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Impact of Artificial Intelligence on Employment and Skill requirements in the Indian IT sector

Raviteja SA
Research Scholar
Dr Rakshitha M Allappanavar,Adrusht Biradar, Roshan Haritsa, Pradhan Swaroop
Center for Management Studies, JAIN Deemed-to-be-University, Bengaluru

Abstract

The rapid evolution of Artificial Intelligence (AI) technologies is significantly reshaping the employment and skill profiles of the Information Technology (IT) industry in India. The current paper seeks to explore the many facets of the impact of Artificial Intelligence on one of the most important sectors of the Indian economy, which employs around 5.43 million professionals directly and contributes around 7.5% to the Gross Domestic Product (GDP) of the country. The Indian Information Technology industry, which has long been the bedrock of the nation's economic growth and the passport to the middle class, is at a crossroads today, as the advent of generative AI, robotic process automation, and machine learning technologies is increasingly replacing human workers.

The paper examines the impact of AI adoption on the replacement of entry-level jobs, on the one hand, and the transformation of mid-level jobs, on the other, resulting in a polarized employment scenario where the need for high technical skills coexists with high job insecurity. The analysis based on industry reports, government statistics, and research studies shows that over 50,000 IT jobs have been eliminated in 2024, with major IT companies such as Tata Consultancy Services (TCS), Infosys, and Wipro undergoing major workforce restructuring. Entry-level IT jobs such as programming, software testing, and business process outsourcing (BPO) staff are some of the jobs most affected, as AI tools increasingly assume their primary tasks.

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At the same time, the paper also points to a rising skills deficit in the industry. While India ranks first globally in AI skill penetration, according to the Stanford AI Index 2024, with a score of 2.8, only around 16% of the total IT professionals are presently AI skilled. Around 51% of AI/ML jobs are presently vacant. In addition to this, by 2030, around 63 out of every 100 Indians would need retraining, as per the World Economic Forum's Future of Jobs Report 2025. There is a rising need for skills in machine learning, prompt engineering, cloud computing, cybersecurity, and data science.

This paper also assesses the response of Governments and industries to this disruption caused by AI, including the IndiaAI Mission, FutureSkills PRIME, and massive upskilling efforts by industries like TCS, Infosys, Wipro, and Microsoft, among others. The paper concludes that, notwithstanding the serious short-term risks of job loss due to AI, especially for entry-level employees and those in routine jobs, there are considerable opportunities for India in the long term if it invests sufficiently in reskilling its workforce, revises its education system, and shifts from being an AI service provider to an AI product developer.

Key Words: *Artificial Intelligence (AI), IT sector, Employment, Skill requirements*

1. INTRODUCTION

The beginning of the twenty-first century has ushered in an unprecedented revolution of technological advancement, and perhaps no other domain has felt the impact of this revolution more than the realm of Artificial Intelligence (AI). What was once considered the purview of academic studies and science fiction has now emerged as a collection of highly effective technologies that are changing the face of industries, economies, and societies around the world. Be it machine learning-based consumer behaviour predictions or the use of generative AI tools that can code, analyze data, write content, and even carry out logical reasoning tasks, the impact of AI on the world of work is significant and widespread.

India's position in this global evolution is unique and of particular importance. The Indian Information Technology sector has expanded over the last three decades from a fledgling outsourcing market to one of the world's premier technology services industries. Cities like Bengaluru, Hyderabad, Pune, Chennai, and Gurugram have been transformed by the IT sector's employment base and have become centers of innovation, consumption, and aspiration for

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millions of educated, middle-class Indians. The sector currently directly employs 5.43 million professionals and contributes an estimated 7.5 percent to India's Gross Domestic Product. Exports have grown to $254 billion in FY 2024. In addition to direct employment, the IT sector also represents a key enabler of the city-level real estate market, retail market, and services sector.

But this sector of the economy, which is at the base of everything else, is now facing what is arguably the most disruptive challenge to this sector in decades: the rapid and widespread adoption of AI technologies. Unlike previous technological disruptions to the labor market, which were largely concentrated in manufacturing and low-skill labor, AI is uniquely suited to automating tasks such as coding software, testing code, analyzing data, and managing customer relations—precisely the kinds of tasks that have defined the IT sector of the Indian economy for generations. The stakes are not merely economic but also social, as an IT job has long been a key to social mobility in India.

The disruption is also visible and measurable. In 2024, over 50,000 IT sector job losses have been witnessed in India, with entry-level programmers and software testers being the worst affected (ORF, 2025). TCS, the largest private sector employer in India with over half a million employees, announced plans to cut over 12,000 jobs, mainly at the middle and senior management levels (CNBC, 2025). The hiring process in the IT sector has also seen a dramatic slowdown. The hiring process has reduced to just 100,000 in FY 2024 from 250,000 in FY 2023. Entry-level salaries have also seen a lack of movement. While in 2015 the salaries stood at around Rs 3.5 lakh annually, by 2024 it had only risen to Rs 3.8 lakh. This is stark compared to the sector’s earlier high growth rates.

At the same time, the skills required in the IT sector are undergoing a fundamental change. Jobs that required proficiency in conventional programming languages, manual software testing, and data management are now being supplemented or replaced by a new set of skills related to artificial intelligence literacy, machine learning, data science, cloud computing, and cybersecurity. New skills such as prompt engineering, artificial intelligence biases, and synthetic data creation are becoming highly relevant, while the WEF Future of Jobs Report 2025 predicts that 63 out of every 100 workers in India will need to be retrained by 2030. As per the Deloitte-NASSCOM report published in August 2024, India’s AI talent pool is

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estimated to grow from 650,000 to over 1.25 million between 2022 and 2027; however, the AI market is estimated to grow at a CAGR of 25-35%, indicating a widening gap between talent availability and talent required (Deloitte India & NASSCOM, 2024).

The Indian government has identified these challenges and has come up with a plethora of policy initiatives such as the IndiaAI Mission, which focuses on the AI talent and research pipeline, and FutureSkills PRIME, a collaborative initiative of the Ministry of Electronics and Information Technology (MeitY) and NASSCOM for re-skilling 2 million professionals across the country. Large IT companies have also undertaken large-scale training initiatives within their companies; for instance, TCS has trained 350,000 employees in AI-related skills for the period 2023-24, while Wipro has trained 220,000 employees for the same period (IndiaAI, 2024). Microsoft has pledged to skill 2 million Indians in AI by 2025 (Microsoft India, 2024).

The objective of this research paper is to explore, analyze, and synthesize the impact of AI on employment trends and skillsets in the IT industry in India. The paper will delve into the dual reality faced by the country in the context of AI, where the immediate impact will be the loss of jobs for the workforce engaged in routine or entry-level jobs, but the long-term possibility cannot be ruled out, where India can emerge as the AI powerhouse of the world if its workforce, academia, and policymakers get it right. The paper will be divided into the following sections: the review of relevant literature, the statement of the problem, analysis and discussion, and the conclusion, where recommendations and suggestions will be offered on the way forward.

The paper relies on secondary data from a variety of sources such as NASSCOM reports, the World Economic Forum's Future of Jobs Report 2025, the Stanford AI Index 2024, studies by Deloitte India, data from staffing companies such as Xpheno and TeamLease, and academic literature. It attempts to offer a comprehensive and well-rounded view of the impact of AI on one of the world's most significant tech industries and its implications for the millions of professionals who depend on the fortunes of the Indian IT industry.

2. REVIEW OF LITERATURE

2.1 Global Perspectives on AI and Employment

The interrelation between artificial intelligence and employment has been a focal point of interest for many researchers and policymakers over the last decade. The pioneering works in

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this domain, carried out by Frey and Osborne (2013), estimated that 47% of the total employment in the US was at a high risk of automation, which sparked a global debate over the subject. Though this figure is now subject to controversy, it set the stage for the debate, which is continuously developing with the advent of advanced artificial intelligence.

The International Monetary Fund (2024) established that artificial intelligence might impact 40% of the total jobs worldwide, while the risk is even greater for advanced economies owing to the proportion of cognitive tasks. In one of the pioneering works, Goldman Sachs, through Hatzius et al. (2023), estimated that the advent of generative artificial intelligence might replace jobs equivalent to 300 million full-time jobs. What is imperative is the fact that the aforementioned works established the fact that the automation of jobs does not mean the total elimination of jobs; rather, artificial intelligence is creating jobs while replacing others.

In addition, the OECD has recently highlighted that “employees who possess strong digital skills are much more protected against displacement caused by AI than those who lack such skills” (OECD, 2024). Data from the IMF for the same year indicated that employment has declined in AI-intensive regions but productivity has grown more rapidly, underscoring the fact that the short- and long-term impact of AI on employment could be quite different. The World Economic Forum's Future of Jobs Report 2025 has indicated that while 85 million jobs are at risk of being displaced by AI and automation by 2025, 97 million new jobs could emerge that are more suited to the new division of work between humans and machines

Academic studies have also identified the phenomenon of "task-biased technological change," wherein "AI complements high-skill labour but substitutes for low-skill labour in routine and repetitive tasks." This leads to labour polarisation as employment creation is concentrated at both the high and low skill end of the spectrum, while the "middle remains hollowed out." This polarisation is of critical equity concern for developing economies such as India, given the large proportion of IT workers employed in middle-skill occupations such as manual testing, coding, and BPO services.

2.2 AI Adoption in the Indian IT Sector

India's IT industry has traditionally enjoyed a strong growth record based on a strategy of arbitrage in labour costs, delivering information technology services to global customers at a

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fraction of the labour costs of Western countries. Although an unprecedented success in terms of employment generation and export earnings, it has also made the IT industry particularly susceptible to automation technologies that erode the labour cost advantage of human resources.

A recent study by the Council for Research on International Economic Relations reported in 2026, based on a survey of 651 IT companies, while employment growth has certainly moderated considerably, the highest demand from employers is for software analysts, developers, and mathematicians who are most susceptible to AI but also have the greatest potential to work alongside it. According to the findings of the ICRIER report, like previous experiences of technological disruptions, the rise of AI productivity will ultimately lead to a fall in costs, expanding markets, and therefore net employment opportunities; however, the transition period may be protracted and traumatic for workers.

A study published in PMC (Sharma et al., 2025) identified the psychological aspects of job displacement caused by AI among Indian IT professionals, wherein an IIM-Ahmedabad study on white-collar employees reported that "while 55% of them had adopted AI tools, and 48% had received training, a significant 68% of them were fearful of their jobs being automated in five years." The study further reported that "industry leaders' quotes, like how Zoho CEO Sridhar Vembu said software development jobs might become obsolete soon, have added to the anxiety within the industry, as reported by the Times of India (2025)."

In their article published in the International Journal of Development Research, Yogesh Kumar and Dr. Ram Ratan (2025) discussed the impact of AI on employment patterns in various sectors of India, focusing specifically on the IT sector. The article revealed that the IT sector of India, which currently provides employment to 5.4 million people, is undergoing a change due to the emergence of low-code and no-code platforms, which are making software development easier but at the same time making the services of programmers redundant. According to the article, PwC (2018) had already predicted the reduction of employment opportunities for programmers due to the emergence of coding tools, and this prediction is now becoming a reality.

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2.3 Skill Transformation and Emerging Requirements

The report published by 'NASSCOM Deloitte,' titled 'Advancing India's AI Skills: Interventions and Programmes Needed' (2024), is arguably the most comprehensive report that assesses the evolution of the need for skills in the Indian IT industry. The report highlights the five major segments of AI skills, which range from AI-informed workers, who use AI tools in their day-to-day activities, to AI experts, who develop and deploy advanced AI systems. The report concluded that the demand for AI-related jobs in India is expected to exceed 1 million by 2026, while only 16% of the total IT professionals in the country possess AI skills.

The report prepared by FutureSkills PRIME and published through NASSCOM in November 2025 highlighted the impact of generative AI in transforming the conventional landscape of data science, software development, and automation. The rising trends of prompt engineering, AI bias knowledge, and synthetic data development are becoming essential skills in the IT-ITeS sector, while cloud computing and cybersecurity are becoming prominent areas of talent development. The integration of generative AI, cloud computing, cybersecurity, and data science is resulting in a paradigm shift in talent development within the IT-ITeS sector.

The positioning of India in the global AI talent ranking table is interesting. In the Stanford AI Index 2024, India leads the world in AI skill penetration with a score of 2.8, leaving the USA (score of 2.2) and Germany (score of 1.9) behind. India has seen a growth of 263% in AI talent concentration since 2016. In 2024, India was the second-highest contributor of AI projects on GitHub across the world, contributing 19.9% of all AI projects (Government of India, PIB, 2025). India’s AI talent pool is likely to increase from 600,000 to 650,000 by 2027 to over 1.25 million by 2027 at a compound annual growth rate of around 15%.

However, there is still a lot to be achieved. In fact, the World Economic Forum (2023) had projected that nearly 44% of the fundamental skills of the workforce would change in five years. In fact, the NASSCOM community analysis reveals that nearly 51% of the AI/ML roles remain unfilled due to the scarcity of the required skills. While the productivity of firms that have invested in reskilling is reported to have increased by 30-50%, as stated in the McKinsey Digital Report, the online courses in AI have as low as 10% completion rates.

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2.4 Government and Corporate Policy Responses

The Indian government's response to the challenge of AI employment is through a multi-pronged framework of measures. The IndiaAI Mission is a program of the current government of India under the leadership of PM Modi. It aims to build AI talent at various levels of education, supporting 500 PhD scholars, 5,000 postgraduates, and 8,000 undergraduates in AI-related work. The government has also set up 27 IndiaAI Data and AI Labs in Tier-2 and Tier-3 cities through NIELIT and approved 174 ITIs and Polytechnics in 27 states and union territories to set up AI labs (Government of India, PIB, 2025).

FutureSkills PRIME is a joint initiative of the MeitY and NASSCOM, which is one of the flagship skilling programmes aimed at reskilling and upskilling 2 million professionals in emerging technologies. The government is also working in collaboration with international tech companies such as Microsoft and Intel to launch training programmes in AI skills, cybersecurity, and data management. (WEF, 2025)

On the corporate front, LinkedIn's "Workforce Report 2024" revealed that 94% of businesses in India were planning to retrain their workforce to counter the impact of AI disruption (Baruah, 2024). TCS has already trained 350,000 employees in the areas of AI and other related technologies during 2023-24. Infosys has also designed customised in-house AI training programmes and has also launched "Infosys Springboard," which helps in the development of academic curriculums for students. Wipro also trained 220,000 employees in the areas of AI during the same period. Microsoft India has also promised to deliver 2 million opportunities for Indians to get skilled in the areas of AI by 2025. It is also believed that Indian IT companies are not investing sufficiently in the areas of research and development; for instance, TCS spent only 1.1% of its revenue in the financial year 2024 on R&D, while the norm for the global tech industry is to spend much higher percentages (Outlook Business, 2025).

2.5 Socioeconomic Implications

The socio-economic impact of AI-related disruption in the Indian IT sector is not limited to the IT sector alone. According to CareEdge Ratings' data, employee cost growth in the Indian IT sector has decelerated considerably from 19% y-o-y in 2022-23 to a meager 5% y-o-y in 2024-25, a result of low salary growth and low staff count growth. The IT sector directly employs

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5.8 million people, according to NASSCOM estimates, which is 1.7 times the employee count of the central government of India.

In fact, economists, including the newly announced laureate of the Nobel Prize in Economics for 2024, James A. Robinson, have warned of the societal implications of wage stagnation brought on by AI, stating that "any significant reduction in wages without corresponding job creation has significant implications for the economic foundations of the middle class." When it comes to India, this is further complicated by its inherent need to create approximately 8 million jobs each year to accommodate its rapidly expanding working-age population, according to Nomura's report from 2025. The possibility of what Nomura's chief economist, Sonal Varma, has called the 'middle-income trap,' wherein economic growth does not keep pace with moving a significant portion of its workforce into jobs of higher skill and, therefore, higher pay, is considered a very serious threat should its adoption of AI not be met with an equally aggressive development of its workforce.

3. PROBLEM STATEMENT

The Indian IT sector is currently undergoing a period of profound and accelerating change as a result of the adoption of artificial intelligence technologies. While such change promises much for the sector’s productivity and export competitiveness, as well as the creation of new high-value jobs, it also poses serious risks to the employment and career security of millions of IT workers, especially at the entry-level and routine jobs.

The overarching challenge addressed in the present research paper is the dual role of the disruptive and generative potential of AI in the employment and skills landscape of the Indian IT sector. In more specific terms, the present paper grapples with the displacement challenge of AI replacing the tasks of entry-level programmers, software testers, manual data analysts, and BPO employees, leading to hiring freezes and salary stagnation even as the sector is growing in terms of topline revenue. The skills gap challenge of the rapidly changing AI landscape leading to a shortage of new skills such as machine learning, prompt engineering, and cybersecurity, while the existing workforce has not been reskilled fast and in large numbers to meet the new demand for such skills, with only 16% of the existing IT workforce being AI-skilled and 51% of the required AI/ML positions unfilled. The structural challenge of the Indian

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IT sector, which has traditionally thrived on labour arbitrage, is being severely impacted by the disruption of AI and needs to pivot to the development of high-value AI-based products and services, which requires not just new skills but new organisational and investment paradigms.

Unless these issues are addressed proactively and comprehensively, these issues have the potential not only to impact the livelihood of millions of IT professionals but also to impact India's economic ambitions and aspirations to become a global hub for artificial intelligence and digital technology in the 'India Techade.' The research aims to understand: What is the nature and extent of the impact of AI on employment and skills in the IT sector in India, and what is required to ensure that the benefits of the impact of AI are shared by all while its risks are managed?

4. ANALYSIS AND DISCUSSION

4.1 Employment Disruption: The Reality of Job Losses and Hiring Deceleration

The evidence of disruption caused by AI on employment within India’s IT industry is considerable, and hiring within the industry has seen a significant decline. Hiring within India’s IT industry has reduced from a high of 445,000 new hires within FY2022, followed by a reduction to 250,000 new hires within FY2023, and then further reduced to only 100,000 new hires within FY2024, according to data from a staffing platform provided by Xpheno. This is a decline of almost 78% within only two years, a decline not seen since the global financial crisis of 2008. Large-scale layoffs at TCS, involving 12,000 employees, and significant workforce restructuring within Infosys and Wipro are a result of both global economic uncertainty and structural disruption from AI adoption

It must, however, be noted that there is a difference between cyclical and structural factors. As analysts put it, the slowdown in global technology spending, especially in the US, has increased the effect of AI-related automation. The Indian IT industry is closely linked to the global economy, and the uncertainty surrounding US tariffs, budgeting confidence among American clients, and macroeconomic headwinds have contributed to the lackluster growth. But the structural aspect of the AI-related change is undeniable. More is being achieved with fewer people, thanks to the help of AI, which enables existing engineers to write codes faster, test software, and handle data.

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The entry-level jobs have been disproportionately impacted by this trend. The use of AI-powered tools for automation, testing, and documentation of codes is making entry-level jobs involving these activities less relevant. According to a study by IIM-Ahmedabad, "68% of IT professionals are worried that their jobs might become redundant within five years due to automation." These concerns have been fueled by opinions shared by industry leaders, such as the CEO of Zoho, on how automation is affecting jobs. The psychological implications of automation on the workforce are considerable, with studies indicating technostress, anxiety, and even "learned helplessness" among employees, according to qualitative studies on automation and jobs.

4.2 Emerging Skill Requirements: What AI Demands

While AI is changing the nature of jobs, it's also creating the need for an entirely new range of competencies. The FutureSkills PRIME-NASSCOM study (2025) outlines several types of skillsets that will emerge. In the technical domain, the skillsets where demand is rising rapidly include machine learning engineering, data science, NLP, computer vision, robotic process automation, cloud computing, especially on platforms such as Azure, AWS, or Google Cloud, cybersecurity, full-stack development, and so on. In the new domain of generative AI, skillsets such as prompt engineering, AI bias mitigation, synthetic data, large language model operation, and so on are rising in importance

In addition, employers are placing increasing emphasis on what might be called "AI adjacent skills," or the ability to work effectively with AI, critically evaluate outputs, understand the ethics and regulatory implications of AI, and work effectively within multidisciplinary teams. The WEF Future of Jobs Report 2025 states, "Two-thirds of companies operating in India recognize the need to tap into more diverse talent pools, a figure significantly higher than the global average of 47%. This is because AI skills are not only held by a narrow range of highly technical individuals but are distributed across a broad range of educational and professional backgrounds."

Furthermore, employers are increasingly placing emphasis on what might be termed "AI adjacent skills," i.e., the capacity to work effectively with AI, critically assess the outputs produced by AI, grasp the ethical and legal implications of AI, and be able to function

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effectively in multidisciplinary teams. The WEF Future of Jobs Report 2025 comments, "Two-thirds of companies operating in India recognize the need to tap into more diverse talent pools, a figure significantly higher than the global average of 47%. This is because AI skills are not only held by a narrow range of highly technical individuals but also exist across a broad range of educational and professional backgrounds."

4.3 The Reskilling Imperative and its Challenges

The extent of the problem of reskilling that the Indian IT industry is faced with is quite daunting. The WEF states that the figure of workers in India requiring retraining by the year 2030 is estimated at 63 out of every 100, while 12 out of every 100 workers will not even have the capacity to upskill, which equates to over 70 million workers that might not get the training they need in the next five years. Therefore, it is imperative that this problem is addressed by the government, the industry, and academia.

Reskilling programmes have been launched in the corporate sphere, with TCS having successfully reskilled 350,000 workers in the domain of AI, Wipro having successfully reskilled 220,000 workers, and Infosys having created comprehensive in-house learning pathways for AI. Nevertheless, the critics argue that the problem lies in the fact that there is a systemic failure in the online learning space, with completion rates for AI-related online courses standing at less than 10%, which means that even the best efforts in the domain of corporate training do not actually lead to the acquisition of skills.

The investment gap in R&D also creates a structural challenge for India. The total corporate expenditure in India's IT software sector as a percentage of total corporate expenditure in the sector decreased from 4% in FY21 to less than 3% in FY24. The contribution of the private sector to gross R&D expenditure in India is only 36.4%, whereas in China and the USA, these figures are 77% and 75%, respectively. The low investment in innovation capacity limits India's prospects for shifting from an "AI services" model, in which India is merely a consumer of AI solutions developed elsewhere in the world, to an "AI products" model in which India is the owner of the AI technology.

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4.4 Opportunities and the Path Forward

Despite the significant challenges identified above, the evidence also reveals significant opportunities for India in the AI era. India currently has the largest lead in the world for AI skill penetration, along with the largest contributor to GitHub AI projects, ranking second in the world. India has the largest digitally skilled talent pool in the world, with the potential to reskill or upskill 8 to 10 million professionals in AI services, based on the NASSCOM report. The AI market in India is expected to grow at a rate of 25 to 35% CAGR up to 2027, while the overall digital economy in India is expected to reach $1 trillion by 2028.

An optimistic view of the impact of AI is provided by the research carried out by ICRIER (2026), which suggests that just as in all previous waves of technological change and disruption caused by new technologies entering the market, increased productivity caused by AI will lead to a decline in costs and a massive expansion in the consumption of products and services enabled by AI, resulting in a net positive employment impact. The research also found that the biggest hiring needs are for those jobs that are most affected by AI, which suggests that rather than replacing human workers, AI is more often augmenting and changing the nature of skilled work done by humans. New companies focused on AI are also expected to emerge as large employers, just as mobile companies and internet companies created enormous new employment opportunities in previous waves of technological change

The strategic imperative for India would therefore be two-fold: one would be to invest heavily in reskilling and upskilling the existing workforce to minimize the displacement risk for the at-risk workforce; and the second would be to shift the focus of the sector from AI services delivery to AI product development and innovation, a shift that would take the country to a higher pedestal in the technology value chain and offer higher-quality employment at better compensation rates. Both of these would require a concerted effort from all stakeholders—government, industry, and education—working together rather than in isolation.

5. CONCLUSION

The impact of Artificial Intelligence on employment and skills in the Indian IT industry is not a simple one of destructive or beneficial impact. It is a complex and multi-dimensional impact that is creating employment loss in some areas while creating new opportunities in others,

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causing stagnant wages at the entry level while holding the promise of significantly higher wages for AI professionals, and disrupting a traditional business model while providing the opportunity for a new and higher level of contribution to the global technology industry.

The evidence analyzed in this paper leads us to several conclusions. First, the impact of the disruption on the jobs, especially the entry-level and routine jobs, is significant and is happening at an increasingly rapid rate. The dramatic slowdown in hiring, stagnant entry-level wages, and massive layoffs by major IT companies are not just cyclical effects, but rather the result of deeper, structural changes driven by the adoption of AI. Second, the skills gap is real and getting bigger. India's IT industry, for example, is faced with a substantial gap between the existing workforce's skills and the skills that the AI economy now demands, and the rate at which this gap is being bridged, although high in absolute numbers, is not keeping pace with the challenge. Third, India's underlying strengths, such as its demographic, technological, and human capital advantages, as well as its global position in AI skill penetration and the quality of its AI talent, offer a promising foundation for addressing this challenge, provided they are effectively tapped through the right frameworks.

In order to achieve this transition effectively, several strategic recommendations have been proposed by the paper. Firstly, the Government must continue to scale up and deepen the India AI Mission, Future Skills PRIME, and other similar schemes so that skilling initiatives are taken to Tier 2 and Tier 3 cities and have high completion and employment outcome rates. Secondly, educational institutions must adopt AI-first education at all levels of education—school, undergraduate, and postgraduate—so that the upcoming workforce of the country is ready to handle an AI-first world. Thirdly, technology leaders must invest heavily in R&D so that their R&D spends are closer to the global average for tech companies. They must also look to move from AI services to AI products. Lastly, a culture of continuous learning must be inculcated across people, businesses, and societies as a whole. The paper argues that in an environment of rapid AI progress, the ability to learn and adapt will be the only sustainable competitive advantage.

The country is at a critical juncture. The decisions made in the next five to ten years on workforce development, education, R&D investments, and industry policy will define the future of AI in the country as a catalyst for equitable economic development or as a contributor

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to widening inequalities and structural unemployment. With its singular strengths of human resources, scale, and ambition, India has the opportunity and obligation to build a future for itself and its citizens where the potential of AI is realized while the interests of the millions of its citizens who depend on the sector for livelihood and employment are safeguarded.

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