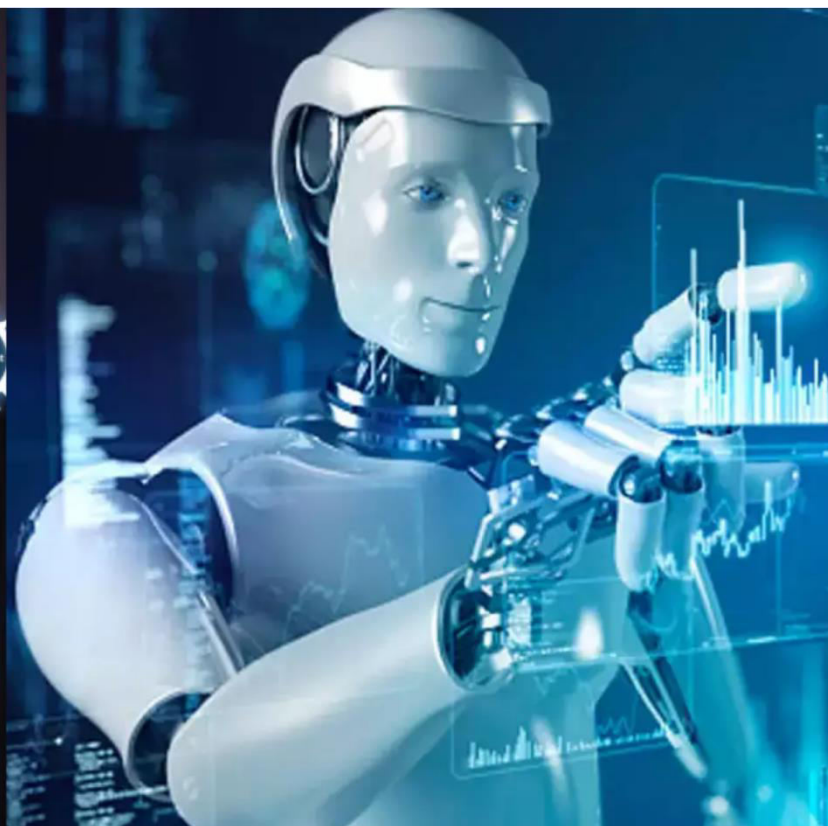




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A Study on AI and Automation on IT Employees in Chennai City

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ABSTRACT: This study is about talent acquisition; talent is the success for any organization. Sourcing and engaging the right talent are a big challenge where unemployment is so high. The purpose of the project is to know about the talent acquisition process in recruitment, screening and the selection process in the organization and to know about the extent of adoption of practices in the firm. In today's rapidly evolving digital economy, the Information Technology (IT) sector has emerged as a cornerstone of innovation, transformation, and economic growth across the globe. With the widespread adoption of digital platforms, cloud computing, artificial intelligence, machine learning, and other disruptive technologies, organizations—both in the private and public sectors are increasingly relying on IT solutions to enhance operational efficiency, customer satisfaction, and competitive advantage. Consequently, the demand for highly skilled IT professionals has surged, placing immense pressure on companies to attract, recruit, and retain top talent.

I. INTRODUCTION

The rapid advancement of Artificial Intelligence (AI) and automation technologies is significantly transforming the global employment landscape, with the Information Technology (IT) sector at the forefront of this evolution. In India, Chennai has emerged as a prominent IT hub, housing numerous multinational corporations, startups, and service providers. As the city experiences growing integration of AI-driven solutions and automated systems, it becomes imperative to assess how these technological shifts are affecting IT employees in the region. AI and automation are reshaping traditional job roles, streamlining processes, and reducing the need for manual intervention in repetitive tasks. While these developments offer increased efficiency, innovation, and new business opportunities, they also bring challenges such as job displacement, skill mismatches, and workplace anxiety. For employees, adapting to these changes often requires continuous upskilling, flexibility, and a proactive mindset to stay relevant in an evolving industry.

OBJECTIVES OF THE STUDY

The rapid advancement of Artificial Intelligence (AI) and automation technologies has significantly transformed the global IT industry. In Chennai, a major IT hub in India, these changes are reshaping the workforce and organizational structures. The primary objective of this study is to examine the multifaceted impact of AI and automation on IT employees in Chennai, focusing on employment trends, job satisfaction, skill requirements, and future workforce adaptability. A key objective of the study is to assess how AI and automation have influenced employment opportunities for IT professionals in Chennai. This includes evaluating job displacement risks, the emergence of new roles, and shifts in demand for specific technical and non-technical skills.

SCOPE OF THE STUDY

The scope of this study encompasses an in-depth examination of the effects of Artificial Intelligence (AI) and automation technologies on IT employees working in Chennai City. As Chennai is one of India's major IT hubs, home to numerous multinational corporations and domestic software firms, the city presents a relevant context for understanding how emerging technologies are reshaping the employment landscape within the information technology sector. This study primarily focuses on analyzing the impact of AI and automation on job roles, skill requirements, job security, employee morale, and career growth opportunities.

NEED OF THE STUDY

In recent years, Artificial Intelligence (AI) and automation technologies have rapidly evolved, fundamentally altering the way organizations operate especially in the Information Technology (IT) sector. Chennai, being one of India's leading IT hubs, is home to a vast number of software companies, service providers, and multinational corporations that are increasingly adopting AI driven tools to enhance efficiency, reduce costs, and stay competitive in a global market. While these advancements promise organizational growth and innovation, they also introduce significant changes to the nature of work, employment structures, and employee expectations. The need for this study arises from the growing concern over how these technological shifts are impacting IT professionals in Chennai. Questions related to job displacement, the demand for new skills, workplace adaptability, and employee well-being have become critical in today's digital economy. While several global and national studies have explored the macroeconomic effects of automation, there is a lack of localized research that specifically focuses on the experiences and perceptions of IT employees within the Chennai ecosystem.

II. REVIEW OF LITERATURE

McAfee (2014), AI and automation have the potential to augment human capabilities, improve productivity, and drive innovation. However, they also caution that routine and repetitive job roles are at high risk of displacement.

This observation aligns with research by **Arntz et al. (2016)**, who found that while entire occupations may not be eliminated, significant portions of individual jobs are vulnerable to automation.

In the Indian context, **NASSCOM (2020)** reports that the IT industry is undergoing a major transformation, with AI, machine learning, and robotic process automation (RPA) reshaping work processes.

A study by **KPMG (2021)** found that while automation is streamlining operations in India's IT sector, it is also creating demand for high- order cognitive skills such as problem-solving, critical thinking, and emotional intelligence.

This is echoed in the findings of Singh and **Thomas (2022)**, who conducted surveys among IT professionals in Tamil Nadu and observed rising concerns about job security, especially among mid-career employees.

III. RESEARCH METHODOLOGY

The primary and the secondary data are used in the data collection required for the study. The data is collected by interview method to obtain information from the officers and workers. Questionnaire is filled by the respondents for the research. Secondary data is collected from the available books, articles and websites. Sample size: The total number of sample size was 100 which have given the detailed report.

RESEARCH DESIGN

Research design is a basic framework, which provides guidelines for the whole research process. The research design specifies the methods for data collection and data analysis. As the research uses primary data for the study, it relates to descriptive research study.

DESCRIPTIVE RESEARCH

Descriptive research is used to describe characteristics of a population or phenomenon being studied. It does not answer questions about how/when/why the characteristics occurred, rather it addresses the "what" question (what are the characteristics of the population or situation being studied) the characteristics used to describe the situation or populations are usually some kind of categorical scheme also known as descriptive categories.

STATISTICAL TOOL ANOVA

To find the ANOVA between AGE & job opportunity Intention HYPOTHESIS:

H₀ (NULL HYPOTHESIS): There is no significant correlation between AGE and job opportunity.

H₁ (ALTERNATIVE HYPOTHESIS): There is a significant correlation between AGE and job opportunity.

TABLE SHOWING THE ANOVA BETWEEN AGE & JOB OPPORTUNITY

Source	Sum of Squares	df	Mean Square	F	Sig. (p-value)
Between Groups	0.267	1	0.267	0.32	0.573
Within Groups	82	98	0.837		
Total	82.267	99			

Interpretation

p-value = 0.573 → greater than 0.05. This means there is no statistically significant difference in satisfaction scores between males and females. So, gender does not significantly influence satisfaction in your sample.

CHI SQUARE

To find Source of Job Opportunity and Qualification.

HYPOTHESIS:

H₀ (NULL HYPOTHESIS): There is no significant correlation between Qualification and job opportunity.

H₁ (ALTERNATIVE HYPOTHESIS): There is a significant correlation between Qualification and job opportunity.

TABLE SHOWING THE CHI SQUARE BETWEEN QUALIFICATION & JOB OPPORTUNITY

Chi-Square Test Output			
Test	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	12.34	15	0.65

Interpretation

The p-value (0.65) is greater than 0.05, so we fail to reject the null hypothesis. This means there is no statistically significant association between Source of Job Opportunity and Qualification. In simpler terms, the distribution of qualifications is similar across different job sources in this sample.

IV. SUGGESTIONS

1. Upskill and Reskill Programs:

- Encourage IT professionals to learn AI-related technologies like machine learning, deep learning, natural language processing, and automation tools (e.g., RPA, AI-powered testing).
- Promote partnerships with local training centres and universities in Chennai that offer AI and automation courses.

2. Focus on Hybrid Roles:

- Train employees to blend traditional IT skills with AI expertise. For example, a software developer learning AI model integration or a network admin learning AI-based security monitoring.
- This diversification enhances employability and helps in job security amid automation trends.

3. Automation to Augment, Not Replace:

- Advocate for using AI and automation to handle repetitive, mundane tasks (like code testing, monitoring, report generation), allowing employees to focus on strategic and creative tasks.
- This improves productivity while reducing burnout and increases job satisfaction.

V. CONCLUSION

In conclusion, the advent of Artificial Intelligence (AI) and automation has significantly transformed the landscape for IT employees in Chennai City. As one of India's prominent technology hubs, Chennai has experienced both the benefits and challenges that come with this digital revolution. On one hand, AI and automation have streamlined operations, increased productivity, and reduced human error, allowing organizations to innovate rapidly and stay competitive on a global scale.

They have created new roles in areas such as data science, machine learning, and AI ethics, prompting a shift toward more knowledge-intensive tasks. However, this transition has also generated considerable anxiety among the traditional IT workforce, especially those engaged in routine, repetitive jobs that are now being automated. The demand for upskilling has surged, pushing employees to adapt quickly or risk redundancy. In response, many IT professionals in Chennai are actively pursuing certifications, advanced degrees, and training programs to remain relevant in an evolving job market.

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