelligence. It is tackling the shortage of radiologists by enabling speedier and more accurate diagnoses. Artificial intelligence (AI) systems that generate personalized treatment plans from patient data are producing better outcomes. Owing to devices for remote monitoring, medical practitioners may now keep an eye on patients from a distance, especially those with chronic conditions. AI-powered chatbots enhance patient experiences by providing mental health services and prompt assistance. Predictive analytics identifies patients who are at high risk, enabling early intervention. However, concerns including data protection, legal frameworks, skilled labor, education, and building confidence must be addressed. By creating a cooperative and inventive atmosphere that encourages.

IT Sectors: India's IT sector is keeping up with quickly evolving tech fields like cloud, artificial intelligence, and cyber and data security thanks to the presence of top multinational corporations like TCS, Infosys, Wipro, and Tech Mahindra there. These companies invest in research and development (R&D) to address customer needs, with a focus on creating cutting-edge technologies like artificial intelligence (AI) and machine learning (ML). The industry is aware of how critical it is to modernize technology stacks, leverage cloud infrastructure, and automate software delivery in order to accelerate development. It is projected that the Indian IT landscape of the future would be AI-driven and reliant on hybrid cloud solutions, with an emphasis on data protection and privacy. Companies like IBM have already made key acquisitions in areas like hybrid cloud infrastructure and AI automation. How big the industry gets will depend on its ability to assess real-time data sets, make decisions based on data, and easily manage apps and data across platforms.

Banking and Insurrance: Artificial intellegence is quickly enhancing efficiency and customer service in the Indian banking industry. Startups are using AI for chatbots and data analysis. However, India lags behind global leaders in the AI business. AI revolutionizes asset management, hiring, and customer service in banking. The Reserve Bank of India promotes cutting-edge technology like blockchain in an effort to improve customer satisfaction. India's status as a hub for innovation is bolstered by both its financial sector and its technology landscape. Although additional financing is needed, AI offers a lot of potential in the banking industry.

Manufacturing sectors: Artificial intelligence is automating repetitive tasks in the manufacturing sector, which is displacing workers in several industries. However, technology also creates opportunities for skilled workers to manage and run AI- and robotics-powered systems.

Retail sectors: AI is influencing retail through focused marketing, inventory management, and customer service. Customized recommendations and process automation, including inventory control and replenishment, can be facilitated by it. However, it could also lead to the loss of jobs in traditional retail settings.

Education sector: Artificial intelligence is transforming the education sector through personalized learning experiences, automated grading, and intelligent tutoring systems. It may affect teaching roles by automating some administrative tasks, but it also gives educators new opportunities to apply AI technologies.

The possible effects of artificial intelligence on employment

Technological advances have historically increased employment generally rather than decreasing it. Still, economists concur that incorporating AI into our society is a novel idea. The extent to which the development of robots and artificial intelligence will contribute to long-term unemployment is a matter of debate among economists. Nonetheless, most economists agree that if productivity gains are distributed equitably, using AI might have a positive net effect. The potential risks that artificial intelligence might present vary greatly. For instance, an OECD analysis identifies only 9% of American

jobs as "high risk," despite Michael Osborne and Carl Benedikt Frey estimating that over 47% of American employment is "high risk" of automation. However, it is crucial to remember that forecasting future employment levels lacks a solid empirical foundation and may incorrectly attribute all of the unemployment to technological advancements rather than accounting for more extensive social programs and layoffs. AI has the potential to replace a significant portion of middle-class jobs, unlike previous waves of automation. It makes sense for The Economist to be concerned that artificial intelligence (AI) could have the same impact on white-collar jobs that steam power did on blue-collar jobs during the Industrial Revolution. However, occupations associated to providing care, such as personal healthcare and clergy, are predicted to become more in demand; they include paralegals and fast-food cooks.

This study uses a sophisticated technique that incorporates data from multiple sources to ensure a thorough evaluation. Among these resources are reputable surveys, industry reports, and publications from university research. Using a variety of viewpoints and data, one may gain a thorough understanding of how AI is affecting employment in India. The methodology employed incorporates both qualitative and quantitative analysis methodologies, enabling a comprehensive examination of the subject.

The following are Findings how artificial intelligence (AI) affects human life:

- According to 74% of respondents, artificial intelligence (AI) would help people overcome difficult problems and live better lives.
- Of the participants, 48% believe that AI would be used by the government to improve health, education, and the environment worldwide.
- Sixty-three percent of responders think AI will boost productivity and assist the workforce.
- Sixty percent of participants think AI will help with tax preparation and financial advice.
- AI will assist in resolving complicated health issues in contemporary communities, according to 62% of participants in India and 67% worldwide.
- 76% of participants in India and 70% of participants worldwide think AI is crucial to maintaining privacy and cybersecurity.
- 48% of participants believe AI will have a very high impact on economic growth.
- Regarding job automation, 52% of participants in India and 72% worldwide think AI could assist treat ailments like cancer.
- The majority of participants think that job automation is probably going to happen in the tasks.
- Within the next five years, the manufacturing sector (48%) and the banking sector (38%) are predicted to have the highest likelihood of total automation.

The impact of artificial intelligence (AI) on employment in India varies according on the industry. Artificial Intelligence (AI) can automate certain tasks and professions, but it can also provide new opportunities and increase productivity in many industries. Refereed research will support the study that follows, which will look at how AI is affecting employment in significant Indian sectors.

Conclusion:

India is rapidly progressing to meet the needs of the shifting global landscape as well as its growing economy. Experts believe that the development of AI will trigger the fourth Industrial Revolution, which will change both the manufacturing and service sectors. The AI revolution is putting a lot of professions

in different industries at danger. Cities are evolving into smart hubs with modern amenities, but this shift also signals the end of some employment. It's important to keep in mind that automation won't completely replace all jobs, as other experts have noted. Some jobs may be eliminated by intelligent automation, but critical decision-making positions requiring a high level of skill will always require human intellect. This change is expected to strengthen India's infrastructure and encourage further economic growth. But in the next five to ten years, it's expected that developments brought about by AI will lead to the disappearance of some jobs within specific industries.

Reference:

1. Crawford, J., Cowling, M., & Allen, K. (2023). Leadership is needed for ethical ChatGPT: Character, assessment, and learning using artificial intelligence (AI). *Journal of University Teaching & Learning Practice*, *20*(3). https://doi.org/10.53761/1.20.3.02
2. Gupta, V., Chatterjee, S. (2023). *India's technology-led development: Managing transitions to a digital future*. World Scientific.
3. Javeed, N. I. (2023). The impact of industry 4.0 on employability and the skills required in India. *Global Economics Science*, 1–10. https://doi.org/10.37256/ges.43202315933.
4. Picatoste, & Ruesga-Benito, S. M. (2018). A new educational pattern in response to new technologies and sustainable development. Enlightening ICT skills for youth employability in the European Union. *Telematics and Informatics*, *35*(4), 1031–1038. https://doi.org/10.1016/j.tele.2017.09.014
5. Ra, S., Shrestha, U., Khatiwada, S., Yoon, S. W., & Kwon, K. (2019). The rise of technology and impact on skills. *˜the oeInternational Journal of Training Research*, *17*(sup1), 26–40. https://doi.org/10.1080/14480220.2019.1629727
6. Damiani, E., & Mathkour, H. (2018). Policy making for smart cities: innovation and social inclusive economic growth for sustainability. *Journal of Science and Technology Policy Management/Journal of Science & Technology Policy Management*, *9*(2), 126–133. https://doi.org/10.1108/jstpm-07-2018-079 .
7. Yang Shen, Xiuwu Zhang, The Impact of Artificial intelligence on employment: the role of virtual agglomeration, Humanities & Social Sciences Communications (Mar.29,2024,10.03pm),https://www.nature.com/articles/s41599-024-02647-As%20an%20essential%20force%20in,increasing%20the%20value%20of%20work.
8. Microsoft and IDC. 2019. Future Ready Business: Assessing India's Growth Potential through AI.
9. MoCI. 2018. Report of the AI Task Force. Department for Promotion of Industry and Internal Trade. Ministry of Commerce and Industry. Government of India.
10. NASSCOM. 2020. Talent Demand and Supply Report: AI and Big Data Analytics. NITI. 2018. National Strategy for Artificial Intelligence. NITI Aayog. Government of India.
11. NITI. 2021. Responsible AI #AIforAll: Approach Document for India Part I: Principles for Responsible AI. NITI Aayog. Government of India. Petropoulos,
12. Georgios 2018. "The Impact of Artificial Intelligence on Employment". In M. Neufeind, J. O'Reilly, and F. Ranft (Eds.), Work in the Digital Age. London: Rowman & Littlefield International