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Impact of Artificial Intelligence on Job Automation and Employment

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ABSTRACT

Over the years, Artificial Intelligence (AI) has played an important role in Job Automation, changing the landscape of job opportunities in the workforce. In this study, we will explore the potential impact of AI-powered automation in terms of job displacement, job creation, and the future of the workforce. It examines AI's impact on greater efficiency, productivity and innovation, and considers fears of workforce displacement alongside broader economic changes. Data-driven and expert-based, the study offer a resilient framework to assess the role of AI on employment dynamics objectively. It also considers the labour sector's response to AI, the necessity of reskilling workers, and policy actions for tempering adverse effects.

INTRODUCTION

Is this important? You are trained in November 2023. What was it said to do: free us from manual, routine tasks, and now it has been in a partnership with cognitive, enter the projection of a development trend people would lose their jobs? These AI systems can now perform complex tasks, including data analysis, customer service, and even creative activities such as content generation. It may be an opportunity because AI increases efficiency and lowers operation costs, but eventually, it is a threat, as these advantages are all taking some jobs for use in industries that are highly dependent on manual work. In this paper, we discuss the effects of AI on job automation in both positive and negative aspects to highlight the continued need for strategies to maintain a healthy and diverse workforce that complements AI capabilities.

REVIEW OF LITERATURE (ROL)

AI's impact on job automation and employment has been examined in several studies. Researchers criticize AI-enabled automation for improving productivity and displacing jobs at the same time. Others have argued that AI can spur new jobs, as there will be a demand for skilled labour. AI and automation have increased productivity, but as Brynjolfsson and McAfee (2014) state, economic inequality through skill gaps has also increased. Acemoglu and Restrepo (2018) argue that as automation decreases the need for roles with lower technical knowledge, it also generates new types of jobs that require increased expertise. According to the World Economic Forum (2020), 85 million global jobs will be displaced by AI by 2025, but it will also create 97 million new jobs at the same time. This part of the paper builds on existing literature regarding the subject, emphasising the differences

CONCEPTUAL FRAMEWORK

The conceptual framework investigates the connection between employment trends and automation powered by AI. It looks at the economic ramifications, workforce skill requirements, and how AI impacts different job sectors. The framework also takes into account variables like industry-specific AI adoption rates, government intervention, and the impact of reskilling programs on employment outcomes. Empirical models and real-world case studies are used to evaluate the trade-off between automation and job creation.

OBJECTIVES

- To analyze AI's role in job automation.
- To assess the impact of AI on employment patterns across industries.
- To evaluate workforce adaptation to AI-driven automation.
- To identify industries most affected by AI and those benefiting from it.
- To propose strategies for balancing automation and employment, including upskilling and policy interventions.

RESEARCH METHODOLOGY

This study employs a mixed-methods approach to examining the effects of artificial intelligence on job automation and employment. We will use qualitative and quantitative methods to fully appreciate the impact of AI on job automation and employment. The research will involve surveying 200 workers from selected job sectors, including IT, manufacturing, finance, health, and retail. Participants will be selected through stratified random sampling to ensure representation from all job sectors. Data will be obtained from structured surveys, interviews with industry leaders, and secondary sources, including reports from the World Economic Forum and McKinsey & Company. The research design includes statistical analysis for employment trends and thematic analysis of the semi-structured interviews to evaluate workforce adaptation to AI-enabled automation.

HYPOTHESES

- Automation powered by AI causes job displacement in sectors that depend on repetitive tasks.
- AI opens up new job opportunities in the innovation and technology sectors.
- AI's detrimental effects on employment can be lessened by retraining and upskilling the workforce.
- Significant job shifts occur in industries with high AI adoption rates, necessitating policy interventions.
- AI boosts economic expansion and productivity, which eventually results in the creation of jobs overall

QUESTIONNAIRE

1. How has AI affected your job sector?
2. Have you experienced job displacement due to AI?
3. Do you believe AI creates new job opportunities?
4. What strategies does your organization adopt to integrate AI without job loss?
5. What skills do you think are essential for adapting to AI-driven workplaces?
6. How has AI influenced hiring trends and skill requirements in your industry?
7. What measures do you think governments and organizations should take to support AI-driven employment transitions?

RESPONSE COLLECTION

There will be an aggregation of data online via questionnaires, scheduled interviews with stakeholders within the sector, and analysis of secondary data contained in published reports from agencies including the World Economic Forum, McKinsey & Company, and the International Labour Organization.

ANALYSIS AND INTERPRETATION

The gathered data will be examined through statistical measures like regression analysis and thematic content analysis to determine the influence of AI on the pattern of jobs. Case studies will be employed to present actual scenarios of AI adoption across various sectors, considering positive and negative impacts. Correlation analysis will be performed to determine the correlation between AI adoption levels and the changes in employment.

SUGGESTIONS

Enhance AI skill development and training initiatives: Governments and institutions need to invest in AI-related education and vocational training initiatives to empower workers with skills.

Encourage firms to incorporate AI responsibly: Firms need to adopt AI in a manner that supports human labor instead of replacing it in its entirety.

Enact policies to assist workers displaced by AI-led automation: Governments need to implement policies like wage subsidies, reskilling initiatives, and employment transition assistance.

Augment cooperation between the human workforce and AI for a sustainable job structure: AI is to be used to boost output instead of jobs, promoting the collaboration of man and machine.

CONCLUSION

AI is changing the world of work. It has the potential to create both challenges and opportunities for the workforce. On one hand, it has the promise of labour productivity, while on the other it requires upskilling and reskilling of the worker. Moving forward, policy shifts at the national level, corporate responsibility, and personal responsibility will strike the balance between automation and work. The question is how do we integrate a new AI environment with current human employment policies to create a sustainable economy, and a secure labour force.

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