Brij Disa Centre for Data Science and Artificial Intelligence
INDIAN INSTITUTE of MANAGEMENT AHMEDABAD
विद्याविनियोगाद्विकास:

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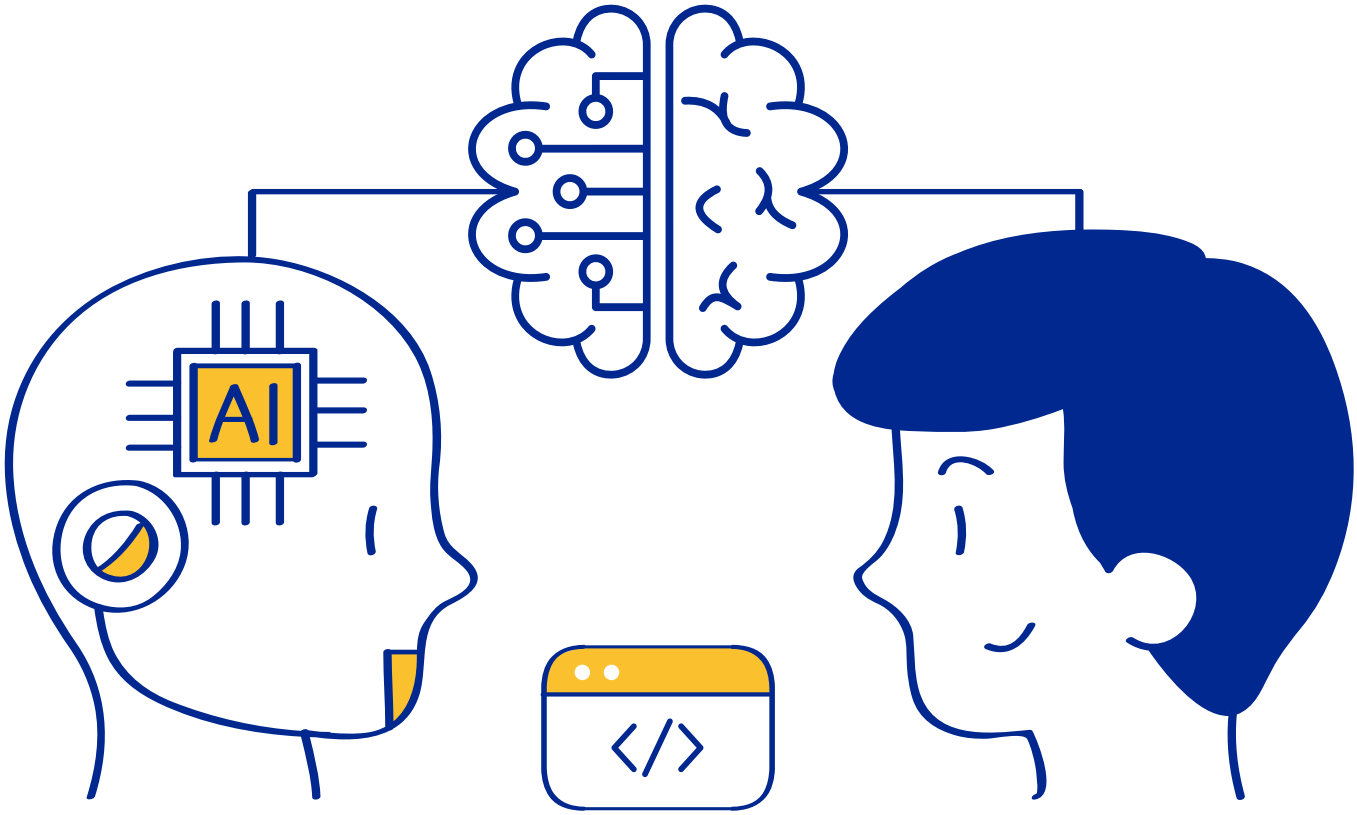
Labour-force Perception about AI:

A Study on Indian White-collar Workers



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Brij Disa Centre for Data Science and Artificial Intelligence (CDSA)

The Centre, hosted within IIM Ahmedabad, is a data analytics and AI research hub. It provides a platform for faculty, scholars, and practitioners to conduct and disseminate cutting-edge research on data analytics and artificial intelligence towards solutions applicable to business, governance, and policy. CDSA's activities include seminars, workshops, conferences, and case-based research to promote an understanding of current industry practices and future needs. Its goal is to build relationships between academics and practitioners in data-driven fields. Further, the Centre engages in impactful consulting projects with industry partners, providing students with hands-on experience that benefits both students and businesses.

Research partners - Wadhwani Foundation

Founded in 2001, the Wadhwani Foundation is a not-for-profit organisation that works to accelerate job growth and enable millions to earn a family-sustaining wage across multiple countries in Asia, Africa, and Latin America.

Executive Summary

Artificial intelligence (AI) has emerged as the defining technology of our age, transforming industries, economies, and society. While AI holds significant promise for economic growth and innovation, its ramifications for the workforce are complex and multifaceted. India ranks among the top countries investing in AI-driven transformation. The IIMA-BCG (2023) study highlighted AI as a strategic imperative for India, critical for maintaining and enhancing its competitiveness. Therefore, the Indian corporate sector and policymakers must understand how AI can sustain and grow employment. The current report features among the earliest attempts focused on gauging the potential impact of AI on India's white-collar workforce. We expect our effort will trigger deeper and more expansive research. To that extent, the findings of the current report are indicative and limited by the scope of the study and must not be considered definitive. Understanding the workforce's perspectives is crucial for informed policymaking, strategic planning, and effective workforce development initiatives.

This study specifically aims to uncover the awareness and usage of AI among white-collar workers and their perception of its implications for the future of jobs. Further, it assesses the workforce readiness to adapt to and embrace AI-driven transformations. For this purpose, we used a mix of methods. In particular, the three methods of exploration are as follows.

- A field survey of over 550 white-collar employees
- Analysis of over 70,000 job vacancies in India from public data sources
- Detailed interviews of 31 business executives

Findings from the Survey

- The impact of AI technologies on the Indian white-collar workforce has already begun. 55% of employees surveyed agreed to have used AI tools at the workplace. Further, 48% of survey participants stated that their organisation had provided training in AI.
  - The adoption rate of AI is a function of academic background. Technical diploma holders (72%) have the highest AI adoption rate, followed by postgraduates (64%) and graduates (39%).
  - Business context and experience play critical roles in AI adoption. Employees with 6 to 10 years of experience have the highest AI adoption rate (63%), followed by employees with 11 to 18 years of experience. Surprisingly, entry-level employees have the lowest adoption rate (32%).
- The survey participants anticipate a significant change in job profiles driven by AI. 68% of the employees expect AI to partially or fully automate their jobs in the next five years. 40% of responders perceive that their current skills will become redundant. At the same time, 63% expect AI to create new job roles over the next five years.
  - Employees with technical backgrounds are optimistic about their future, as 83% expect AI to create more jobs in future, while 67% perceive their current jobs to be automated. Employees with postgraduate qualifications are pessimistic. 63% of them expect their current job to be automated, while 52% expect AI to create new jobs.
  - Among entry-level employees, 50% expect their roles to be automated, while 34% believe AI will create new jobs.

- The workforce appreciates the importance of AI. 72% acknowledge that AI increases their performance at work, while 59% believe AI complements their work. 62% of respondents admitted using AI tools outside their work requirements.

- The current level of AI adoption by industry shows some potential AI winners and some surprising laggards. In AI adoption, the education sector (74%), information technology (66%) and public administration (61%) lead the way. Meanwhile, sectors like retail and trade (31%), infrastructure (38%), and finance and insurance (54%) are lagging in AI adoption. Here, the presence of finance and insurance among relative laggards is surprising.

  - Over 80% of employees in education, healthcare, and public administration believe that AI improves their performance. Among industries, retail and trade have the lowest proportion of employees (55%) who believe AI improves performance.

  - Manufacturing, IT, and public administration are three industries where a higher proportion of white-collar employees (63%, 73% and 46%, respectively) believe AI will create new jobs vis-à-vis the proportion who believe that their current job will be automated (62%, 64% and 42% respectively).

  - Employees in the education and healthcare sectors perceive themselves to be most impacted since 78% and 70%, respectively, expect their work to be automated. In comparison, only 52% and 42% expect AI to create new jobs in their industry.

Insights

- **AI disruption has begun:** The disruption by AI technologies in the Indian white-collar workforce is already underway. The current level of AI intervention is arguably higher than is generally perceived.

- **Employees taking up the AI challenge:** A substantial portion of white-collar employees are taking the challenge head-on and are going for AI-related training on their own or taking up training facilitated by their organisation. An overwhelming majority believes AI improves their performance and that knowledge of AI is essential for their career advancement.

- **Believers in AI job automation slightly outnumber believers in AI job creation:** 68% of the employees expect AI to partially or fully automate their jobs in the next five years. 40% of responders perceive that their current skills will become redundant. At the same time, 63% expect AI to create new job roles over the next five years.

- **The current graduation/postgraduate setup is not optimal for the AI era:** The awareness and adoption of AI tools and AI training are low among recent graduates and entry-level workers (less than five years of experience). This may indicate a gap in their current education and training, which organisations can address through training and upskilling programs.

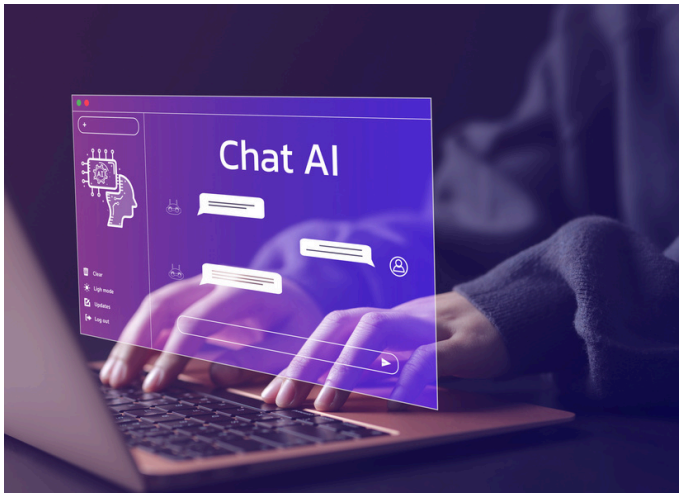
- **Uneven AI adoption across industries:** Education, IT, manufacturing, and healthcare are more actively training and exposing employees to AI. Retail and trade, and infrastructure are laggards in this aspect. Public administration is well informed and tends to expose its employees to AI. A surprise finding in this study is finance and insurance industry not featuring among the top industries in training and exposing their employees to AI.

Introduction

The advent of Artificial Intelligence (AI) is ushering in a technological revolution that is reshaping industries, redefining business models, and transforming the nature of work itself. Expectedly, the impact of AI on the workforce is a subject of intense debate and analysis. AI, being a General Purpose Technology (GPT), on the lines of steam engines, electricity, computers and the internet, will have many direct and indirect impacts. At this point, an understanding of what exactly constitutes AI and the contours of its impact may be useful.

Defining Artificial Intelligence

Artificial Intelligence (AI) was coined in 1955 by John McCarthy at Stanford University as "the science and engineering of making intelligent machines." Since then, multiple researchers and organisations have come up with different descriptions and definitions. There are too many definitions of AI to list here, and they also fall outside the scope of the report. The main takeaway is that, by and large, the definition became less specific, more malleable and expansive over the years. Some of the recent characterisations are fundamentally descriptive rather than definitive.



For instance, Furman and Seamans (2019) referred to AI as "a loose term used to describe a range of advanced technologies that exhibit human-like intelligence including machine learning, autonomous robotics and vehicles, computer vision, language processing, virtual agents, and neural networks." Brynjolfsson, Li and Raymond (2023) defined AI as "an umbrella term that refers to a computer system that is able to sense, reason, or act like a human." For this study, we use a functional definition adopted by the global body Organisation for Economic Co-operation and Development (OECD) in their impact of AI on the workplace survey (Lane, Williams and Broecke, 2023). The definition, for our purpose, is as follows.

"Artificial intelligence - or AI in short - is what enables smart computer programs and machines to carry out tasks that would typically require human intelligence." (Lane, Williams and Broecke, 2023)

Below are some examples relevant to the context of this study:

- Automated workflows such as scheduling tasks, sending emails, contacting customers
- Assistance in content creation such as writing with ChatGPT, audio transcription tools with Otter.ai/Krisp.ai, image and video generation with apps such as Dall-E/Midjourney
- Automated manufacturing processes such as robotic arms, digital twins, industrial robots
- Automated facial recognition, asset tracking and inventory management

AI: A Schumpeterian Dilemma

Schumpeter's concept of creative destruction suggests that innovation, while disruptive in the short term, ultimately leads to long-term economic growth. Along the lines of past GPTs, AI is likely to fit this framework. While some jobs would disappear and new ones would be created due to AI, the transition period can be challenging. To navigate this challenge, one must appreciate the uncertainties in the job and skill landscape attributable to AI. Some of the prominent uncertainties in this regard are:

- The pace at which new AI-driven jobs will emerge relative to the job destruction.
- The availability of socio-economic infrastructure for large-scale up-skilling and reskilling of the workforce.
- The economic and personal cost of reskilling individuals in terms of suitability of post-skilling employment, geographical displacement, expense and opportunity cost of the training.

A Peek into the Land of Opportunities

A user-friendly Large Language Model (LLM) by OpenAI has made the world rethink adoption velocity. New jobs will likely emerge at an accelerated pace in areas like AI development, data analysis, and human-machine collaboration. AI can also augment human capabilities, allowing workers to focus on cognitive tasks requiring creativity, critical thinking, and social skills. The job descriptions, organisational structures and contracts with employees must evolve to enable AI to maximise human potential.

The Wage Polarisation Threat

AI continues to automate routine tasks. Specifically, repetitive tasks requiring limited judgment and discretion and low cognitive skills may be disproportionately impacted by AI. Conversely, new jobs that require specialized AI skills or a high level of interaction between human creativity and computational power are already emerging in the job market. In this scenario, complex expertise in certain niche areas will see disproportionate demand and wages while others face job insecurity. Those who acquire these skills may see significant wage hikes, while others stagnate or even face job losses.

Unprecedented Level of Upskilling and Reskilling Required

Among possible solutions to the above threat of wage polarisation, reskilling and upskilling are likely to play an important role. Upskilling involves building upon existing skill sets, while reskilling focuses on acquiring new ones. The ideal approach might vary based on the individual's current skill level and the evolving needs of different industries. The scale of this initiative may be something human society may not have experienced before. Doubt remains on whether India's (or most countries') current educational and training infrastructure can handle the scope and scale of such an exercise. Solutions such as alternative learning models on the lines of online platforms or industry-specific training programs may be further explored and experimented with. However, they are unlikely to be adequate by themselves.

India's Call to Action

India has been delivering the highest economic growth rates post-COVID among the major economies. India's aspiration to become a middle-income economy over the next two to three decades and generate jobs for a young population requires the GDP growth rate to continue.

However, the advent of AI presents a unique exogenous factor which may not have been explicitly considered in this growth equation. Adopting AI in production and services is essential to maintaining and strengthening the nation's competitive edge. At the same time, the AI agenda should be set to not stop at increasing the productivity of current jobs and industries. AI should be leveraged to enhance the labour force's capability, potential, and creativity, thus creating new industries, services, and jobs. Addressing these issues requires a collaborative effort from government, educational institutions, businesses, and individuals. The future of work in India hinges on our collective response to these challenges.

Global Perspective on AI Adoption

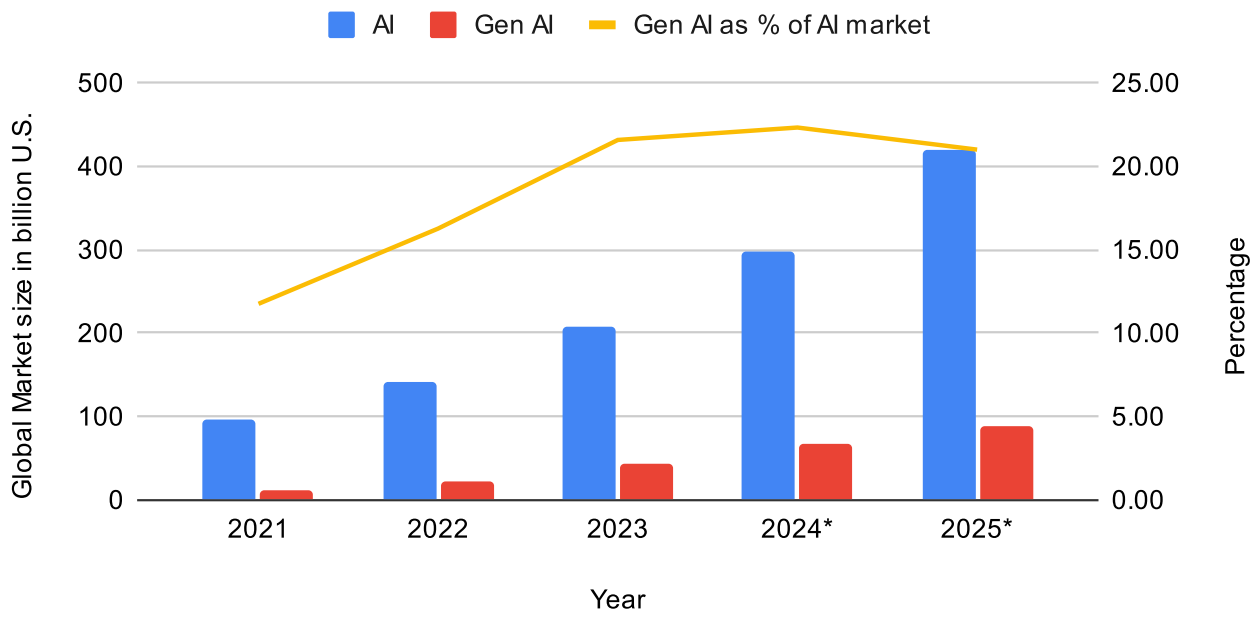
Impact on Global Economy: A global report on the impact of AI (World Economic Forum, 2017) predicts that AI could contribute up to USD 15.7 trillion to the global economy in 2030, more than the current output of China and India combined. Of this, USD 6.6 trillion is likely from increased productivity and USD 9.1 trillion from consumption side effects.

AI Investments: The Institute for Human-Centered AI at Stanford University collected and published multiple useful estimates on global AI investments (The AI Index 2024 Annual Report). Some of the important ones are as follows. In 2023, the total AI investment was USD 189.2 billion, a decrease of approximately 20% from 2022. Although global investments dropped, the United States dominates AI investments with USD 67.2 billion invested, nearly 8.7 times the next country, China, with USD 7.8 billion. Additionally, the count of newly funded AI companies in 2023 spiked to 1,812, up 40.6% from 2022. The focus areas that attracted the most investment were (1) AI infrastructure and governance (USD 18.3 billion), (2) NLP and customer support (USD 8.1 billion), and (3) data management and processing (USD 5.5 billion).

Market Expansion of Generative AI and Expected Future Trajectory: Gen-AI applications such as ChatGPT, Stable Diffusion, GitHub Copilot, ClaudeAI and others have gained widespread adoption and broad utility across organisational functions and industries. Despite declining overall AI private investment last year, funding for generative AI has surged. The generative AI market is projected to reach USD 100 billion by 2025 (Statista, 2024). While both AI and generative AI market sizes are increasing, the broader field of AI is expected to grow faster in the long run.

Fig. 1 - AI and Generative AI market size

Generative AI as a percentage of total AI market peaks in year 2024



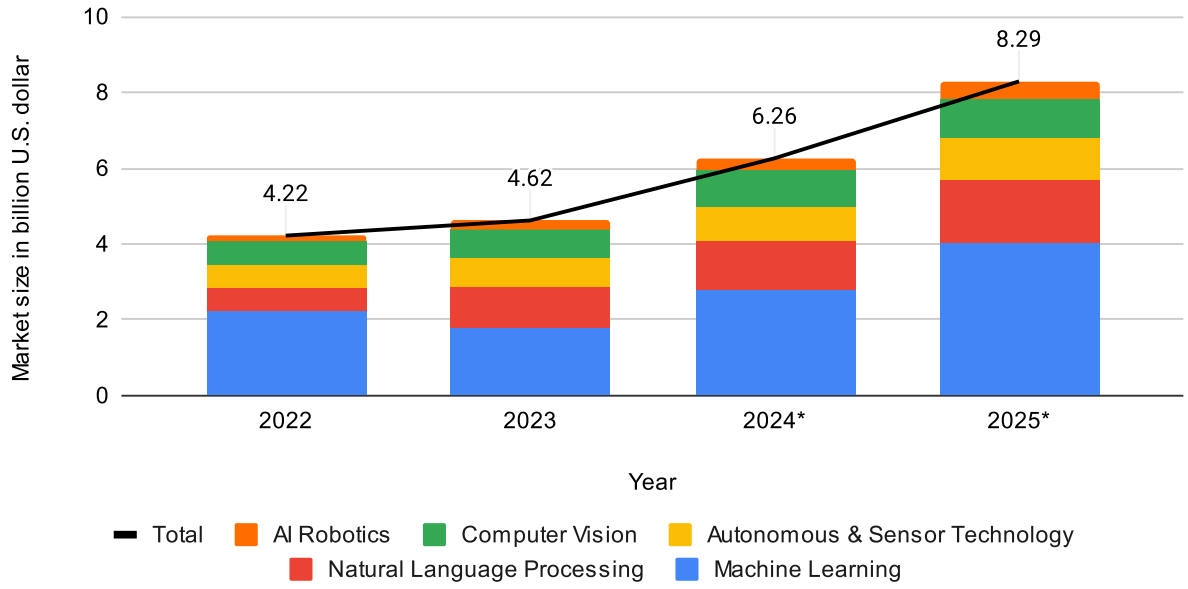
Data source: Artificial intelligence (AI) worldwide - statistics & facts. Statista. Retrieved March 26, 2024. Gen AI as a % of the AI market is calculated.

Government Initiatives: The European Union enacted the AI Act, and the US President signed an Executive Order on AI, indicating increasing AI capabilities and the establishment of governance frameworks. In 2023, about 11,500 Hollywood writers struck over AI script writing concerns, securing agreements on AI usage disclosure and residuals for AI-generated scripts after halting major productions for months. AI systems with significant decision-making impact on employment, such as those used in recruiting or other HR processes, are classified as high-risk under the EU AI Act 2023.

Aside from strong policy initiatives, many governments have taken concrete action to upskill their citizens in AI. Adapting education systems to these new realities seems inevitable, with many nations encouraging students and professionals to adopt AI literacy. In February 2024, the Singapore government announced a new SkillsFuture Level-Up Programme offering SGD 4,000 credit top-up, for Singaporeans over 40 to attend training courses for better employability. The US is injecting AI into K-12 via personalised learning and virtual tutors. Italy earmarked EUR 30 million to improve the skills of unemployed people and those workers whose jobs could be most at risk from advancing automation and artificial intelligence. Countries like South Korea (USD 10 billion) and France (USD 5.5 billion) invested funds directly into AI education and research.

Fig. 2 - Indian AI market size

Machine Learning has largest contribution



Data source: Artificial intelligence (AI) worldwide - statistics & facts. Statista. Retrieved March 26, 2024

India's AI opportunity

Value from AI to the Indian Economy

Digital Governance

1.38 B
Aadhar: 1.38 billion

131B
UPI transactions: 131 billion, totalling INR 200 trillion

345M
FasTag: 345 million issued

Bhashini

India Urban Data Exchange (IUDX) platform

Organisations leveraging AI to build applications

1400
1,400 Industrial Patents in AI (Statista, 2020)

56.3% Vs 2.2%
Open Source LLMs:
English (56.3%) Vs Hindi (2.2%)

2B
VC investments in AI: India (USD 2 billion) at 3.6% of the US (USD 55 billion)

Academic Research

1% → 7%

India's high-impact papers rise from 1% to 7% in 20 years (US at 17%)

Digital Infrastructure and Communication

1.25B
USD1.25 billion to deploy over 10,000 Graphics Processing Units (GPUs)

800M
Teledensity at 85.7% with 800 million internet users

2.33M
2.33 million Base Transceiver Systems (End of FY-2022) (India DOT, 2022)

100
100 Smart Cities, 88% of sanctioned projects, worth INR 65,475 crore completed (National Progress - Smart Cities Mission)

Educational Institutions

Graduate Education:

670
Bachelor's Programs in Data Science and AI

76
2-year Master's Programs

1000+
Certifications

Early Education:

27,000 CBSE (27,000 schools) - incorporated AI in the curriculum in 2023

Education qualification of Data Scientist / Machine Learning Experts:

63.5%
Bachelor's degree (63.5%)

30.6%
Master's degree (30.6%)

Value from AI to the Indian Economy

By 2035, AI is anticipated to contribute a staggering USD 967 billion to the Indian economy. The AI market in India is growing at a CAGR of 25-35% and is expected to reach USD 28 billion by 2030 (Dharmaraj, 2023). Furthermore, India's growing population warrants AI-driven solutions within critical sectors like education, healthcare, and agriculture to address escalating societal needs. The China+1 initiative's revitalisation of the manufacturing sector presents opportunities to leverage AI for enhanced efficiency and competitiveness.

Digital Governance

The Government of India is positioning itself as a global leader in AI innovation with the Digital India and IndiaAI Mission programs. India's National Semiconductor Mission seeks to build a domestic chip industry through over USD 10 billion of "production-linked incentives" to jumpstart chip manufacturing. The Smart City Research Centre at IIIT-H fosters data exchange in 10 smart cities through the Indian Urban Data Exchange (IUDX) platform to share data among city administrations, government departments, and municipal bodies. 25+ cities implementing AI solutions in mobility, security, waste management.

Digital Infrastructure and Communications

India is expanding its digital infrastructure and internet accessibility, empowering AI deployment. Under the India AI mission, the Union Cabinet has approved an ambitious USD 1.25 billion investment over five years to deploy over 10,000 Graphics Processing Units (GPUs). The Centre for Development of Advanced Computing (C-DAC), Pune, has implemented AI Research Analytics and Knowledge Dissemination Platform (AIRAWAT) of 200 AI Petaflops to provide computation power to startups, academics, and researchers.

Research and Educational Institutions

India has secured the top position in AI skill penetration, highlighting the country's skill potential (Institute for Human-Centered AI, 2022). The Central Board of Secondary Education (CBSE) introduced coding and AI in classes 9 and 10 in the academic session 2019-2020 as part of the New Education Policy (NEP) 2020 recommendations. From our secondary research, we could enlist 670 AI and Data Science Engineering Degrees and 76 Masters programs related to AI by Management and Engineering colleges. The scheme 'Establishment of 3 Centres of Excellence (CoEs) in Artificial Intelligence (AI)' was allocated INR 255 crore in FY 2024-25 to develop AI products in agriculture, health and sustainable cities.

AI Reshaping the Workforce

The proliferation of artificial intelligence (AI) has reignited the debate on potential "technological unemployment" across various sectors of the economy. We find researchers, technologists, and thought leaders on both sides of the debate. One side has postulated that an escalating number of tasks traditionally performed by human labour will become automated as AI capabilities advance. The other side postulated that the productivity and innovation gains from automation will create new businesses and jobs. The current study acknowledges that both sides have relevant points given the 'never-before-seen' situation and the emergent behaviour of AI's impact on society. The impact of AI on the white-collar workforce is multifaceted, influenced by several factors including the pace and scope of automation integration, the specific jobs and sectors impacted, and the availability of opportunities for workers to re-skill or upskill. However, specific robust frameworks to assess the possible trajectory of the Human-AI interaction can help society devise some no-regret moves. The worst thing society can do is not act and let things evolve, or go to the other extreme and ban most AI initiatives.

Job Displacement and Reinstatement: Multiple research papers have explored the task-based method to calculate technology-induced labour displacement, exploring varied facets such as worker productivity, automation of routine tasks and brilliant machines learning tacit knowledge. The Frey and Osborne (2017) study estimated that 47% of occupations were exposed to AI, creating dystopian alarms. Autor (2016) and Agrawal, Gans, and Goldfarb (2020) made conservative estimates, stating that most jobs and industries are only partially exposed to automation and are thus more likely to be complemented rather than substituted by AI. In a more 'Schumpeterian' work, Lawrence et al. (2017) predict creative destruction wherein AI-led productivity gains may lead to a positive spillover effect, creating new jobs.

Job Polarisation: In retrospect, the first era of digital automation was defined by the "hollowing out" of middle-class jobs in the labor market.

"AI is going to replace tasks, not jobs, and the sooner we understand how to think about AI-Human complement, the better we will be able to embrace its potential while mitigating its downsides."

- Brynjolfsson and McAfee (2016)

While this phenomenon of job polarisation evidenced the diminishing need for middle-skill jobs, recent studies have shown that AI threatens high-skill occupations. On the other hand, robotics automates routine low-skill jobs, thus displacing workers into lower-paying roles.

Skill Gap and Skill Mismatch: Reports by Squicciarini and Nachtigall (2021) and our job vacancy analysis highlight increased job postings requiring AI expertise, underscoring the growing need for skills relevant to the new technology paradigm. As AI reshapes job profiles, a significant skills gap emerges where the demand for specific skills outstrips supply. Felten et al. (2018) and Webb (2019) highlight the likelihood of AI disproportionately affecting cognitive tasks and high-income occupations, signalling a shift towards more advanced skill sets in the labour market.

Wage Inequality: Studies by Copestake et al. (2023) and Alekseeva et al. (2020) report that AI skills command a wage premium, reflecting their growing demand and value to organisations. The integration of AI into various sectors can intensify existing wage disparities. High-skill workers who can effectively integrate and complement AI technologies tend to command higher wages, whereas low-skill workers displaced by automation face wage stagnation and skill obsolescence. Acemoglu and Restrepo (2022) estimate that 50% to 70% of the increase in earnings inequality from 1980 through 2016—and the entirety of the fall in real wages is due to the adverse effects of automation on worker groups that were initially more specialised in routine task-intensive work.

"White collar jobs may be most exposed to AI's spread."

- Brooking's analysis of Webb (2019)

"It is a near-certainty that AI will increasingly be deployed to accomplish mid- and high-level decision-making tasks that have historically been performed by managers and professionals."

- Autor, (2022)

Studying AI-Driven Workforce Disruptions

Understanding AI's impact on the future of work and the nature of the workforce is crucial in crafting informed policies and regulations that protect workers while promoting innovation. As summarised below, many international organisations and leading academicians have carried out primary and secondary research to study these pressing issues.

Main themes of inquiry	Principal queries	Research methods deployed	International studies
Technological change	What is the extent of usage of AI technologies at work? How does the use of AI tools change employees' work experience?	Collecting industry-level and employee-level data on AI adoption Conducting interviews and focus group discussions	The European skills and jobs survey (2014), (2021) Lane, Williams and Broecke (2023). OECD study on AI impact on workplace
Labor demand	How exposed is each job role? Which demographics are most affected? Which industries are creating jobs in AI?	Task-based methods that identify and quantify substitution and displacement effects Job vacancy data analysis to study new job titles and labour demand	Frey and Osborne (2017) and Felten, Edward and Raj (2019) research with O*NET employee database Squicciarini and Nachtigall (2021) and Copestake et al. (2023) vacancy data studies
Skill demand	What are the new skills required for new AI jobs? Does AI create skill gaps and skill mismatch trends?	Collecting micro-level data from workers through employee surveys Job vacancies data analysis to study new skills demand	Survey of Adult Skills (PIAAC) by OECD. The European skills and jobs survey (2014), (2021)

Research methodology for this report

We have adopted a mixed methods approach involving interviews and surveys with secondary data for triangulation. To set up the context, we first describe the globally evolving narrative on AI and the recent research advances and evidence. The next step is to understand the evolving perspectives of business executives across industries as they navigate the new area of AI-powered disruptions. This exploratory part of the study grounds the more significant questions around AI. In the second phase, we conduct a pilot field survey to capture perceptions regarding AI among white-collared workers. In the final phase, we triangulate our findings based on secondary data collection around current open jobs, AI skills in job descriptions, AI investments and similar statistics on AI-related activities.

Research Method	Employee Survey	Personal Interviews	Job Vacancy Data Analysis
Data collected	550+ employees surveyed across multiple cities in India	31 interviews conducted with managers and business leaders	70,000 job vacancies data collected
Identify technology change	✓	✓	✗
Study labor demand	✓	✗	✓
Study skills demand	✓	✓	✓

Note: All inferences drawn and described below are necessarily dependent on the sample size of the survey respondents. All estimates are correct to the best of our knowledge within-sample and out-of-sample extrapolations should be done with caution.

Findings from the Study

High adoption of AI tools in the Indian workplace

The adoption of AI tools is already widespread in India. This is not surprising, given the Indian government's focus on public digital infrastructure. India has one of the largest technical workforces globally and extensively uses digital and AI-supported interfaces in consumer-focused industries.

55% of surveyed white collar office workers have used AI tools at the workplace, while 58% have upskilled in AI. Interviewees shared multiple use cases, from enhancing customer service through speech-to-text and sentiment analysis in call centres to driving hyperlocal marketing campaigns and lead analysis where AI is being leveraged. Managers also shared that AI internal tools are created for fleet management, predictive maintenance needs, and data collection. The high awareness and use of AI tools signify that AI adoption is increasing unexpectedly, catching up with global adoption, which is as high as 75%, as per LinkedIn's 2024 Work Trend Index Annual Report.

When comparing AI usage across industries, the education sector (74%), information technology (66%), and public administration (61%) lead the way. However, sectors like retail and trade (31%), infrastructure (38%), and finance and insurance (54%) are lagging behind the average. In education, public administration, healthcare, and manufacturing, the percentage of employees self-training is higher than that of employees trained by the organisation, showcasing a greater personal initiative.

"AI has made my job easier because now I have a tool that can assist anytime and provide suggestions immediately, unlike earlier when I had to rely heavily on human interaction."

- Customer Support Manager
  Leading Global Automobile Company

"AI tools are used for automated invoice processing, checking bank details, and validating invoices"

- Manager Product Technology
  Leading Indian FMCG Conglomerate

"AI helps in getting patient appointments and reduces the waiting time."

- Medical Director
  Leading Multi-speciality Hospital

Table 1: Adoption Percentage of AI by Industry

Industry	Count of responses	Use AI tools at work (in percent)	Trained in AI by the organisation (in percent)	Self-trained in AI (in percent)
Education	55	74.55	61.82	80.00
Finance and Insurance	59	54.24	47.46	47.46
Healthcare	77	59.74	53.25	57.14
Information Technology	53	66.04	58.49	54.72
Infrastructure	21	38.10	38.10	47.62
Manufacturing	127	60.63	55.91	59.06
Others	33	42.42	39.39	39.39
Public Administration	49	61.22	51.02	61.22
Retail and Trade	93	31.18	26.88	29.03
Total	**567**	**55.03**	**48.68**	**52.91**

Young graduates show the least AI adoption

When we compare AI users by education, 72% of technical diploma holders use AI, followed by 64% of postgraduates and 39% of graduates. In experience level analysis, 63% of employees with 6-10 years of experience and 60% of employees with 11-18 years of experience use AI compared to 41% of entry-level and 32% of senior-level employees. Thus, middle-level employees are more aware and adopt AI faster than entry-level and senior employees.

Fig 3. AI user and Non AI user by Education

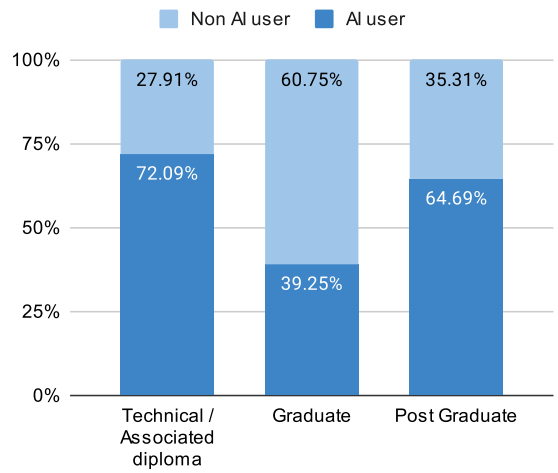
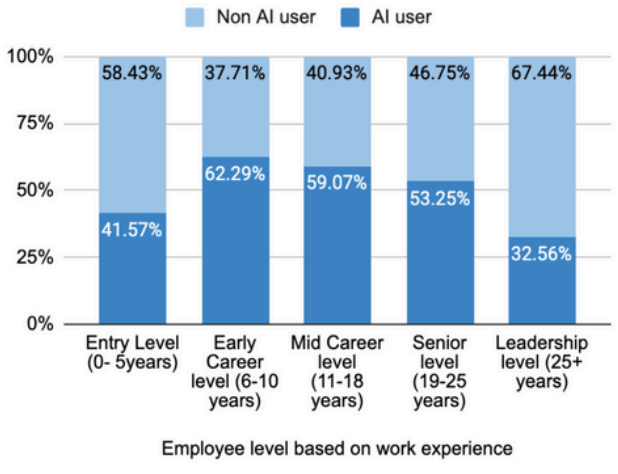


Fig 4. AI user and Non AI User by Work Experience

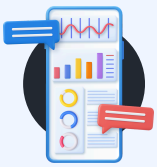


AI users: Employees that responded Always and Frequently and Occasionally in Employee Survey Question 7.2 - Which of these statements describes your use of AI at the workplace? - I currently use AI-enabled tools.

AI is reshaping the future of work

Interviewees shared experiences of workforce reductions, including data entry operators, quality inspectors, demand forecasters, and language translators. In the manufacturing sector, supervisory roles overseeing human workers are shifting towards monitoring and managing systems on the production line. Job profiles like quality control inspectors and demand planners, management information systems (MIS) managers and IT support teams are impacted as AI tools can automate many tasks.

Clerical and administrative roles involving data entry, documentation, and routine tasks appear particularly vulnerable to being automated by AI technologies. Such experiences have stoked fears about job security in specific roles. 60% of employees from the survey believe AI automates their jobs partially or fully, while 68% believe AI will automate their jobs in the next five years. Employees perceive AI impacting their jobs more in the future, which could indicate wider adoption of AI in the workforce in the next five years. The fear of job loss is evident in both interviews and survey results, though more employees fear their own job loss more than an industry-wide labour displacement.



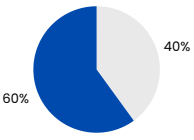
"Data is captured automatically through various loggers. We have reduced the workforce by 50%. AI has helped us, and I can see how human resource requirements may come down to zero in the future."

- Senior Manager
  Electric Vehicle Fleet Management
  Leading Global Automobile Company.

"If you do not master AI, then either you will end up spending much time, or you will end up losing your job"

- Manager Product Technology
  Leading Indian FMCG Conglomerate

AI brings more fear of job loss than hope for new jobs



60% of respondents fear job loss, while 53% hope for new jobs in AI.

"In training design, I need to translate some videos or text from English into any language. I will have to hire some translators, but with AI, the workforce requirement would be zero or with the current rate, it could be about 20%."

- Manager Training Design
  Leading Indian Automobile Manufacturer.

Table 2. Perception of Fear of Job Loss and Hope of New Jobs by Education

	Fear of job loss (in percent)	**Hope of new jobs** (in percent)
Education level	**Agree AI automates their job**	**Agree AI creates new jobs**
Technical / Associated diploma	67.44	83.72
Graduate	49.53	50.71
Post Graduate	67.33	52.35
Total	**60.14**	**53.85**

When comparing the perception of AI impact according to education level, graduates have the least fear of job loss and the least hope of new jobs. Since only 39% of graduates have used AI tools, a general lack of awareness could impact AI perception negatively. Technical diploma holders and postgraduates have a high fear of job loss.

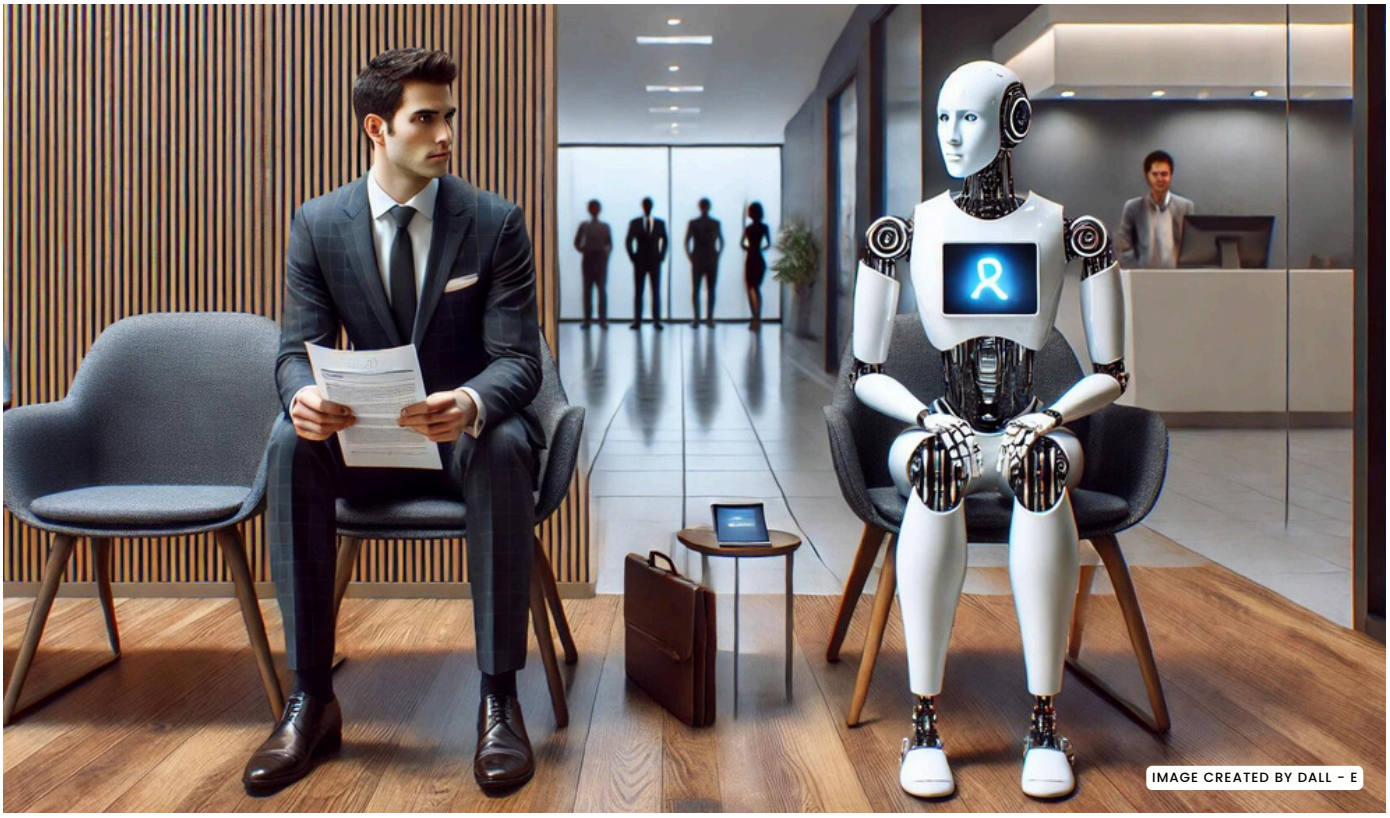
Table 3. Perception of Fear of Job Loss and Hope of New Jobs by Industry

	Fear of job loss (in percent)	**Hope of new jobs** (in percent)
Industry	**Agree AI automates their job**	**Agree AI creates new jobs**
Education	78.18	52.73
Finance and Insurance	62.71	54.24
Healthcare	70.13	42.86
Information Technology	64.15	73.58
Infrastructure	76.19	61.90
Manufacturing	62.20	63.78
Others	48.48	39.39
Public Administration	40.82	46.94
Retail and Trade	45.16	40.86
Total	**60.14**	**53.09**

Table 4. Perception of Fear of Job Loss and Hope of New Jobs by Work Experience

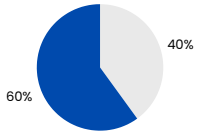
	Fear of job loss (in percent)	**Hope of new jobs** (in percent)
Employee level based on work experience	**Agree AI automates their job**	**Agree AI creates new jobs**
Entry Level (0- 5years)	50.56	34.83
Early Career level (6-10 years)	60.00	52.00
Mid Career level (11-18 years)	70.47	62.18
Senior level (19-25 years)	54.55	55.84
Leadership level (25+ years)	41.86	37.21
Total	**60.14**	**53.09**

The fear of job loss is the least common among senior and leadership-level employees but significantly higher among early-career and mid-career-level employees. Entry-level and leadership-level employees also have the least hope of AI creating new jobs than middle-level employees.



Employees perceive AI will have a greater impact on job displacement in the future

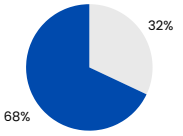
Present perception



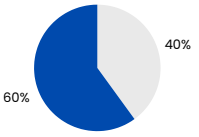
60% of employees believe AI automates their job

48% employees believe that AI replaces jobs in their industry

Future perception



68% of employees believe AI will automate their job in the next 5 years



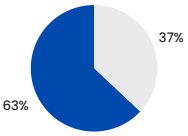
60% of employees believe AI will replace jobs in their industry in the next 5 years

Jobs created for a more skilled and specialised workforce

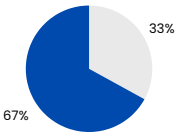
Business executives in their interviews shared that the integration of AI technologies has led to the creation of specialised job roles focussed on topics such as visualisation, forecasting, natural language processing (NLP) experts, and prompt engineers.

Employee perception from the survey

53% of employees agree that AI creates new jobs in their industry.



63% of employees agree that AI will create new jobs in their industry in the next five years.



67% of employees want routine tasks to be automated by AI.

"The traditional roles will transform into more advanced, tech-focused roles like AI engineers, data integrators, and data scientists."

- Senior Manager Strategic Sourcing
  Leading Global Automobile Company

“More specialists who can handle generative AI or Large Language Model experts and NLP linguistic programming experts would be required."

- Manager Digital Transformation
  Leading Indian Automobile Manufacturer

Employees in proactive preparation to ride the AI wave

Employees, as individuals, are taking the lead in AI adoption and training themselves compared to the organisations they work for. Compared to 55% of employees using AI at the workplace, 62% of respondents stated to have used AI outside the workplace, and 58% agreed to have personally subscribed to (free or paid) AI-based tools. In training, 52% of employees are self-training compared to 48% trained by organisations, signifying employee push for AI use. Employees are also strongly positive about AI's impacts on performance and productivity. 72% of employees believe AI skills increase performance and efficiency at work, while 62% of employees believe AI increases productivity, and 59% believe AI complements their work. Except for retail and trade employees, most employees use AI and believe it increases their productivity and performance.

Table 5. Perception of AI Impact on Performance and Productivity

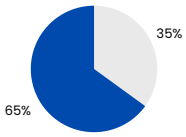
Industry	**Personally subscribed to AI-based tools.** (in percent)	**Used AI tools outside of the workplace.** (in percent)	**Agree AI increases productivity** (in percent)	**Agree AI complements their work** (in percent)	**Agree AI increases their performance at work.** (in percent)
Education	78.18	74.55	80.00	45.45	80.00
Finance and Insurance	59.32	69.49	67.80	57.63	72.88
Healthcare	59.74	70.13	66.23	45.45	81.82
Information Technology	62.26	56.60	66.04	62.26	67.92
Infrastructure	52.38	66.67	57.14	61.90	80.95
Manufacturing	65.35	66.93	60.63	74.80	73.23
Others	48.48	39.39	48.48	33.33	63.64
Public Administration	71.43	73.47	75.51	67.35	81.63
Retail and Trade	31.18	45.16	39.78	62.37	55.91
Total	**58.38**	**62.79**	**61.55**	**59.44**	**72.13**

Upskilling is imperative for an AI-ready workforce

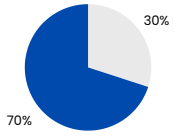
Organisations are proactively investing in building AI capabilities among their workforce. Interviewees highlighted the importance placed on understanding AI basics and developing skills in prompt engineering. Many companies provide basic AI training programs, data science courses, and analytics skill development opportunities. While technical AI proficiency is valued, communication and analytical abilities are seen as complementary skills. Employers actively encourage and incentivise their staff to pursue AI learning, offering reimbursements for relevant courses. Company-wide AI training seminars and workshops are being promoted to facilitate continuous upskilling. Overall, there is a strong organisational commitment to investing in building AI capabilities at scale to prepare the workforce for an AI-driven future.

Employee perception from the survey

58% of employees agree to have already upskilled in AI.



65% of employees want to learn AI skills.



70% of employees believe upskilling in AI is necessary for career growth.

“If you don't use AI tools, you will be left behind, so people will soon realise that if not today, in five years and 10 years it is coming."

- School Principal

"We trained our staff in the new software for AI for about 2-3 months."

- Medical Director
  Top Indian Multi-speciality Hospital

Table 6. Perception of AI impact on upskilling

Industry	**I have upskilled in AI.** (in percent)	**I want to learn AI skills.** (in percent)	**I need training in AI skills for my current job role.** (in percent)	**Upskilling in AI is necessary for my career growth.** (in percent)
Education	49.09	78.18	56.36	80.00
Finance and Insurance	66.10	72.88	54.24	64.41
Healthcare	46.75	68.83	33.77	75.32
Information Technology	66.04	79.25	64.15	81.13
Infrastructure	61.90	52.38	57.14	61.90
Manufacturing	71.65	64.57	61.42	74.02
Others	45.45	51.52	24.24	54.55
Public Administration	53.06	85.71	73.47	63.27
Retail and Trade	50.54	41.94	38.71	64.52
Total	**58.02**	**65.61**	**51.68**	**70.37**

AI skills demand in India

While 51% agree they need AI skills for their current job role, 70% are upskilling for future prospects. The survey participants perceive that demand for AI skills will grow as AI adoption increases. 3,650 or 5.2% of the total 70,000 jobs analysed in our secondary research required AI skills such as machine learning, natural language processing and computer vision. Information technology has the most AI jobs created, as shown in our data, and also reflected in employee perception of new job creation. Analysis of key skills requested by these AI jobs provides insights into the most demanded skills.

Most demanded technical skills in AI jobs

Programming languages	Software Engineering	Data Management
Python SQL Java HTMLCSS Javascript MongoDB Scala	Machine Learning Natural Language Processing Algorithms Object-Oriented Programming Debugging Rest API DevOps Docker	Data Science DBMS (Database Management Systems) Big Data Data Mining Data Analysis Hadoop Cloud Computing

Most demanded cognitive and management skills in AI jobs

Fig 5. AI jobs by location

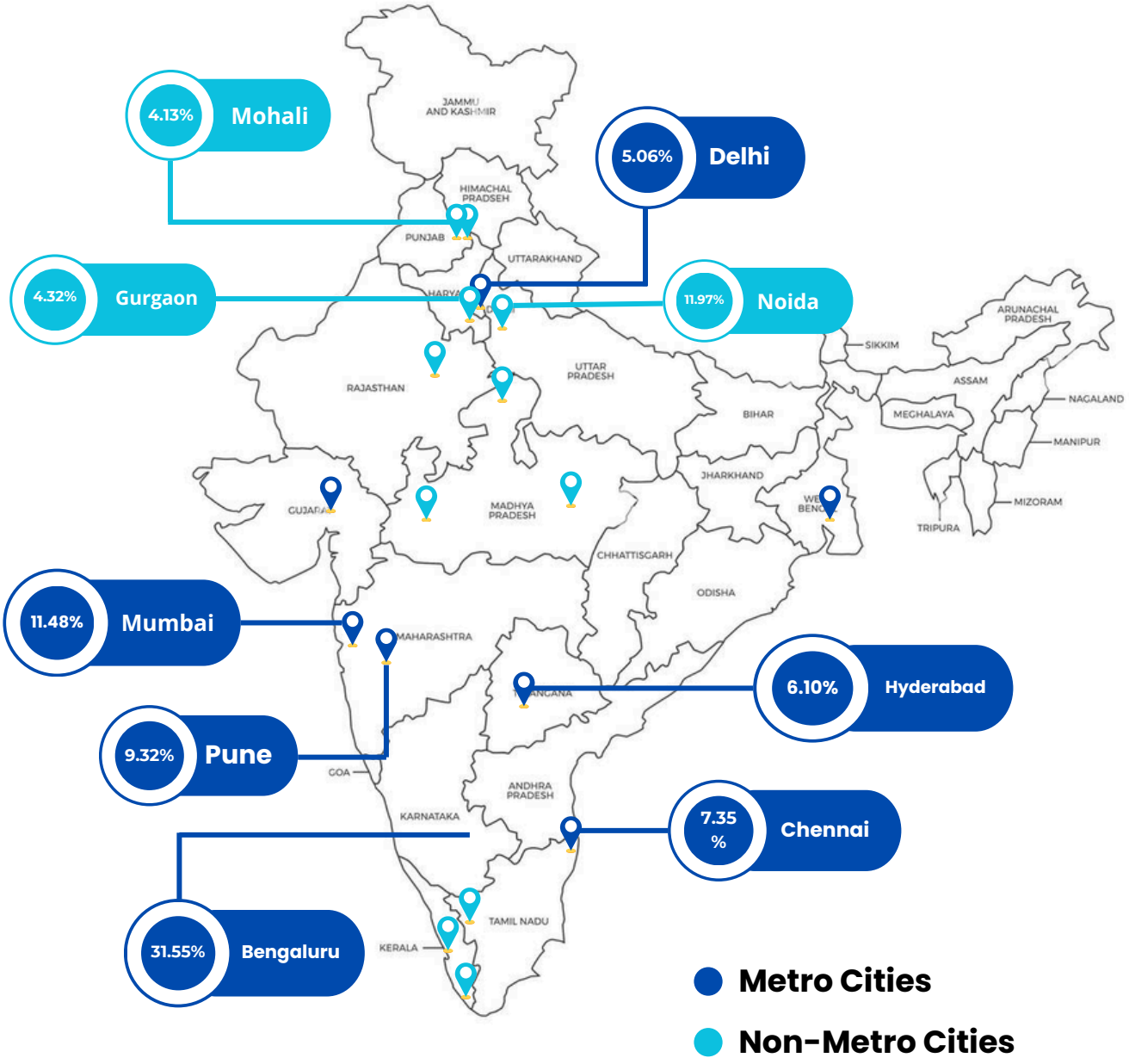
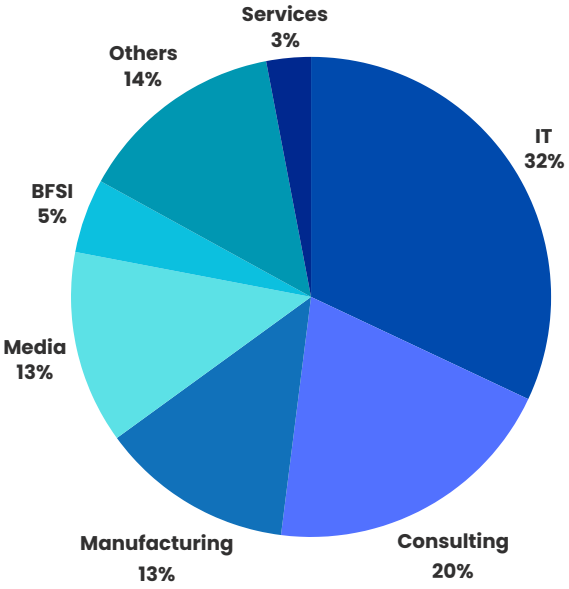


Fig 6. AI jobs by industry



- **Bengaluru** tops across all cities in India with 31% of total AI job vacancies, followed by Mumbai (11%) and Noida (11%)
- 32% of total AI jobs are created in the **information technology** sector
- 50% of AI jobs require **2-5 years minimum work experience.**

The Way Ahead

The advent of AI in the workplace is exemplified throughout the study by the high percentage of employees using AI tools and AI training. Business executives highlighted using Gen-AI tools in everyday tasks to in-house AI software built to optimise business processes. Technological disruption affects employees with a high perception of job loss and skills redundancy and hopes for automation of routine tasks and the creation of new jobs. The enthusiasm to learn AI skills and gain productivity benefits signifies optimism in upskilling for future career growth. Thus, organisations, policymakers, and educational institutions should understand that AI is a future possibility and reality that will shape the professional environment.

India plays a significant role in the global AI race, hosting major summits like the GPAI Summit and investing in INDIAai and Digital India. This reflects its commitment to shaping a responsible AI landscape internationally and leveraging AI for economic growth and social inclusion. The Indian government, led by bodies like the Ministry of Electronics and Information Technology, NITI Aayog, and the National e-Governance Division, has launched several initiatives for the India AI mission. Different bodies focus on enhancing computational capacities, introducing AI into school curriculums, and fostering an AI-ready generation through awareness and knowledge dissemination. Platforms like INDIAai and AIFutureSkills have also been established to support knowledge sharing and collaboration within India's AI ecosystem. However, there is a noticeable lack of cohesive interaction among the entities involved.

Building an AI-centric coordinating agency will help unify the diverse efforts of multiple agencies with a centralised strategy. India has a strong talent pool, a vibrant startup ecosystem, and a data-rich environment, but it lacks infrastructure, specialised skills, and investments. The US and China, which have established dualistic dominance in this sector, are fueled by heavy investments, robust governmental support, and a strong presence of high-tech corporations that drive innovation. Building a central agency in India dedicated to AI would streamline national AI development efforts and ensure cohesive labour market adaptations to technological advancements. This approach positions policymakers as an active collaborator in AI research and development rather than merely a regulatory body. A central agency can also build strong collaboration among academia, industry and government in AI development.

IMAGE CREATED BY DALL - E

AI skilling must be made a strategic priority, and upskilling and reskilling programs must be invested in to equip the workforce with the necessary AI skills and knowledge. The findings indicate an urgent need for enhanced AI literacy and targeted skills development, particularly among entry-level and senior-level employees who lag behind their mid-career counterparts in AI adoption. Educational institutions should develop their curriculum to include AI-focused courses and practical training, mainly targeting groups of graduates who are currently least familiar with AI.

IMAGE CREATED BY DALL - E

Policymakers should capitalise on the strong positive sentiment towards AI benefits. Employees overwhelmingly believe that AI adoption can boost productivity and performance. Key decision-makers should direct this positive sentiment to create customised solutions for Indian needs and challenges. Another impediment to AI adoption could arise from the high fear of job loss, which has to be addressed by policymakers and business leaders by creating policies that foster an AI-friendly ecosystem and discuss and inform technology changes. As per an OECD study (Lane, Williams and Broecke, 2023), worker consultation is associated with better outcomes in terms of worker productivity and working conditions, as well as employment and wage expectations.

As employees navigate the rapidly evolving AI landscape and its proliferating integration, urgent and informed choices must be made to carefully shape AI's overarching impact on the nation's economy and society.

Popular AI-enabled tools at the Workplace

TECHNOLOGY	POPULAR AI SOFTWARES	TASKS
Computer Vision	Google Lens Amazon Rekognition	• Object detection • Image classification
Natural Language Processing	Google's Bard Meta's Llama Amazon Comprehend OpenAI's ChatGPT	• Generating text for emails, reports. • Sentiment analysis • Text classification • Language translation
Speech Processing	Amazon Transcribe Apple's Siri Microsoft Azure Speech Services Amazon Alexa Google Cloud Speech-to-Text	• Speech-to-text conversion • Voice assistants • Chatbots • Call transcription
Image/Video Generation	Microsoft Azure Cognitive Services Midjourney Google Cloud Vision OpenAI's DALL-E	• Image generation • Video generation • Digital art • Media production
Robotics	Boston Dynamics' Atlas Rethink Robotics' Sawyer Samsung's Bespoke AI Universal Robots	• Operating machinery • Inspection robots • Auto-maintenance • Service and care robots
Prediction/ Recommender systems	IBM Maximo RapidMiner Nvidia Merlin KNIME SAS	• Demand forecasting • Risk identification • Process optimization • Real-time decision making

Appendix 1: Methodology note

Employee survey

The survey aimed to understand and assess how jobs and skills will evolve due to the advent of AI in India. The study focuses on white-collar workers. The survey studies AI complementarity in current roles and productivity gains witnessed by AI adoption. The employees are asked whether they see possible displacement in their jobs and industries. Thus, employees' concerns and attitudes towards AI adoption will be studied. The survey also measures the employee's current AI skills and the need to upskill in AI for career progression. The modes of AI training are asked to differentiate whether employees opt for self-directed learning or are trained by their organisations.

The key themes for the survey are -

- Use of AI tools
- Impact of AI on the job
- Impact of AI on skills

Survey design

The survey, Perception of Impact of Artificial Intelligence (AI) on Jobs and Skills, was designed to collect over 550 responses from white-collar office workers in India. The survey collected information on the use of AI tools and employees' perception of AI on jobs and skills from April 2024 to May 2024. The broad references for this survey are Cedefop (2021) and Lane, Williams and Broecke (2023). While the definition of AI and questions numbered 7 and 13 on the use of AI have been adopted (Lane, Williams and Broecke, 2023), the rest of the questions are developed by the research team within the broad framework of the pre-existing studies as referenced above, but adapted to the Indian context. Demographic variables are used as a control mechanism. All survey respondents are employed full-time and above 18 years of age.

Respondents' demographic data

Education	Count	Percentage	Organisational hierarchy	Count	Percentage
Technical / Associated diploma	43	7.58	Junior Level	65	11.46
Graduate	214	37.74	Middle Level	219	38.62
Post Graduate	303	53.44	Senior Level	283	49.91
Grand Total	567	100.00	Grand Total	567	100.00

City	Kolkata	Lucknow	Chennai	Pune	New Delhi	NA	Total
Response count	110	110	101	89	118	39	567
Percentage	19.40	19.40	17.81	15.70	20.81	6.88	100

Fig 7. Industry breakup of Respondents

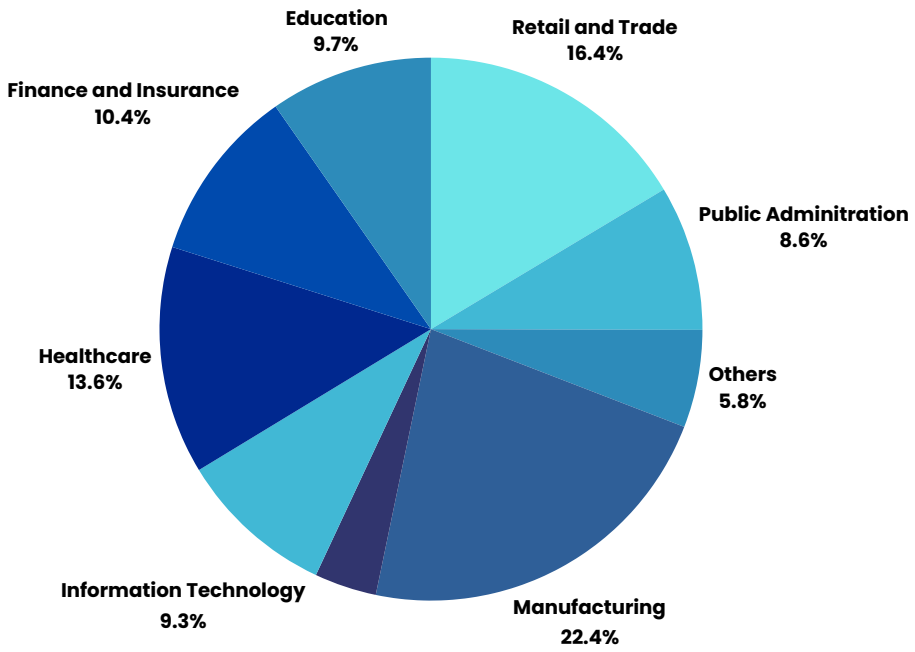
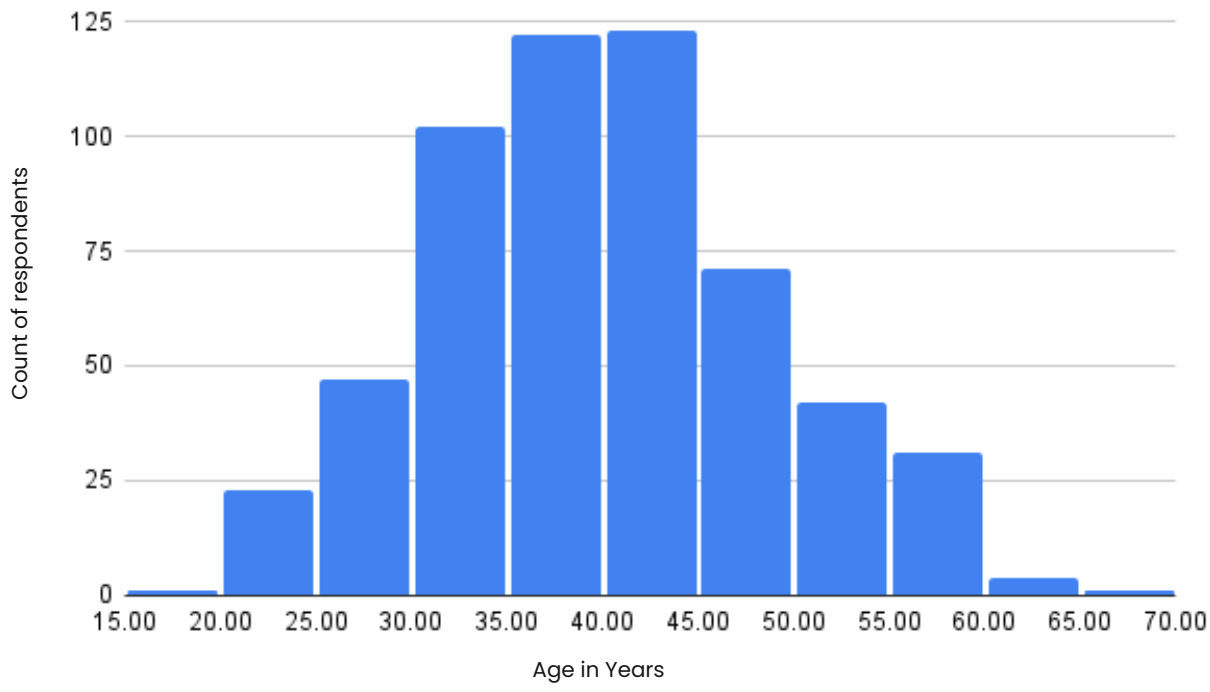


Fig 8. Age In Years Of Respondents



Personal Interviews

In-depth interviews were conducted to comprehend AI adoption in the manufacturing, consumer goods, education, legal and healthcare sectors. The interviewees in middle manager to senior manager roles were asked to share their experiences of the current state of AI adoption in their organisations and industry. They also shared case studies exemplifying displacement and augmentation in jobs. Business leaders and CEOs were asked about current levels of understanding of AI in their fields and across professionals.

CXO and business leaders

The research team conducted 19 interviews with leaders, CXOs, and partners from the legal, education, and healthcare sectors. The questions focused on business challenges and significant changes in their sectors due to AI adoption. The leaders provided their views on the effects on team sizes, skills, and training needs in their organisations. They also shared future expectations within their sectors and possible new emerging roles.

Interview Questions

1. What is the level of understanding of AI across professionals in the studied professions?
2. What is the current integration of AI tools into their day-to-day tasks?
3. What are the changes they have seen in their workforce since the deployment of AI tools?
4. What are the changes they have seen in their own productivity levels?
5. What changes do they expect to see in the future?
6. How have their organizations prepared for the integration of AI tools into working life?
7. What skills need to be built to leverage the full value of AI

Mid to senior managers

The research team conducted 12 interviews with mid-level managers and leaders within the FMCG and automobile industries. Through a thematic analysis of the semi-structured interviews, insights were obtained on understanding the current state of AI adoption within their organisation, changes in job roles due to AI implementation, and potential impacts of AI on employment.

Interview Questions

1. Could you elaborate on the extent to which AI has been integrated into the daily operations of your department/industry?
2. Do you think AI will create new jobs?
3. Has your job changed due to AI and AI tools? How?
4. Do you think roles will be replaced in your industry/function? Which?
5. Do you find any new job opportunities created in your field?
6. Have you observed any major changes in hiring or team sizes within your organization?
7. Does your organisation provide training in AI? Which departments or functions?
8. What are the new skills needed to work in an AI-powered economy

Job vacancy data analysis

AI adoption in India is difficult to assess due to limited data available through employee or industry surveys. A proxy indicator for AI adoption is obtained from labour demand, where data on online job postings allows researchers to infer AI activity across occupations, sectors and locations. With reference to previous studies done using Burning Glass Technologies' (now Lightcast) data on online job openings and Acemoglu et al. (2020), the demand for AI jobs and skills in India is studied. Deploying bag-of-words approaches with pre-specified search terms are used to identify AI-related skills from Alekseeva et al. (2021).

AI-related vacancies are collected from publicly accessible job postings published online. Seventy thousand job vacancies were collected on a rolling basis from November 2023 to April 2024 for analysis from a leading job portal in India. The vacancy data provides information on the location, experience, industry, and specialisations of AI jobs. The upcoming key skills needed for these roles are also studied to provide direction for future upskilling and training courses.

List of interviewees

Sr no	Designation	Company	Industry
1	Senior Manager Strategic Sourcing	Leading Global Automobile Company	Manufacturing
2	Performance Engineer	Leading Global Automobile Company	Manufacturing
3	Customer Support Manager	Leading Global Automobile Company	Manufacturing
4	Manager Training Design After-Sales	Leading Indian Automobile Company	Manufacturing
5	Manager Digital Transformation	Leading Indian Automobile Company	Manufacturing
6	Senior Manager Institutional Sales EV	Leading Global Automobile Company	Manufacturing
7	Senior Manager - Electric Vehicle Fleet Management	Leading Global Automobile Company	Manufacturing
8	Lead Engine Design Manager	Leading Indian Automobile Company	Manufacturing
9	Manager Product Technology	Leading Indian Conglomerate	FMCG
10	Manager, Procurement	Leading Indian Conglomerate	FMCG
11	Quality Manager -Plant operations	Leading Indian Conglomerate	FMCG
12	Manager for Industry 4.0 and Data Science Projects	Leading Indian Conglomerate	FMCG
13	Head of Legal	Indian Investment Fund	Finance
14	Partner	Leading Indian Legal Firm	Legal
15	Partner	Leading Indian Legal Firm	Legal

16	Partner	Leading Indian Legal Firm	Legal
17	Co-Founder	Independent Law Practitioner	Legal
18	Associate General Counsel	AI Contract Management Company	Information Technology
19	General Counsel	Leading Career Institute	Education
20	Partner	Indian Law firm	Legal
21	Medical Director	Top Indian Multi-speciality Hospital	Healthcare
22	Orthopedic Doctor	Top Indian Multi-speciality Hospital	Healthcare
23	Pathologist and Owner	Private Testing Laboratory	Healthcare
24	AI specialist	Top Indian Eye Institute	Healthcare
25	Ophthalmologist	Top Indian Eye Institute	Healthcare
26	Cardiologist	Undisclosed	Healthcare
27	Ophthalmologist	Undisclosed	Healthcare
28	School Principal	Undisclosed	Education
29	Teacher	Undisclosed	Education
30	Educator	Undisclosed	Education
31	Teacher	Indian CBSE School	Education

Survey Questionnaire

Informed Consent

All data is stored in a password-protected electronic format. To help protect your confidentiality, the surveys will not contain information that will personally identify you. The results of this study will be used for scholarly purposes only. If you have any questions about the research study, you may please contact at cdsa@iima.ac.in. This research has been reviewed according to the Indian Institute of Management, Ahmedabad IRB procedures for research involving human subjects. For any further concerns, contact irb@iima.ac.in.

Electronic Consent: Please select your choice below. Clicking on the "agree" button below indicates that:

- you have read the above information
- you voluntarily agree to participate
- you are at least 18 years of age.

If you do not wish to participate in the research study, please decline participation by clicking on the "No, I do not give my consent" button.

1. Yes, I give my consent
2. No, I do not give my consent

Demographic

Q1. Please indicate the range of your age

Q2 What is the highest degree or level of education you have completed?

1. Graduate
2. Post Graduate
3. Technical / Associated diploma
4. Others _____

Q3 The following two questions are related to your work experience. Use the slider to indicate

What is your total work experience?	0	4	8	12	16	20	24	28	32	36	40
How long have you been working in your current role?	0	4	8	12	16	20	24	28	32	36	

In years

Q4 Please indicate your position in organizational hierarchy

1. Junior Level
2. Middle Level
3. Senior Level

Q5 Which industry do you work in?

1. Information Technology
2. Public Administration
3. Education
4. Finance and Insurance
5. Manufacturing
6. Infrastructure
7. Retail and Trade
8. Healthcare
9. Other (please specify) _____

Q6 What is your job title?

_____

Use of AI

For the purpose of the following questions, we use a functional definition of Artificial Intelligence (Lane, Williams and Broecke, 2023) : Artificial intelligence - or AI in short - is what enables smart computer programs and machines to carry out tasks that would typically require human intelligence. Below are some prevalent examples: - Automated workflows such as scheduling of tasks, sending emails, contacting customers - Assistance in content creation such as writing with ChatGPT, audio transcription tools with Otter.ai/Krisp.ai, image and video generation with apps such as Dall-E/Midjourney - Automated manufacturing processes such as robotic arms, digital twins, industrial robots - Automated facial recognition, asset tracking and inventory management.

Q7 Which of these statements describes your use of AI at the workplace?

	Never	Rarely	Occasionally	Frequently	Always
• I have participated in AI trainings provided by my organization	○	○	○	○	○
• I currently use AI - enabled tools	○	○	○	○	○
• I develop and maintain AI - based applications.	○	○	○	○	○
• I manage employees who develop or use AI.	○	○	○	○	○

Display This Question:

If Which of these statements describes your use of AI at the workplace? = I have participated in AI trainings provided by my organization. [Always]

And Which of these statements describes your use of AI at the workplace? = I have participated in AI trainings provided by my organization. [Frequently]

Q8 I complete the AI courses that are provided by my organization.

1. Never
2. Rarely
3. Occasionally
4. Frequently
5. Always

Q9 Which of these statements best describes your personal interest in AI?

	Never	Rarely	Occasionally	Frequently	Always
• I have enrolled in AI courses for self learning.	○	○	○	○	○
• I have personally subscribed to (free or paid) AI-based tools.	○	○	○	○	○
• I have used AI tools outside of workplace.	○	○	○	○	○

Display This Question:

If Which of these statements best describes your personal interest in AI? = I have enrolled in AI courses for self learning. [Frequently]

And Which of these statements best describes your personal interest in AI? = I have enrolled in AI courses for self learning. [Always]

Q10 I complete the AI courses that I enrolled for self learning.

1. Never
2. Rarely
3. Occasionally
4. Frequently
5. Always

Impact on Jobs

Q11 To what extent do you agree with the following statements?

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
• AI is increasing productivity in my current job role.	○	○	○	○	○
• AI is automating my job role.	○	○	○	○	○
• AI is creating new jobs in my industry.	○	○	○	○	○
• AI is replacing jobs in my industry.	○	○	○	○	○

Q12 To what extent do you agree with the following statements about the future? (Think 5 years from now)

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
• AI will increase productivity in my current job role.	○	○	○	○	○
• AI will automate my job role.	○	○	○	○	○
• AI will create new jobs in my industry.	○	○	○	○	○
• AI will replace jobs in my industry.	○	○	○	○	○

Impact on Skills

Q13 To what extent do you agree with the following statements about the skills required for your current job?

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
• My work is complemented by AI.	○	○	○	○	○
• Some of my skills are made less valuable by AI.	○	○	○	○	○
• I have upskilled in AI.	○	○	○	○	○
• I want to learn AI skills.	○	○	○	○	○

Q14 To what extent do you agree with the following statements?

	Strongly disagree	Disagree	Neither agree nor disagree		Strongly agree
• I need training in AI skills for my current job role.	○	○	○	○	○
• Upskilling in AI is necessary for my promotion and career growth.	○	○	○	○	○
• AI skills increases my performance and efficiency at work.	○	○	○	○	○
• My routine and repetitive tasks should be automated by AI.	○	○	○	○	○

Feedback

Q14 I was able to understand all the questions in the survey

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree

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