



TRANSFORMATION OF EMPLOYMENT OPPORTUNITIES IN AI ERA

Anjali

Assistant Professor of Economics, RR BAWA DAV College for Girls, Batala

ABSTRACT

The objective of the studies shed light on India's status in Artificial intelligence. We also explore the key contribution AI companies to India's TECH Landscape. We also examine the various job opportunities in AI sector and its impact of AI in India's employment and the skill of the labor.

INTRODUCTION

AI is a technology that enable machines and computer to perform task that typically require human intelligence. India has emerged as the fastest growing developer population globally and ranked second in public generative AI projects on GiT HUB (a cloud based platform built on Git version control system that allows developers and team to collaborate on projects). According to the Stanford AI index 2024, India rank first globally in AI skill penetration with a score of 2.8 ahead of the U.S. 2.2 and Germany 1.9. India also lead in AI skill penetration for woman with a score of 1.7 surpassing the U.S.1.2 and Israel 0.9.

Several Indian companies are making significant strides in the field of Artificial Intelligence some prominent name include TATA Elxsi, Fractal Analysis, Haptik, Infosys, Persistent System, Locus, Zoho.

How AI works

Step1 Data collection: AI system rely on large set of data which could include images, text or sensor reading.

Step2 Processing and learning: It uses algorithm to analyze data and identify pattern.

Step3 Model Training: The AI mode is trained using the data, adjusting its internal setting to improve its prediction. With more data, the model become more accurate.

Step4 Decision Making: Once trained, it uses the learned patterns to make prediction, automate decision and perform task.

Step5 Feedback and improvement: It can improve through feedback especially in methods like reinforcement learning. I this case the AI receives reward or penalties, refining its ability to make better decision over time.

Key Contribution of Artificial Intelligence Companies to India's TECH Landscape

- ❖ In the BFSI sector, AI is used for real-time fraud detection, credit risk assessment, algorithmic trading, and personalized financial services. Companies like Razorpay and Upstox use AI to analyze transaction data and predict stock market trends.
- ❖ AI-powered solutions help farmers with precision farming, crop monitoring, yield prediction, and managing the effects

of climate change. companies like CropIn and Fasal use AI to optimizing farming practices, which directly benefit farmer.

- ❖ AI is used to optimize supply chains, personalize product recommendations, and enhance customer service through advanced chatbots. Flipkart and Zest Money utilize AI for visual search and creditworthiness assessment respectively.
- ❖ AI driven diagnostics and telemedicine platform are making high quality healthcare more accessible, particularly in rural area.
- ❖ AI companies supported by government initiative like Future Skill Prime, are driving the up skilling of the Indian workforce in new technology.
- ❖ Indian startup is leveraging AI to build innovative product and create new business models.
- ❖ Collaboration between AI companies, academia, and government are expanding AI education through new labs, fellowships and revised curricula.

Jobs Consider To Artificial Intelligence

Artificial Intelligence Engineer

- ✓ AI engineer focus on developing the tools, systems, and process that enable the application of AI real –world problems.
- ✓ AI engineers can help cut costs, increase productivity and profits and business recommendation.

Machine Learning Engineer

- ✓ Machine learning engineer often serve as a liaison with other data science team members, collaborating with the data scientist who develop model for building AI.
- ✓ They maintain and improve AI systems.

Data Engineer

- ✓ Data Engineer build a system that collect, manage, and convert raw data into usable information for data scientists, business analysts and other data professionals to interpret.
- ✓ Data Engineer are a board field with the application in nearly every industry.



Robotic Engineer

- ✓ Robotic Engineer develop robotic application for many industries including automotive, manufacturing, defense and medicine.
- ✓ Some may work on site at manufacturing plant overseeing robots during production while other monitor their performance in the real world.

Software Engineer

- ✓ Software Engineer create software for computer and application.
- ✓ A software engineer may also test, improve and maintain software built by other engineer.

Data Scientist

- ✓ Data scientist determine what question an organization or team should ask and help them to figure out how to answer those question well.

Impact of Artificial Intelligence and Automation On India's employment and landscape

Positive impact of AI on India's employment landscape

- The National Association of Software and Service Companies (NASSCOM) projects contribute nearly \$1trillion to the Indian economy by 2035 through increased productivity, new product enhances and enhance global competitiveness.
- Economic Survey (conducted by department of economic affairs, under the ministry of finance) 2024- 25 emphasis that upbeat tone of implication of AI could have on workforce.
- It allows Indian's to stay one step ahead to technological advancement.
- World Economic Forum anticipated that AI will generate 12 million more job in 2025.
- According to report Wheebox National Employability Test (evaluate the skill and ability of fresher's and graduating student for the Indian job market) the demand for AI professionals will be 1 million in 2026.
- It is observed by the Vikram Ahuja (cofounder of ANSR and CEO of Talent 500) AI also promising to provide solution to address recruitment bias relying on objective criteria like qualification skill, minimizing influence of unconscious biases in hiring decision.
- Contribution of AI in IT sector is 26%, education 14%, Manufacture9%, Oil, Gas, Power energy 3%.
- AI powered shift will cause 65% change in skill which are demanded in 2030.
- According to a estimation from the Mc Kinsey Global Institution the development of AI in Indian Industrial sector. ght result in up to 950,000 new job by 2030.
- Indian Government's pledge to spent 1 billion dollar AI research and development for healthcare industry also contributed to the optimistic prognosis for employment creation. The launch of AI powered cancer diagnosis is the

prime example of the potential for new job growth in AI powered medical imaging and diagnostics.

- In Agriculture precision irrigation and crop monitoring system are two example of cutting edge technology that are being develop in agriculture thanks to AI.

Negative impact of AI on India's employment landscape:

- Primary concern AI impact on labor market is widespread job displacement and automation.
- The rise of AI in the job market has resulted demand for skilled labor hence the low skilled worker faces obsolescence.
- According to Mc Kinsey analysis Black worker are in position at high risk of automation, with 24% where as white worker faces only 20%.
- The introduction of AI in workplace can have profound psychological effects on worker. Fear of jobless, uncertainty about the future a and a diminished human interaction can lead to increased stress and anxiety.

SUGGESTION TO REMOVE THE NEGATIVE IMPACT OF AI

- ❖ Government's policymaker should take initiative to upliftment of AI skill and data literacy across society.
- ❖ Encourage the development of AI tool which work alongside human enhancing productivity and decision making rather than replacing worker entirely.
- ❖ Develop clear guideline for the use of AI in hiring, performance evaluation and decision making processes prevent discrimination.
- ❖ Establishment of supported incubators and accelerator focused on AI startup, fostering job creation in emerging tech sectors.
- ❖ Diverse representation in AI to reduce algorithmic biases and create more equitable AI system.