

Impact of Artificial Intelligence on Job Security of Employees in IT Sector - A Study in Cognizant Technology Services in Coimbatore City

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Abstract: *Artificial Intelligence (AI) has emerged as a transformative technology in the Information Technology (IT) sector, influencing the way organizations perform business operations, deliver services, and manage human resources. The increasing adoption of AI, automation, machine learning, and generative AI has created opportunities for improving productivity, efficiency, and innovation. At the same time, employees may experience concerns regarding job displacement, changes in job roles, skill requirements, career growth, and employment stability. The present study focuses on the impact of Artificial Intelligence on the job security of employees working in the IT sector, with special reference to Cognizant Technology Solutions in Coimbatore City.*

Keywords: Artificial Intelligence, Job Security, IT Sector, Employees, Automation, Reskilling, Upskilling

1. Introduction

Artificial Intelligence has become one of the most significant technological developments influencing modern business organizations. AI enables organizations to perform tasks involving data analysis, decision-making, automation, prediction, natural language processing, and customer support. The IT industry is among the sectors experiencing substantial changes due to the rapid adoption of AI-based technologies. Consequently, employees are required to continuously develop their technical and professional skills.

Cognizant Technology Solutions is a major IT services organization with operations in India and a presence in Coimbatore. The adoption of emerging technologies makes it an appropriate organizational context for studying employees' perceptions regarding AI and job security. Therefore, this study attempts to understand how employees perceive the impact of AI on their jobs and what factors influence their sense of employment security.

2. Statement of the Problem

Employees may be concerned about whether AI will replace certain tasks, change their responsibilities, reduce employment opportunities, or increase the need for continuous skill development. Employees who do not update their technical and professional skills may perceive greater uncertainty regarding their future employability.

At the same time, AI can create new job roles and enable employees to perform their existing work more efficiently. Therefore, the impact of AI on job security cannot be considered only from the perspective of job displacement. It is also necessary to examine employees' awareness of AI, their willingness to acquire new skills, organizational training opportunities, changes in job responsibilities, and their overall perception of job security. The impact of Artificial Intelligence on the job security of employees in the IT sector,

with special reference to Cognizant Technology Solutions in Coimbatore City.

3. Limitations of the Study

- The study is restricted to employees of Cognizant Technology Solutions in Coimbatore City and therefore may not represent employees working in the entire IT industry.
- The study primarily depends on primary data collected through a questionnaire, and the findings may therefore be influenced by the respondents' individual perceptions and opinions.
- Employees may provide socially desirable responses regarding their job security and perceptions of AI.
- The study is conducted within a specific period, whereas AI technologies and their applications are continuously evolving.
- The study focuses mainly on employees' perceptions of job security and does not measure actual employment losses or gains caused by AI.

4. Objectives

- To understand the level of awareness and adoption of AI technologies among employees in Cognizant Technology Services.
- To examine the impact of AI on the nature and responsibilities of employees' jobs.
- To assess employees' perceptions regarding job security in the context of increasing AI adoption.
- To identify the factors influencing employees' perceptions of job security due to AI.

5. Scope of the Study

- Impact of AI on existing job roles and responsibilities.

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- Employees' concerns regarding job displacement and employment security.
- Impact of AI on workload and productivity.
- Employees' perception of organizational training and development opportunities.
- Relationship between employees' demographic characteristics and their perception of AI-related job security.

6. Research Methodology

- Research design: The overall plan or framework of the study, such as descriptive, exploratory, experimental, or analytical research.
- Study area: IT Sector employees in Coimbatore District.
- Sample and sampling technique: 100 IT sector employees with using convenience sampling.
- Secondary Data: Secondary information will be collected from books, journals, research articles, company reports, websites, newspapers, and other relevant published sources relating to Artificial Intelligence, employment, automation, and job security.
- Data collection tools: Questionnaires, interview schedules, observation checklists, or other instruments used to collect information.
- Data analysis: Statistical or qualitative techniques used to organize and interpret the collected data.

7. Data and Interpretation

Regression Analysis

A simple linear regression can be used to examine whether employees' perception of AI statistically predicts their perceived job security.

Illustrative result:

Variables	AI Perception	Job Security
AI Perception	1	-0.624**
Job Security	-0.624**	1

Note: Correlation is significant at the 0.01 level (2-tailed).

Interpretation

The correlation coefficient ($r = -0.624$) indicates a moderate-to-strong negative relationship between employees' perception of AI and perceived job security.

This means that, in this illustrative analysis, employees who perceive AI as having a greater impact on their work tend to report lower perceptions of job security. However, correlation alone does not establish that AI causes reduced job security.

Regression equation:

$$\text{Job Security} = a + b(\text{AI Perception}) + e$$

Illustrative regression output:

Model	R	R ²	Adjusted R ²		Std Error
1	0.624	0.389	0.383		0.641
ANOVA Model		F			Sig.
Regression		62.34			0.000
Correlation variable	B	Std. Error	Beta	t	Sig.
Constant	4.182	0.241	—	17.35	0.000
AI Perception	-0.571	0.072	-0.624	-7.93	0.000

Interpretation of Regression

The illustrative regression results show an R^2 value of 0.389, indicating that approximately 38.9% of the variation in perceived job security is explained by employees' perception of AI in this model.

The regression coefficient for AI perception is -0.571, suggesting a negative relationship between AI perception and perceived job security. The significance value is $p < 0.001$, indicating that the relationship is statistically significant in this illustrative dataset.

The remaining 61.1% of the variation may be associated with other factors such as employee skills, experience, organizational policies, training opportunities, job role, salary, career prospects, and other workplace factors.

Important: The numbers above are examples, not actual findings from your Cognizant respondents. Do not present them as your actual statistical results unless your collected data produces these values.

8. Findings

Based on the proposed analysis, you can write the findings section as follows:

- The study examines employees' perceptions regarding the increasing use of Artificial Intelligence and its relationship with perceived job security.
- The correlation analysis indicates a negative relationship between AI perception and perceived job security. In the illustrative analysis, the correlation coefficient is -0.624.
- The regression analysis indicates that employees' perception of AI has a statistically significant relationship with perceived job security in the illustrative model.
- The illustrative R^2 value of 0.389 indicates that AI perception accounts for approximately 38.9% of the variation in perceived job security.
- The findings suggest that employees may experience concerns regarding automation, changes in job roles, skill requirements, and the possibility of certain routine tasks being performed by AI.
- At the same time, AI adoption may create opportunities for employees to develop new technical and analytical skills and move toward higher-value responsibilities.
- The results indicate that employee perceptions of AI and job security should be considered together when organizations introduce AI-based technologies.

9. Suggestions

Based on the objectives of the study, the following suggestions can be made:

- Provide AI-related training: Organizations should provide regular training programmes to help employees understand and work effectively with AI technologies.
- Focus on reskilling and upskilling: Employees whose existing tasks are increasingly automated should be provided opportunities to acquire new technical, analytical, and interpersonal skills.
- Improve communication: Management should clearly communicate the purpose of AI adoption, its expected impact on employees, and changes in job responsibilities.
- Create internal career opportunities: Organizations can support employees by providing opportunities to move into new roles created or reshaped by technological changes.
- Reduce uncertainty: Transparent communication about organizational changes can help employees better understand how AI may affect their work.
- Human-AI collaboration: AI should be introduced as a tool that supports employees wherever appropriate, rather than focusing only on replacing existing tasks.
- Continuous learning: Employees should be encouraged to participate in continuous learning programmes because AI-related technologies and required skills can change rapidly.
- Monitor employee perceptions: Organizations can periodically conduct employee surveys to understand concerns about AI, job roles, training needs, and career development.

10. Conclusion

The study was undertaken to examine employees' perceptions regarding Artificial Intelligence and its impact on job security among employees of Cognizant Technology Solutions in Coimbatore City. The study considers both the opportunities and concerns associated with the increasing adoption of Artificial Intelligence in the workplace.

The correlation analysis is used to examine the relationship between employees' perception of Artificial Intelligence and perceived job security, while regression analysis is used to determine whether AI perception significantly predicts perceived job security. In the illustrative analysis, a negative relationship was observed between the two variables, indicating that greater concern or perceived impact of AI may be associated with lower perceptions of job security.

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