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REPERCUSSION OF ARTIFICIAL INTELLIGENCE AND AUTOMATION ON EMPLOYABILITY

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Abstract:

Artificial intelligence (AI) has a major impact on employment worldwide. While repetitive task automation can improve productivity and accuracy in a variety of industries, intelligent robots, and algorithms can suppress many human work. While this can lead to job losses in to some industries, it can also create new career opportunities in technology fields such as artificial intelligence and software development and data technology.

Keywords – *Artificial Intelligence, Employability, Automation, Human-AI Interaction, Job Creation, Socio-economic Effects.*

Objective of the Study:

- To study the impact of AI on Employment.
- To study the efficiency and accuracy of various AI tools in current labour market.
- To analyze the requirement of additional education or training of AI for employability.

Introduction:

India is known for its developing population and technology landscape, India faces the challenges of integrating Artificial Intelligence and the impact on job creation. The Industry is creating employment concerns as AI technologies such as machine learning and robotics can be applied to improve efficiency. AI can create new roles and changes existing roles, but there is fear before you postpone work, as AI traditionally perform tasks are performed by humans. The IMF analysis shows that almost 40% of global employments are exposed to AI. Approximately 60% of workplaces will be affected by the developed economy, with half and half of AI integration profiting by reducing job needs, leading to unemployment and lower wages. However, in these countries, infrastructure and qualified workers often lack the benefits of AI and can exacerbate global inequality over time. Overall, AI offers both future challenges and opportunities for the job.

AI and automation are part of daily digital interactions. Social media platforms like Facebook and Instagram use AI to suggest friends by analyzing their activities. Netflix and Prime Video recommend shows based on viewing history, but we speculated that Google's predictive search was looking for them when they entered. In ecommerce, AI helps you filter your products allowing you to quickly find what you need. These technologies personalize and streamline your online experience, increasing convenience and efficiency.

Together, these technologies promote the potential for AI and automation transformation, industry redesign, and the redefinition of our work and interaction with machines.

AI and Automation:

AI refers to the development of computer systems that can perform tasks that normally require human intelligence, such as learning, decision-making, problem solving, and language processing.

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Automation, on the other hand, involves the use of technology to perform tasks within minimal human intervention.

Key Technologies Driving AI and Automation:

AI and automation are equipped with several key technologies that can work more efficiently and effectively in a variety of sectors. The impact of AI and automation on India's employment environment is facing the challenges of integration artificial intelligence (AI) and the impact on job creation. The industry is creating on India's employment environment concerns as technologies such as machine learning and robotics can be applied to improve efficiency.

AI can create new roles and change existing roles, but AI-Automated tasks where AI has traditionally been performed by humans are fearful before they are deferred.

Approximately 60% of workplaces will be affected by the developed economy, with half and of AI integration profiting by reducing job needs, leading to unemployment and lower wages. However, in these countries, infrastructure and qualified workers often lack the benefits of AI and can exacerbate global inequality over time. Overall, AI presents both future challenges and opportunities for the job.

This blog examines how AI and automation change the Indian labor market, examines the potential socioeconomic impacts, and suggests political measures that use their advantages while mix fatigue is a suitable effect. Learning, decision making, problem solving, language processing. On the other hand, automation uses technology to perform tasks with minimal human intervention. Social media platforms like Facebook and Instagram use AI to suggest friends by analyzing their activities. Netflix and Prime Video recommend shows based on view history, but I guessed that Google's predictions are looking for when typing. In e-commerce, AI helps you filter your products, products, allowing you to quickly find what you need.

These technologies personalize and streamline your online experience, increasing convenience and efficiency.AI and automation revolutionize the industry, allowing not only repeating repetitive tasks, but also repeating complex decisions about decision making.

Sector:

Machine learning (ML) is a prominent subset of AI to learn from data and improve over time wit hout the need for explicit programming. This feature allows businesses to develop applications that can adapt to new information and make well-discovered decisions based on data patterns These robots are increasingly used in industries such as manufacturing, logistics, and healthcare operational and productivity improvements.

Natural Language Processing (NLP) is another important technology that enables AI systems to understand and process human language. This feature makes it easier for a variety of applications, such as translation services, chat bots, and virtual assistants, and improves communication and user interaction. By taking over secular and time- consuming activities, RPA allows people to focus on more complex and valuable tasks, ultimately increasing operational efficiency.

AI and Employment:

Global The latest report from Goldman Sachs shows that AI can threaten up to 300 million jobs worldwide. In the UK, studies of less than 22,000 behavior types show that AI can acquire around 8 million jobs, which means that 11% of tasks are already exposed to automation. The roles of customer service, accounting, sales, research and retail face a considerable obstacle. While the labor market is developing, both employees and employers need to adapt to these changes and focus on opportunities for

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retraction and second scale in an increasingly automated world.

India:

The IT industry in India has been a major employer, providing over 5.4 million jobs and creating numerous opportunities for fresh engineering graduates. However, the rise of AI poses challenges to this landscape. As companies work to become "**AI-ready"** through employee reskilling, technologists warn of a potential white-collar recession in India by 2027.

AI will also affect blue-collar jobs in India, impacting about 300 million workers in sectors like manufacturing and healthcare. While advanced robotics may automate some tasks, mass job losses are unlikely, as AI is expected to enhance productivity rather than replace workers entirely.

AI Transforming Sectors:

AI will change various sectors in India, improve efficiency, improve services, and change customer experiences in areas such as services, healthcare, industry, finance and more.

Industrial robots lack the flexibility and cost-effectiveness of human work, making the processing industry unaffected by AI. Automation exists, but it doesn't distribute employees significantly.

Service Sector:

The Services sector has experienced significant AI adoption, particularly in customer service using chatbots and virtual assistants. AI-powered chat bots, such as language assistants run by Amzon India's Alexa, can revolutionize customer support by providing immediate answers and personalized interaction, allowing customers to pursue orders, orders and receive product recommendations for voice commands. This not only improves the customer experience, but also manipulates and optimizes resource allocations to help businesses work more efficiently.

Healthcare Sector:

AI has made considerable advances in the Indian healthcare industry. AI- controlled diagnostic instruments, medical image analysis, and predictive analytics improve the accuracy and efficiency of your healthcare services. Furthermore, AI- led telemedicine platforms for remote physicians are improving access to healthcare in rural and remote areas, creating healthcare challenges in hug e and diverse countries like India. Using AI allows the health sector to provide timely and effectiv e services, ultimately benefiting both patients and practitioners alike.

The Indian government has developed the AAROGYA SETU app with AI that provides information on Covid-19.

Financial Sector:

The financial sector quickly includes AI technologies such as HDFC Bank EVA-AI-KI- CHATBOT for a variety of applications, including fraud detection, risk assessment, credit insurance, and personalized financial services. AI algorithms can analyze large amounts of data in real time, allowing financial institutions to make sound decisions quickly and efficiently.

As a result, there is a growing demand for funding for AI professionals. This is because businesses are using AI skills to improve risk management and improve customer experience.

New Opportunities for Job Creation:

As AI continues to permeate various industries, the employment environment is subject to major changes. Instead of simply replacing jobs; AI changes existing roles and creates new opportunities. The World Economic Forum (WEF) assumes that Ki will generate 12 million jobs by 2025 than th an Penate. Additionally, around 20 million new jobs will be created, particularly in sectors such as IT- BPM, production, agriculture, transportation and logistics.

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According to a report from Nasscom 2020, AIand data could contribute to US$54 billion to US$50 0 billion GDP in amounts of US$540 billion. Approximately 45% of this value is expected to come from three key lenses: consumer goods and retail, agriculture, banking and insurance companies. Additionally, additional sectors being contributed are telecommunications, media, IT, energy, transportation and logistics, automotive production, assembly and healthcare.

Routines and repetitive tasks are susceptible to automation, but the adoption of AI often leads to a redefine Jobrolle. Employees are increasingly working with AI systems to improve productivity a nd efficiency so they can focus on more complex and engaging tasks. In areas such as data science, machine learning, and AI development, there is a growing demand for expertise, leading to new job opportunities for management, and the maintenance and promotion of AI technology.

AI functions as a power multiplier, allowing people to focus on higher-order tasks that require creativity, critical thinking and emotional intelligence. Instead of replacing workers, AI improves human skills, leading to a more dynamic and productive workforce.

Traditional industries experience shifts as AI becomes more common. For example, production involves the development of intelligent factories that create jobs through AI-controlled production and maintenance and change the way products are created and delivered.

The democratization of AI technology allows entrepreneurs to look at innovative business opportu nities. Startups will appear in sectors such as AI advice and adapting AI solutions for niche market promoting economic growth, and creating jobs. The focus shifts from increasing the number of jobs to improve the quality of jobs. By automating secular tasks, AI will improve the quality of work and enable employees to do more meaningful and fulfilling work.

Job Losses:

In India, the challenge lies in the ability to transform employees and pass them to new roles create d by AI. India's processing business has traditionally been labor-intensive, with many low- qualified and half-qualified workers working in industries such as textiles, automobiles and electronics. However, the advent of automation technologies such as robotic process automation, AI- operated machines, and 3D printing reduces the demand for manual work, especially in assembles line tasks.

According to a report by McKinsey Global Institute, automation estimates that by 2030, it will eliminate the impact on the employment of up to 60 million employees in the Indian production sector, particularly textile and electronics. India's huge informal workforce is particularly susceptible to technical impairments. Without a formal employment contract or social security, the transit ion can be difficult. Approximately 90% of Indian workers are employed in the informal sector. This is particularly susceptible to automation. This is because these employees often have no access to retraining programs or support systems.

Automated industries are concentrated in urban areas, but the rural economy is heavily dependent on agriculture and traditional industries. A World Bank report suggests that the transition will move from rural to urban areas if automated employment grows in cities leads to challenges such as urban overload and infrastructure pressure.

Agriculture remains India's largest employer, but it is also a non- automated sector. The adoption of AI and automation in agriculture can lead to more efficient practices, reduce waste, and increase income.

AI and automation could enhance existing inequality. Systemic qualified workers are susceptible to job losses, and those with highly technical skills may

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benefit from it. This could increase income disparities and deepen socioeconomic distinctions.

Mitigating Job Displacement:

An important step towards employment relief is investing in education and training initiatives that focus on abolishing the workforce. Both governments and industry must work together to develo p programs that will provide employees with the skills needed for ambitious technologies, includi ng AI. Ensuring that individuals are prepared for the digital economy can promote a smooth transition and reduce the risk of unemployment.

Recently, Upskill Trend 2024-25 published by Global Edtech Company's Excellent Learning found that 67.5% of engineers believe their work is negatively affected. Introduced in 2015, Skill India Mission aims to provide workers with the skills needed for the labour market under development. One of his flagship programs, Pradhan Mantri Kaushal Vikas Yojana (PMKVY), offers training in key areas such as AI, machine learning, robotics, and data analytics

By focusing on these emerging technologies, the mission seeks to improve the employment potential of the Indian workforce. Digital India missions have been concentrated.

A strong framework for social security is essential for informal employees and provides services such as unemployment assistance, health insurance, and pensions. Furthermore, facilitating formalization of the workforce can better protect those affected by automation. By providing these safety networks, employees can ensure the support they need to navigate the challenges of the rapidly developing labour market.

To promote innovation and AI startups, governments need to continue supporting AI initiatives through incubators, fundraising and research and development efforts. Public partnerships can further promote growth in sectors such as healthcare, agriculture, and manufacturing.

It is important to promote integrated growth. Target guidelines should close urban gaps and ensure that the benefits of automation reach rural areas and are concentrated in sectors such as agriculture, micro and small and medium-sized enterprises (MSMEs).

Entrepreneurship and promotion of innovation is another effective strategy to create new job opportunities. By promoting a culture of entrepreneurship, it can promote job creation in AI-related startups and small businesses. Supporting initiatives that provide resources, mentoring an d funding to future entrepreneurs can lead to innovative solutions and reliable business models th at adapt to changing landscapes.

Atal Innovation Mission (AIM) is an important initiative that promotes AI and automation innovation and entrepreneurship. We have set up an Atal Habsen lab at our school, establishing an ATAL incubation center to encourage creativity and problem solving among students and to support AI-controlled start-ups.

In 2018, Niti Aayog launched a national strategy for artificial intelligence, focusing on the use of AI for integrated growth. This strategy identifies five key sectors for intervention: healthcare, agriculture, education, intelligent cities, and mobility. By focusing on these areas, the government aims to use AI possibilities to improve development and improve the quality of life for its citizens. Whereas National Instruction Approach 2020 proposes more noteworthy utilize of advances such as AI, it must be adjusted with the request of the work showcase. Considering the chance of work misfortune over businesses, the government must set out on a life-long learning stage. Activities such as "Future Skills PRIME" cover developing innovations, counting AI, which must be fortified. YUVAi (Youth for Unnati and Vikas with AI), an activity for familiarizing

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school understudies from classes 8 to 12 with AI advances, ought to be extended.

Methodology:

Both primary and secondary data are used in this paper.

Primary data:

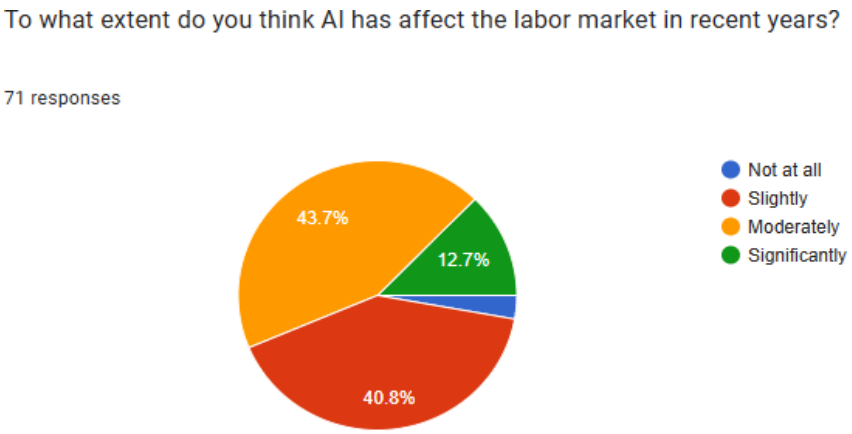
Quantitative information collected through a research approach forms the basis of primary data. The survey was distributed through an online survey using tools from the Google platform. Information was collected by 71 respondents.

Secondary data:

Secondary data is gathered from a range of sources, including journals, websites, reports, web portals, and research articles.

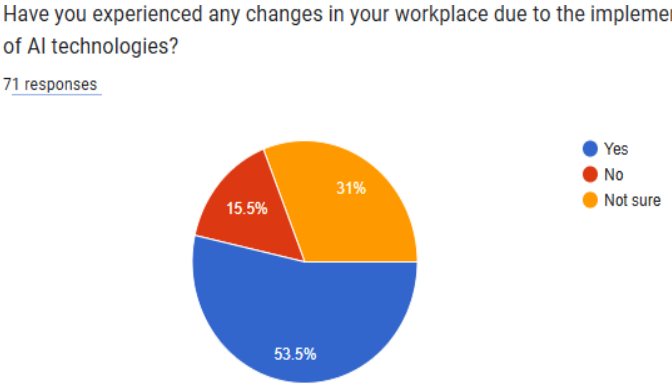
Data Analysis:

The information was gathered from 71 respondents using Google form to determine the impact of AI in employability, the data is further examined.



Findings and Interpretation:

The above schematics provide information on the impact of AI on the labor market. 12.7% of respondents said that AI has a major impact on the labor market, and 4.7% of those surveyed said that AI has a moderate impact.



Findings and Interpretation:

The above schematics provide information that respondents experience workplace changes through implementation of AI tools. 53.5% of respondents indicated that there were changes due to AI, while 15.5% did not make any changes to their workplace due to AI implementation.

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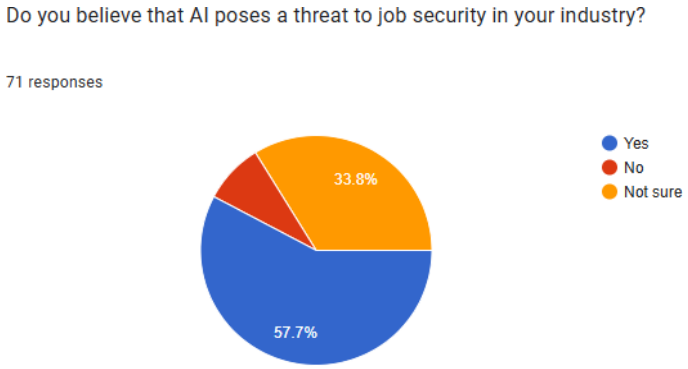
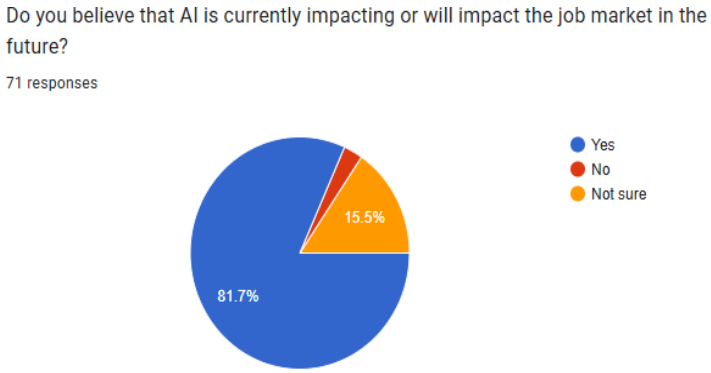


Findings and Interpretation:

The above circular diagram poses a threat to job safety in the industry with information on AI 57.7% of respondents believe that AI represents a threat to industry in terms of employment, while 8.5% disagree that AI represents a threat to industry, while 33.8% disagree that it is no certain of the threat.

Findings and Interpretation:



In the future, the above circular diagrams provide information on the current impact of AI on the labor market. 81.7% of respondents believe that AI is affecting the labour market.

Result and Discussion:

From the above Data analysis, we can say that-

- Thane people are aware about the AI technologies & its implementation in Employment
- AI improves accuracy and enhances the decision making in Labor Market.
- There are the most attractive potential benefits of AI in employment.
- It reduces the demand for coded employment in companies and simultaneously increases the demand for complex, un-programmed workers.
- There are potential drawbacks or limitations from AI in accounting and financing related to accurate input data. There is a lack of human judgment and intuition, data security and data protection risks, and an impact on employment in the accounting industry.

Conclusion:

AI is reshaping the Indian work showcase by making modern openings whereas posturing challenges, especially with respect to work relocation due to robotization.

As request for AI masters and talented experts develops, India must prioritize speculation in aptitude advancement and build up a strong AI investigate, biological system.

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By tending to moral contemplations and receiving a key approach to AI integration, India can develop as a worldwide pioneer within the AI- driven computerized economy, cultivating comprehensive and feasible financial development for its workforce.

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