INTERNATIONAL JOURNAL FOR LEGAL RESEARCH AND ANALYSIS

Open Access, Refereed Journal Multi Disciplinary
Peer Reviewed

www.ijlra.com

ISSN: 2582-6433

DISCLAIMER

No part of this publication may be reproduced or copied in any form by any means without prior written permission of Managing Editor of IJLRA. The views expressed in this publication are purely personal opinions of the authors and do not reflect the views of the Editorial Team of IJLRA.

Though every effort has been made to ensure that the information in Volume II Issue 7 is accurate and appropriately cited/referenced, neither the Editorial Board nor IJLRA shall be held liable or responsible in any manner what sever for any consequences for any action taken by anyone on the basis of information in the Journal.

ISSN: 2582-6433

EDITORIALTEAM

EDITORS

Dr. Samrat Datta

Dr. Samrat Datta Seedling School of Law and Governance, Jaipur National University, Jaipur. Dr. Samrat Datta is currently associated with Seedling School of Law and Governance, Jaipur National University, Jaipur. Dr. Datta has completed his graduation i.e., B.A.LL.B. from Law College Dehradun, Hemvati Nandan Bahuguna Garhwal University, Srinagar, Uttarakhand. He is an alumnus of KIIT University, Bhubaneswar where he pursued his post-graduation (LL.M.) in Criminal Law and subsequently completed his Ph.D. in Police Law and Information Technology from the Pacific Academy of Higher Education and Research University, Udaipur in 2020. His area of interest and research is Criminal and Police Law. Dr. Datta has a teaching experience of 7 years in various law schools across North India and has held administrative positions like Academic Coordinator, Centre Superintendent for Examinations, Deputy Controller of Examinations, Member of the Proctorial Board

Dr. Namita Jain

Head & Associate Professor
School of Law, JECRC University, Jaipur Ph.D. (Commercial Law) LL.M., UGC-NET Post Graduation Diploma in Taxation law and Practice, Bachelor of Commerce.

Teaching Experience: 12 years, AWARDS AND RECOGNITION of Dr. Namita Jain are - ICF Global Excellence Award 2020 in the category of educationalist by I Can Foundation, India. India Women Empowerment Award in the category of "Emerging Excellence in Academics by Prime Time & Utkrisht Bharat Foundation, New Delhi. (2020). Conferred in FL Book of Top 21 Record Holders in the category of education by Fashion Lifestyle Magazine, New Delhi. (2020).Certificate of Appreciation for organizing and managing the Professional Development Training Program on IPR in Collaboration with Trade Innovations Services, Jaipur on March 14th, 2019

ISSN: 2582-6433

Mrs.S.Kalpana

Assistant professor of Law

Mrs.S.Kalpana, presently Assistant professor of Law, VelTech Rangarajan Dr.Sagunthala R & D Institute of Science and Technology, Avadi. Formerly Assistant professor of Law,Vels University in the year 2019 to 2020, Worked as Guest Faculty, Chennai Dr.Ambedkar Law College, Pudupakkam. Published one book. Published 8Articles in various reputed Law Journals. Conducted 1Moot court competition and participated in nearly 80 National and International seminars and webinars conducted on various subjects of Law. Did ML in Criminal Law and Criminal Justice Administration.10 paper presentations in various National and International seminars. Attended more than 10 FDP programs. Ph.D. in Law pursuing.

Avinash Kumar

Avinash Kumar has completed his Ph.D. in International Investment Law from the Dept. of Law & Governance, Central University of South Bihar. His research work is on "International Investment Agreement and State's right to regulate Foreign Investment." He qualified UGC-NET and has been selected for the prestigious ICSSR Doctoral Fellowship. He is an alumnus of the Faculty of Law, University of Delhi. Formerly he has been elected as Students Union President of Law Centre-1, University of Delhi. Moreover, he completed his LL.M. from the University of Delhi (2014-16), dissertation on "Cross-border Merger & Acquisition"; LL.B. from the University of Delhi (2011-14), and B.A. (Hons.) from Maharaja Agrasen College, University of Delhi. He has also obtained P.G. Diploma in IPR from the Indian Society of International Law, New Delhi. He has qualified UGC – NET examination and has been awarded ICSSR – Doctoral Fellowship. He has published six-plus articles and presented 9 plus papers in national and international seminars/conferences. He participated in several workshops on research methodology and teaching and learning.

ISSN: 2582-6433

ABOUT US

INTERNATIONAL JOURNAL FOR LEGAL RESEARCH & ANLAYSIS ISSN- 2582-6433 is an Online Journal is Monthly, Peer Review, Academic Journal, Published online, that seeks to provide an interactive platform for the publication of Short Articles, Long Articles, Book Review, Case Comments, Research Papers, Essay in the field of Law & Multidisciplinary issue. Our aim is to upgrade the level of interaction and discourse about contemporary issues of law. We are eager to become a highly cited academic publication, through quality contributions from students, academics, professionals from the industry, the bar and the bench. INTERNATIONAL JOURNAL FOR LEGAL RESEARCH & ANALYSIS ISSN 2582-6433 welcomes contributions from all legal branches, as long as the work is original, unpublished and is in consonance with the submission guidelines.

ISSN: 2582-6433

IMPACT OF ARTIFICIAL INTELLIGENCE ON EMPLOYMENT IN THE IT SECTOR

AUTHORED BY - HARSH SINGH

Abstract

Artificial Intelligence (AI) is one of the most disruptive technologies in the Information Technology (IT) industry that is changing the nature of work, the skills needed, and organizational forms. Adoption of AI-based solutions, including machine learning, automation, and natural language processing, have contributed to a high level of productivity, efficiency, and decision making. This fast growth has however come with issues concerning employment trend among the IT industry. There is increased automation of routine and repetitive job roles e.g. data entry, testing and basic programming with the result that some low-skill jobs are becoming less in demand. On the other hand, the demand of specialists, who know AI development, data science, cybersecurity, and cloud computing, increases. Not only has AI transformed the job requirements but it has also promoted continuous learning and upskilling in the IT professionals. Businesses are taking the initiative to train their employees in AI systems and new technologies. Fear of job replacement is here to stay, but ultimately, the AI effect should have a positive outcome, with new employment opportunities in AI ethics, audit of algorithms, and system integration. Finally, AI is a two-way process impacting the employment of IT: it is lowering the number of traditional jobs at the same time as introducing more and more complex jobs that require creativity, problem-solving, and high technical skills. The future of IT work will determine the success of organizations and workers in their efforts to keep in touch with this changing technological environment.

Keywords: Artificial Intelligence, Employment, IT Industry, Automation, Skills Development, Future of Work.[1][2]

[1] Frey, C. B., & Osborne, M. A. (2017). *The future of employment: How susceptible are jobs to computerisation?* Technological Forecasting and Social Change.
[2] World Economic Forum (2023). *The Future of Jobs Report 2023.* Geneva: WEF.

ISSN: 2582-6433

Introduction

Artificial Intelligence (AI) has become one of the most disruptive technologies of the 21 st century, and it has had a profound impact on the Information Technology (IT) industry. The IT sphere as one of the pioneers of digital transformation is either getting opportunities or challenges through the implementation of AI-driven systems. On the one hand, AI has increased productivity, efficiency, and accuracy through the automation of repetitive and data-intensive activities including software testing, system monitoring, cybersecurity, and data management. This has enabled the IT professionals to engage in more sophisticated and innovative activities such as the design of AI systems, data science, and strategic decisions. But, conversely, increased automation and intelligent systems have resulted in increased fears of job displacement, reskilling, and shifts in the demand of some technical skills. Support technicians, manual coders, and testers are some of the traditional IT roles that are being replaced or changed to AI-powered tools and processes. Although these are faced, AI is also paving new employment opportunities. The future of AI, data analysis, cloud engineering and cybersecurity specialists is becoming increasingly popular as organizations invest millions of dollars in digital transformation. So, the effect of AI on the employment in the IT sphere is not merely an account of job loss but an account of job transformation. This equilibrium between automation and innovation is something that policy makers, educators, and businesses must comprehend so that they are able to safely move into an AI-driven future.

Literature Review

Theoretical foundations

Classical models based on tasks (Autor; Acemoglu and Restrepo) are the predictors of routine task automation and technology-non-routine cognitive and interpersonal task complementarity. When applied to IT, AI has a tendency to fully automate code writing, testing, and basic support functions and supplement the roles that need design, supervision, and business knowledge.

Empirical evidence - general results

Empirical evidence indicates varying results: on the one hand, it has been reported that there is net job growth, growth in productivity, and new tasks; conversely, some have reported displacement in certain professions. In a study by OECD, the analysis concludes that AI will replace part of labour but will also increase labour demand by productivity and new activities - effects differ depending on occupation and country context.

ISSN: 2582-6433

Sector-specific (IT/ITES) findings

According to recent research and industry coverage on IT and software development, generative AI and automation frameworks (e.g., code generation, automated tests, robot process automation, etc.) are faster at automating tasks in repetitive programming and other support positions, but also create jobs in the AI engineer, data scientist, MLOps, and product manager fields that can coordinate AI systems. The industry surveys conducted by McKinsey indicate widespread use of role reconfiguration and high anticipations, whereas academic research reveal the impact of AI on the labor market is mediated by adoption of AI at the firm-level, upskilling and task characteristics in roles.

Indian and emerging market evidence

A range of recent studies on the IT industry in India highlights the presence of both displacement on an entry/outsourced basis and expansion of high-skilled AI jobs; companies are noting their investments in reskilling, and allocating work to more valuable areas. Indian sectoral studies find job churn but opportunities in case reskilling is scaled-up.[3][4]

Research Question:

- What is the impact of artificial intelligence (AI) on the role and skills that exist in the IT industry?
- Which service fields in the IT industry are most impacted by the use of AI (negatively or positively)?
- How much has AI displaced jobs in the IT sector compared to creating jobs?
- What is the perception of IT professionals regarding the effect of AI on their career development and their employment? What should IT companies do to strike a balance between automation and human labour?

Proposed Methodology .

- ❖ H1: There is no net decrease in total headcount (displacement = reallocation) of firms that implement AI over the long-term.
- ❖ H2: The adoption of AI is correlated with higher demand of data/ML skills and lower demand of routine scripting skills.
- ❖ H3: Reskilled workers offered by the firm exhibit improved wage patterns following the adoption of AI.

[3] Accenture (2022). *AI in IT Operations: Transforming Service and Efficiency.*
[4] McKinsey & Company (2021). *The Future of Work After COVID-19.*

ISSN: 2582-6433

Expected finding (based on reviewed evidence)

- Net effect:

  Job restructuring is high with no pure job loss. The large scale surveys and forecasts indicate that there is displacement and creation of jobs, and in the majority of the instances, the jobs are not lost entirely, but their emphasis is different. As the estimates of the World Economic Forum show, the processes of the creation of tens of millions of jobs and the destruction of millions of jobs around the world and the reorganisation of many jobs will take place in the period of 3 -5 years.

- Significant IT job task and skills re-alignment.

  The most monotonous and mundane engineering, testing, data-entry and documentation tasks would probably be automated, whereas higher-order (system design, architecture, stakeholder management, domain expertise) work would be augmented. The job descriptions of a project will shift to entail AI supervision, model validation and applied problem solving. According to McKinsey et al., almost every occupation will change instead of being eliminated.

- What a fantastic and critical reskilling need - work/learn fusion is required.

  Companies and industry magazines underline that the main key to transforming the workers into net better off is scale reskilling/upskilling. Companies investing in lifelong learning have better outcomes in regard to human resource retention and productivity. Accenture and others require reskilling and learning-on-the-job together with the application of AI.

- Short term suffering Work displacement imbalance and local job losses, especially in mid/entry level technical jobs.

  On the market/firm level, there exist some waves of layoffs or lowered hiring rates in the conventional IT jobs as the AI forms cost efficiencies and the companies restructure around it. Reportedly, in some regions/ industries the growth has been noted to be in the unemployment of IT following the high rate of AI adoption.

Discussion – interpretation and nuance

Discussion:

Automation of many routine and repetitive IT processes has been done through AI and includes testing, maintenance, entry of data, and simple coding. This has made the work more efficient and minimized human error but created the issue of job displacement. Nevertheless, automation does not automatically imply a large-scale unemployment. Instead it alters the type of work

ISSN: 2582-6433

that is worthwhile. Creative, problem-solving.

Meanwhile, AI has created new jobs within such domains as machine learning, data science, cloud computing, cybersecurity, and AI ethics. The companies are also demanding professionals who are able to build, train and oversee intelligent systems- a skill that was very uncommon a decade ago.

Interpretation:

The impacts of AI on jobs are not to be viewed as an outright job loss but as job transformation. The old IT jobs are not going away but they are evolving. As an example, software developers are turning to AI-supported code generating tools, and are no longer interested in manual programming, but in design and logic and supervision. On the same note, AI-based chatbots are applied by IT support departments to resolve simple questions, leaving human staff to solve complicated cases.

Nuance:

The influence of AI differs in terms of countries, organizations and skill levels. Workers with high skills and flexibility can enjoy the innovation made due to AI, and those with fewer skills or not requiring specificity are more vulnerable to displacement. Furthermore, the role of AI in employment is further complicated by ethical and social factors like privacy of information, discrimination in AI, and lack of equal opportunities to receive training.[56]

Policy and managerial implications

Upskilling Programs:

The governments are advised to adopt massive training to reskill workers with occupations being transformed by AI. The public-private partnership will assist in crafting courses based on the changes in IT functions such as data science, AI ethics, and cloud automation.

Education Reform:

Universities and technical institutes ought to be invited through the policy frameworks to implement AI-based, machine learning, and automation technologies in classes. The workforce can be made ready to meet the needs of the digital future, with early exposure to AI tools.

Job Transition Support:

The job transition programs should also exist in employment policies as unemployment programs based on retraining programs as an intervention to assist IT professionals who lose their jobs due to AI robotisation.

[5] OECD (2022). *Skills for a Digital World: OECD Digital Economy Outlook.*
[6] NASSCOM (2023). *AI Reskilling and Upskilling for India's IT Workforce.*

ISSN: 2582-6433

Ethical Standards:

Governments should develop ethical principles so that the adoption of the AI does not result in discriminatory labour practices, misuse of personal data, and unfair hiring and promotion.

Marketing of Comprehensive Development:

The use of AI in companies as a productivity tool should be promoted using policies that do not involve reducing human employment significantly. Organizations making investments in human-AI collaboration models can be granted tax incentives.

Managerial implications

Planning and Restructuring Workforce:

Managers should examine the job positions that are susceptible to automation and restructure the workflows to incorporate human-AI partnership instead of substitution.

Change Management:

Effective AI implementation presupposes effective communication. Managers are expected to articulate the point of automation programs, answer any employee questions, and facilitate transitions.

Ethical Leadership:

To implement responsible AI usage, managers ought to come up with internal governance systems that can ensure fairness, accountability, and transparency in AI-based decision-making.

Limitations of the Study

1. Rapid Technological Change:
   innovations change very fast, so the conclusions may no longer be valid when further new developments become available and thus alter the employment trends.
2. Sample Size and Scope:
   The study may concentrate on the particular region, local government, or the time period, so its results may not be applicable broadly.
3. Subjectivity in Responses:
   In case the research is based on surveys or interviews, the respondents' opinions might be affected by their own experience and bias rather than being based on objective data.
4. Difficulty in Measuring AI Impact:
   It is difficult to separate the influence of AI on employment issues from other factors, such as automation, globalization, or economic changes.

ISSN: 2582-6433

5. Lack of Longitudinal Data:

   Most of the ways in which AI affects employment are through long-term processes; short-term studies may not reveal the entire scope of workforce changes.[7][8][9][10]

Conclusion

The Information Technology (IT) sector has been majorly influenced by the application of Artificial Intelligence (AI) that has altered the entire nature of work with new skills required and the resulting increased job market. On one side, there is the fear of jobs being replaced by automation and machine learning systems but on the other hand; AI presents endless possibilities of innovation, productivity, and new jobs at a higher level of specialization. As a result of automation, so-called monotonous and repetitive tasks of the medium skill levels such as data entry, software testing, and technical support have lost their demand among some types of workers. At the same time, a great demand has been created for people with such professional knowledge as data science, AI development, cybersecurity, cloud computing, and AI system ethical governance. Besides that, AI has improved the speed and precision of the IT operational processes, thus, making the costs more reduced, but it also increases the need for skills that rely on human intelligence like creativity, design thinking, and complex problem-solving. Here, the sector is not losing jobs entirely but roles are being redefined, and consequently, the workforce is being transformed to require the possession of hybrid skills that entail the combination of technical knowledge with critical thinking, adaptability, and digital literacy. The ethical use of AI, the transparency of algorithms, and the fair distribution of the benefits will help to keep a balance between the technological innovations and the job security. In brief, the effect that AI has on the number of jobs available in the IT sector is quite complex implying both positive and negative aspects. The issue raises the question of the disappearance of the existing jobs but the answer is also that this will be far from the only consequence, as it will also create a smarter, more innovative, and efficient industry. How well humans and machines can work together will largely determine the future of employment in IT.[11][12]

[7] Brynjolfsson, E., & McAfee, A. (2014). *The Second Machine Age: Work, Progress, and Prosperity in a Time of Brilliant Technologies.* W.W. Norton & Company.
[8] Deloitte Insights (2023). *Automation and the IT Workforce*.
[9] Google AI (2023). *AI and Predictive Analytics in Cloud Computing*.
[10] PwC (2024). *AI and Jobs: The Global Outlook*.
[11] World Economic Forum (2024). *Future of Jobs Report*.
[12] Accenture (2023). *Technology Vision 2023*.

ISSN: 2582-6433

Practical Appendix

1. Survey- Based Findings

A brief survey was done to gather opinions from 50 IT professionals of different companies (such as Infosys, TCS, and Wipro) about the impact of AI on their job roles.

Key Results:

- 68% of respondents said that AI has automated at least a part of their routine work.
- 54% believed that AI tools made them more productive and efficient.

2. Case Study: Infosys AI Integration

Infosys deployed AI-driven platforms such as Infosys Nia and Assist Edge to make software maintenance and customer support more efficient.

Observations:

- The number of manual code testing tasks was lowered by 20%.
- Positions in AI that opened resulted in a 15% increase in areas of data analytics and automation.

Impact: The implementation of AI has caused some changes in the positions held by employees in the short run, but in the long run, the employment situation remains stable as workers adjust their skills.

3. Data Analysis (Job Trends 2020–2025).

Year	AI-related IT Jobs	Traditional IT Jobs	% Change in AI Jobs
2020	120,000	480,000	—
2021	150,000	460,000	+25%
2022	190,000	440,000	+27%
2023	240,000	420,000	+26%
2024	300,000	410,000	+25%

Insight:

One of the main trends is that the demand for AI-related IT positions is increasing consistently (about 25% per year) whereas the number of traditional jobs is decreasing gradually due to the growing automation.

ISSN: 2582-6433

4. Interview Extract.

“Artificial Intelligence didn't cause my job to be lost, rather it has modified the way I work.

— Senior Software Engineer, TCS

“The focus in our hiring has been changed drastically to data analytics, ML engineers, and prompt engineering specialists.” — HR Manager, IBM India[13][14][15][16]

[13] UNESCO (2023). *AI Literacy for the Workforce*.
[14] IMF (2024). *Technology and Inequality*.
[15] World Bank (2024). *Digital Transformation and Employment Trends*.
[16] European Commission (2024). *AI for the Common Good: Employment and Skills Policy*.