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Impact Of Artificial Intelligence On Employment In The IT Industry

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Abstract
In addition, AI gradually transforms the approach taken by businesses to conditioning with regards to IT-related affairs. It has become increasingly common practice to introduce technologies associated with robotics and machines' learning capabilities in the manufacturing process that will assist in making employees more efficient by engaging in less repetitive work. Nevertheless, despite its beneficial effect on various professional spheres in which employees operate, such introduction of technology may prompt companies to consider the risks of loss of job opportunities and experience gained in other areas. Consequently, the current research is concerned with the exploration of advantages of AI in terms of their impact on the field of careers, career change possibilities, employment opportunities, and skills acquisition. As far as results go, AI has succeeded in taking repetitive work away from professionals and introduced a range of exciting new career choices linked to data analysis and AI development.

Keywords: *Artificial Intelligence (AI), Career Transformation, Employment Opportunities, Career Change, Skills Acquisition, Machine Learning, Robotics*

1. Introduction

Artificial Intelligence (AI) refers to the capabilities of machines to execute intelligent activities, which are commonly performed by humans. Such activities include learning, reasoning, and problem solving, among others. AI has become increasingly popular in various industries in the past few years. For example, the Information Technology (IT) industry has been using several AI technologies to increase efficiency and lower workload. IT companies have widely adopted AI technologies such as machine learning, automation, and analytics to make it easier to accomplish their goals. Nevertheless, the adoption of AI has been raising questions regarding the implications of this innovation in terms of employment. Many of the jobs associated with the IT industry are being automated in order to boost performance and reduce the burden associated with manual labor. Moreover, there is a rising need for professionals who will develop artificial intelligence applications, analyze data, and manage machine learning models. It is evident that although AI technologies are taking up some jobs, there are new positions being created as well [1], [2]. Consequently, it is necessary to investigate the influence of AI innovations on employment.

1.1. Objectives Of The Study

- To assess the effect of artificial intelligence on employment within the Information Technology (IT) sector.
- To determine how artificial intelligence is revolutionizing job profiles and employment prospects.
- To explore the perceptions held by employees about artificial intelligence and their job security.
- To emphasize the significance of up-skilling in an artificial intelligence environment.
- To determine which job profiles within the IT sector will be most affected by artificial intelligence.
- To assess whether artificial intelligence is seen as an opportunity or a threat by students and IT professionals.

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2. Literature Review

The relationship between artificial intelligence and the shifting dynamics of employment has attracted considerable scholarly and institutional attention, particularly as automation and machine learning have matured from experimental technologies into mainstream tools reshaping everyday work. The Stanford Institute for Human-Centered AI, through its AI Index Report 2025, documents a marked acceleration in AI adoption across sectors, with a corresponding surge in demand for professionals equipped in data science, machine learning, and AI engineering [1]. An earlier iteration of this report, published in 2024, reinforced the view that while AI serves as a significant productivity multiplier, it simultaneously reconfigures what traditional job roles entail [2]. Analysis from PricewaterhouseCoopers offers a complementary perspective: AI is expected to generate entirely new categories of employment even as it renders redundant the more mechanical, process-driven dimensions of existing work [3]. Crucially, occupations rooted in judgment, creativity, and analytical reasoning appear far more durable in the face of automation than those defined by routine and repetition. Employment projections published by the U.S. Bureau of Labor Statistics for the decade spanning 2023 to 2033 reflect a similar pattern — AI-driven automation will close off certain occupational pathways while simultaneously expanding those that require technical expertise and higher-order reasoning [4]. The implication is clear: sustained employability in the coming years will depend less on accumulated static knowledge and more on the capacity for continuous learning and professional reinvention. Academic literature has increasingly grappled with this duality. A 2025 systematic review by A. Jetha found that AI meaningfully enhances both individual productivity and broader operational efficiency, but that these gains are distributed unevenly — workers in lower-skilled roles bear a disproportionate share of the displacement risk [5]. Parallel research into labor market dynamics confirms that AI simultaneously destroys and creates employment, with the net outcome largely determined by the nature and complexity of the tasks involved [6]. A systematic review featured in the International Journal of Research and Innovation in Social Science (IJRISS, 2025) adds further nuance, underscoring how AI is fundamentally reordering the competencies that employers value [7]. Technical fluency, analytical depth, and problem-solving agility have become baseline expectations rather than differentiators, making reskilling and upskilling not merely advisable but structurally necessary. Beyond skill dynamics, emerging research is probing AI's role in labor market forecasting. Work by S. Osborn and colleagues (2025) demonstrates how AI-powered tools are improving the precision of employment trend analysis, offering planners and policymakers sharper insight into where the workforce is headed [8]. Institutional research from Auburn University (2024) similarly documents how generative AI is spawning new job categories while fundamentally altering the contours of roles that already exist [9]. At the macro level, global assessments of AI's societal implications acknowledge a dual reality: the technology introduces genuine risks — including structural unemployment and widening inequality — while simultaneously creating fertile conditions for innovation and economic expansion [10]. Taken together, these findings argue against a simplistic narrative of AI as a job-destroyer; the more accurate characterization is one of transformation rather than elimination. In summary, the body of literature surveyed here makes plain that AI's influence on employment is neither uniformly positive nor straightforwardly negative. It automates the routine, disrupts established occupational hierarchies, and poses real challenges for vulnerable segments of the workforce. At the same time, it opens new professional frontiers and raises the value of distinctly human capabilities. Navigating this landscape will require individuals, institutions, and policymakers alike to treat lifelong learning and adaptive skill development not as aspirational ideals but as practical imperatives.

3. Methodology

This research work adopts the descriptive research method to investigate the effects of artificial intelligence (AI) on employment in the information technology (IT) industry. Descriptive research entails

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the use of primary data obtained in this study to gather insights on people's views and perception on AI and its effect on jobs.

Data Collection Technique: The data used in this research were obtained from a structured questionnaire. It consists of multiple choice questions geared towards collecting details on people's views on AI and the impact of AI on their employment.

Number of Respondents: In total, thirty respondents responded to the survey conducted. These respondents include students and IT experts because they are more informed and impacted by AI.

Data Collection Period: This survey was conducted in the month of March 2026. The data collection exercise took a very short period to allow for relevancy.

Survey Questions

- Are you aware of Artificial Intelligence ?
- How would you rate your Knowledge of AI?
- Which AI technologies are you familiar with?
- From where did you mainly learn about AI?
- Do you think AI will affect employment in IT industry?
- DO you think AI will replace some jobs in the IT industry?
- Which types of jobs do you think are most likey to be replaced by AI?
- Do you think AI can create new job opportunities?
- Which new job roles do you think are increasing because of AI?
- In your opinion, which statement is more accurate?
- Are you concerned about your future job security because of AI?
- Do you think employees need to learn new skills to survive in the AI era?
- Are you currently learning any AI-related skills?
- Which skills do you think are most important for future jobs?
- Who should take responsibility for reskilling people?
- Do you think AI is more of an opportunity or a threat?
- in your opinion, what is the biggest advantage of AI in the IT industry?
- In your opinion, what is the biggest disadvantage of AI in the IT industry?
- What suggestions would you give to students and employees to prepare for an AI- driven future?

Results And Analysis

The obtained information was analyzed to determine the way in which the surveyed persons assess the impacts of the use of AI technology on their work in the sphere of IT. The findings are presented through percentage calculations.

Awareness Concerning Artificial Intelligence: It is clear from the results that the majority of the respondents are well-aware of artificial intelligence technology. In particular, more than 80% of them stated that they know about this kind of technology, while the rest had quite vague ideas about artificial intelligence.

Threats Related to Losing Jobs Caused by the Introduction of AI Technology: About 70% of the surveyed people assume that AI might be influential for some jobs performed in the field of IT. They mainly include data entry jobs and the testing of various computer software. However, several respondents are not certain that AI could take place of humans in these fields.

Generation of New Job Opportunities due to Artificial Intelligence: While many of the participants had a certain level of apprehension about job security, almost 65% believed that artificial intelligence brings new employment opportunities. They were mostly related to more challenging activities in fields like data science, machine learning, and artificial intelligence.

Acquiring AI Skills: From the survey responses obtained, we can state that more than 60% of respondents currently train themselves in artificial intelligence skills.

Reskilling Importance: As a result of the survey analysis, it is possible to conclude that more than 75% of surveyed people believe that reskilling is an important process at the times when AI is developing rapidly.

Job Insecurity Fears: Almost half of the respondents, 55%, said that they had fear concerning the possibility of being fired because of AI.

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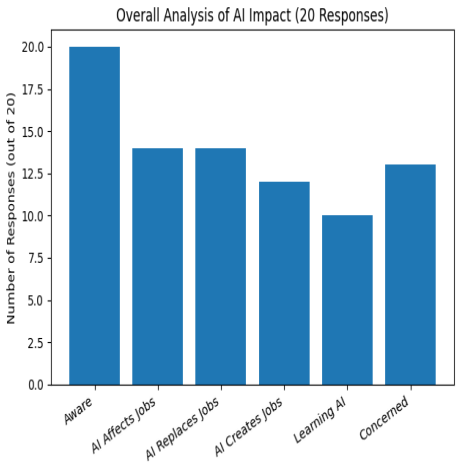
General Results Analysis Based on Survey Data



4. Discussion

Based on the above results, one can assume that Artificial Intelligence is significantly changing the situation in terms of employment within the IT industry. Participants acknowledge their familiarity with the term of AI and its technologies. They understand that such tools can positively and negatively influence their performance. One of the main observations from this research would be that the usage of artificial intelligence leads to changes in jobs related to routine activities. Data entry and simple tests are being conducted automatically by AI. Thus, jobs involving routine activities might disappear because of artificial intelligence. What is more, it is essential to highlight the reduction in vacancies which do not require special qualifications or experience. Some participants have shared their concerns regarding the decline in jobs. On the other hand, the implementation of artificial intelligence contributes to the creation of numerous career paths that require specific knowledge and experience. Career opportunities within machine learning and artificial intelligence increase rapidly. Hence, although some jobs might become unnecessary, new positions will emerge and become popular among employees. This means that artificial intelligence contributes to the change in job distribution in the IT sector. It is important to emphasize that another interesting observation from the survey results is related to the interest in reskilling and upskilling. Most respondents are aware of their need to improve their skills and qualifications in order to cope with modern requirements. To conclude, it is worth stating that job security is another critical topic among participants. Many people fear losing their jobs because of the automation process.

Conclusion

Having analyzed the results of the current research, it becomes clear that the impact of artificial intelligence can be considered rather significant. In addition, it seems like the majority of respondents are aware of the presence of such technologies and know about the positive and negative effects of using artificial intelligence in their workplace. As for the main conclusion drawn during the research, it can be stated that artificial intelligence replaces routine work. To put it differently, people performing duties of data inputters and testers are more vulnerable to the introduction of such technologies in the nearest future. Predictable work is very easy to automate, and thus, employees who perform such tasks lose their workplaces really quickly. It is important to note, however, that the development of occupations associated with artificial intelligence, data science, and machine learning happens really fast. While some occupations tend to disappear in such conditions, many others appear very rapidly.

In addition, it is possible to state that another finding identified during the research is the feeling of need among respondents to gain new skills and new knowledge in order to continue earning money.

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