Impact Of AI Tools On Job Readiness and Employability Skills Among Students and Professionals

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***Abstract*—Artificial Intelligence (AI) is a branch of computer science that enables machines to perform tasks that usually require human thinking, such as learning, reasoning, and decision-making. In recent years, AI tools have become widely used in education, business, and professional environments, including chatbots, virtual assistants, and automated data analysis systems.**

In modern organizations, AI helps reduce manual effort, improve efficiency, and support faster decision-making. Many employers now expect individuals to have basic knowledge of AI tools, making AI skills an important factor in job readiness and employability.

Despite this growing importance, many students and job seekers still lack hands-on experience with AI tools. This gap in practical knowledge may affect their employment opportunities and workplace performance.

This study examines the impact of AI tools on job readiness and employability skills using primary data collected through a structured Google Form survey. A total of 52 participants, including students, job seekers, and working professionals, provided responses.

The results show that most respondents actively use AI tools and believe that these tools im- prove productivity, efficiency, and learning. Participants also indicated that AI skills are essential for career development and future employment.

The study concludes that AI tools play a significant role in improving job readiness and employability, highlighting the need for continuous learning and adoption of AI technologies.

***Index Terms*—Artificial Intelligence, Quantitative Research, Survey Method, Primary Data, Employability skills, Job Readiness, Structured Questionnaire, AI tools Adoption.**

I. INTRODUCTION

Artificial Intelligence (AI) is a field of computer science that focuses on developing systems capable of performing tasks that normally require human intelligence, such as learning, reasoning, and decision-making.

The concept of AI began to take shape in the mid-20th century through the work of early re- searchers.

In 1950, Alan Turing[1] published the paper Computing Machinery and Intelligence.

Later, in 1955, John McCarthy[2] introduced the term "Artificial Intelligence," which be- came the official name of the field.

Around the same period, early AI programs such as the Logic Theorist, developed by Allen Newell[3] and Herbert A. Simon[4], demonstrated the ability of machines to solve logical problems.

Since then, AI has evolved rapidly, moving from simple rule-based systems to advanced machine learning and deep learning technologies that are now widely used across industries.

II. AI IN MODERN WORKPLACES

Artificial Intelligence (AI) has transformed from a future concept into reality in modern workplaces. Today, AI is rapidly being adopted across various industries.

By 2028, many technology leaders expect AI to be widely used in workplaces, in countries like the USA. Organizations are using AI to change traditional working methods. The main goal is to increase productivity, reduce manual work, and improve customer satisfaction. With AI, tasks can be completed more efficiently and accurately.

In the past, most work was done manually. However, with the introduction of AI, employees can now focus more on strategic, creative, and collaborative tasks. This makes professional and corporate life more effective and innovative.

A major development in this area is the use of AI Agents. These represents a new class of intelligent

systems that are more advanced than simple automation tools.

AI Agents forms the backbone of modern plat- forms such as Aisera. They are goal-oriented and can operate autonomously.

These intelligent systems are capable of executing complex and multi-step tasks across multiple platforms. For example, AI agents can process leave requests (PTO) in a Human Resources Information System (HRIS) or re- solve complex IT support tickets without hu- man intervention.

By deploying AI agents, organizations can significantly reduce manual workload. This allows employees to focus on high-value tasks that require human intelligence, creativity, and decision-making.

Modern Workplaces[5]

"The study focuses on how AI impacts daily workplace activities and transforms employee roles through automation and intelligent systems"

Work practices before AI Adoption? More manual work, Slow support.

What practices after AI?

Smart systems, fast service, better productivity.

AI Use Cases in Workplaces

In traditional workplaces, employees raise tickets for HR or IT support, which are handled manually. With the introduction of AI agents and generative AI, support systems have become faster, more efficient, and more reliable.

AI-powered systems can instantly respond to employee queries, process requests and pro- vide solutions. This enhances workplaces productivity and improves overall employee satisfaction.

III. IMPORTANCE OF AI SKILLS

According to World Economic Forum[6] AI skills are becoming more important than job experience when employers choose candidates.

What Microsoft, LinkedIn and PwC re- searches on this topic is that in frequent way how AI is changing profiles and to succeed they suggest how job seekers need to adapt it.

The Competition between experienced employees and AI skilled professionals we are seeing nowadays and we will see in future too.

A Timeline based Perspective

1. Before 2015 (Early Stage)

Before 2015, Artificial Intelligence was mainly limited to research laboratories and large technology companies. Only specialists such as data scientists and researchers re- quired AI and email communication were considered sufficient.

At the stage, AI skills were:

- Not required for most jobs.
- Limited to technical fields
- Considered optional

According to OECD report[7] shows in demand for AI skills in jobs from earlier years till recent times.

2. 2015-2019 (Growing Awareness)

Between 2015 and 2019, AI technologies such as machine learning system, recommendation engines, and chatbots began gaining popularity. Organizations started adopting AI for data during this period, AI skills became:

- Important for IT and engineering students
- Useful for analytics and software- related jobs.
- A competitive advantage in recruitment.

However, AI skills were still not mandatory for all employees.

According to Science Direct[8] they analysis shows AI jobs postings increasing significantly from 2010 to 2019

3. 2020 - 2022 (Rapid Growth – COVID Period)

The COVID-19 pandemic accelerated digital transformation across industries. Remote working systems, automation, and online plat- forms expanded rapidly. Many organizations adopted AI-based tools to improve efficiency and reduce human dependency.

As a result, AI skills became:

- Highly valuable in the job market.
- Necessary for digital and remote work.
- Important for business continuity.

Organizations increasingly demanded AI- trained professionals.

According to edX [9] After 2020, many studies and data sources show AI becoming mainstream and it shows job postings re- quiring AI skills jumped significantly 2023- 20205.

4. 2023-Present (Mainstream Usage)

From 2023 onwards, with the emergence of generative AI tools such as ChatGPT and Microsoft Copilot, AI became a part of daily professional activities. Employees across various sectors started using AI for writing, coding, analysis and decision-making.

Currently, AI skills are:

- Required in most professional roles.
- More important than experience in some cases.
- Essential for productivity and career growth.
- Needed in education, business, healthcare, and government sectors.

Today, AI is no longer optional; it has become a fundamental workplace skill.

According to edX report[9] already shows a 109% jump in job postings requiring AI skills.

According to Forbes research[10] it shows many employers now prefer AI skills over experienced.

According to Indian report. It shows AI skills demand rising across sectors and Enterprise ai[11] have data about AI skills are now required across many roles in India, proving widespread adoption.

IV. SKILLS GAP AMONG STUDENTS AND JOB SEEKERS

General Skill Gap:

The rapid growth of Artificial Intelligence in modern workplaces has created a significant gap between industry skill requirements and the capabilities of students and job seekers. Many graduates possess theoretical knowledge but lack practical experience in AI tools and technologies. This mismatch has resulted in difficulties in securing employment and meeting workplace expectations. World Economic Forum 2023 [6]

Indian Student's Situation

A Survey conducted among Indian students revealed that more than 65% of respondents con- sider AI skills essential for future employment. However, many students reported limited exposure to AI-based learning and insufficient training facilities. This indicates a gap between student's awareness and their actual prepared- ness for industry requirements.

Economic Times Education 2025 [11]

Training Gap Among Youth

A national-level report highlights that only

one in five young individuals in India has received formal training in Artificial Intelligence. Due to limited access to structured learning programs, many job seekers remain under-skilled, reducing their chances of se- curing high-quality employment.

Times of India 2025 [12]

Global Skill Gap

At the global level, studies indicate that although nearly 75% of organizations have adopted AI technologies, only about 35% of employees have received proper AI-related training. This imbalance has resulted in a shortage of skilled professional and increased competition and among job seekers. Randstad 2024 [13]

Education System Limitation

One of the major causes of the skill gap is the slow adaption of educational circulated.

Many institutions still focus on traditional subjects and provide limited practical expo- sure to emerging technologies. As a result, graduates often struggle to meet the dynamic demands of AI-driven workplaces.

World Economic Forum 2023 [6]

Use of Survey data

The findings of the present study also sup- port the existence of a skill gap. The survey results show that although most respondents use AI tools regularly, many are still in the learning stage and lack advanced technical competencies. This suggests that continuous training and practical exposure are necessary for improving employability.

Therefore, bridging the skill gap requires curriculum modernization, industry-oriented training programs, internship opportunities, and continuous learning initiatives. Collaborative efforts between educational institutions, industries, and policymakers are essential to prepare students and job seekers for AI- based workplaces.

All Major and relevant tools

Various AI tools are widely used in modern workplaces to improve productivity, communication, and automation. Some of the major tools are presented in Table 1.

Table 1: Major AI tools used for Job Readiness and Employability

Sr. No	Tools Name	Category	Main Use	Official Links
1.	ChatGPT	AI Assistant	Writing, Cod-ng, Research	https://chat.openai.com
2.	Google Gemini	AI Assistant	Search, Docs, Gmail	https://gemini.google.com
3.	Microsoft Copilot	Office AI	Word, Excel, Teams	https://www.microsoft.com/copilot
4.	Claude	AI Assistant	Reasoning, Documents	https://claude.ai
5.	Perplexity	Research AI	Search with Sources	https://www.perplexity.ai
6.	Notion AI	Productivity	Notes, Summaries	https://www.notion.so/ai
7.	Grammarly	Writing AI	Grammar, Writing	https://www.grammarly.com
8.	Jasper	Content AI	Marketing content	https://www.jasper.ai
9.	Write sonic	Content AI	Blogs, Ads	https://writesonic.com
10.	Copy.ai	Content AI	Social media posts	https://www.copy.ai
11.	Fireflies	Meeting AI	Call transcription	https://fireflies.ai
12.	Otter.ai	Meeting AI	Notes, Recording	https://otter.ai
13.	Asana AI	Project Management	Task Automation	https://asana.com
14.	Click Up AI	Project Management	Reports, planning	https://clickup.com/ai
15.	Trello AI	Project Management	Workflow Management	https://trello.com
16.	Eightfold	HR AI	Hiring, skills	https://eightfold.ai
17.	SAP SuccessFactors	HR AI	HR Management	https://sap.com/hcm
18.	Darwin box	HR AI	Recruitment	https://darwinbox.com
19.	Hire Vue	HR AI	Interview Analysis	https://hirevue.com
20.	Mid journey	Design AI	Image Creation	https://www.midjourney.com
21.	DALL-E	Design AI	Image Creation	https://openai.com/dall-e
22.	Adobe Fire- fly	Design AI	Graphics editing	https://firefly.adobe.com
23.	Canva AI	Design AI	Posters, slides	https://www.canva.com
24.	Runway ML	Video AI	Video editing	https://runwayml.com
25.	Synthesis	Video AI	Training videos	https://www.synthesia.io
26.	HeyGen	Video AI	Presentations	https://www.heygen.com
27.	GitHub Co- pilot	Coding AI	Code writing	https://github.com/features/copilot
28.	Tabnine	Coding AI	Auto Coding	https://www.tabnine.com
29.	Replit AI	Coding AI	Code Assistant	https://replit.com
30.	Power BI AI	Analytics	Data Visualization	https://powerbi.microsoft.com
31.	Tableau AI	Analytics	Business Re- ports	https://www.tableau.com
32.	Hootsuite AI	Social Media	Post Scheduling	https://hootsuite.com
33.	Buffer AI	Social Media	Content planning	https://buffer.com
34.	Zoho Zia	Business AI	CRM automation	https://zoho.com/zia
35.	Salesforce Einstein	CRM AI	Customer Analytics	https://salesforce.com/einstein

Source: Compiled by the researcher based on publicly available information

These tools demonstrate the practical implementation of Artificial Intelligence in daily workplace activities.

Availability of AI Tools (Free or Paid Access)

The following AI tools provide free or freemium access and are commonly used by students and beginners for learning and daily academic tasks:

Table 2: Commonly used Free or Freemium AI Tools for Learning and Academic Tasks

ChatGPT	Replit AI
Google Gemini	Tab nine
Perplexity	Otter.ai (Basic)
Grammarly	Canva AI
Write sonic (Free Version)	Buffer
Copy.ai (Free Version)	Hootsuite (Limited Free)
Notion AI (Trial)	Zoho Zia (Basic)

Source: Compiled by the researcher based on publicly available information

These tools help students in writing, research, coding, content creation and communications.
The following tools required paid subscription for full access and are mainly used by working professionals and organizations:

Table 3: Paid AI Tools Commonly used by Professionals and Organizations

Jasper
Mid Journey
Microsoft Copilot
Git hub Copilot
Tableau AI
Power BI AI
Synthesis
HeyGen
Runway ML
Adobe Firefly (Advanced Features
Asana AI
Click Up AI

Source: Compiled by the researcher based on publicly available information

These tools are used for advanced content creation, data analysis, automation and professional productivity
These AI tools are mainly designed for large organizations and are expensive for individual users:

Table 4: Enterprise-Level AI Tools used in Recruitment, HR, and Business Management

Eightfold
SAP SuccessFactors
Darwin box
Hire Vue
Salesforce Einstein
Trello Enterprise AI

Source: Compiled by the researcher based on publicly available information

These tools are used in recruitment, HR management, performance evaluation and customer relationship management.
Although many free AI tools are available for students, advanced professional and enterprise level tools remain costly. Due to financial constraints, most students and job seekers depend on free versions, which limits their exposure to industry-grade AI systems. This difference in access contributes significantly to the skill gap between academic learning and workplace requirements.

V. AIM OF THE RESEARCH

The main aim of this research is to study the impact of Artificial Intelligence on modern workplaces and to analyse the level of AI skills among students and job seekers. The study focuses on understanding how AI tools are being used in daily professional activities and how these tools influence productivity, learning and employability.
The research also aims to identify the existing skill gap between industry requirements and the current skill level of learners and job seekers. By analysing primary survey data and secondary sources, the study seeks to highlight the challenges faced by individuals in adapting to AI-driven work environments.
Furthermore, the research aims to provide practical recommendations for improving AI education and training programs in order to enhance workforce readiness and career opportunities.

VI. LITERATURE SURVEY

Artificial Intelligence has evolved significantly over time and plays an important role in modern workplaces. Alan Turing (1950) introduced the concept of machine intelligence and proposed the Turing Test to evaluate whether machines can demonstrate intelligent behaviour similar to humans [1].

John McCarthy (1955) later coined the term Artificial Intelligence and contributed to establishing AI as a formal academic field [2]. Early developments in AI were further advanced by Allen Newell and Herbert A. Simon, who developed the Logic Theorist, considered one of the first AI programs capable of performing problem-solving tasks [3][4].
According to Aisera, Artificial Intelligence is widely used in workplaces to automate repetitive tasks, improve productivity, and support decision-making processes. AI tools help employees' complete tasks faster and more efficiently [5].
The World Economic Forum (2024) reported that AI

skills are becoming as important as work experience in hiring decisions, and employers increasingly prefer candidates With AI knowledge [6].

Similarly, the OECD highlighted that demand for AI skills is rapidly increasing across industries, and individuals with AI skills have better employment opportunities and career growth [7].

Research published on Science Direct shows that AI improves workplaces efficiency, enhances productivity, and supports better decision-making, contributing to improved job performance [8].

According to edX, learning AI tools helps students and professionals develop essential technical and analytics skills required for modern employment [9].

A report by Forbes stated that many employers prefer candidates with AI skills, as these skills improve innovation and overall organizational performance [10].

Furthermore, The Economic Times reported that AI skills are in high demand across various industries in India, highlighting their importance for employment and career advancement [11].

Based on these studies, Artificial Intelligence plays a significant role in improving job readiness, employability skills, productivity, and career opportunities.

VII. RESEARCH METHODOLOGY

This study follows a survey-based quantitative research design to analyse the impact of Artificial Intelligence (AI) tools on job readiness and employability skills. The survey method was chosen to collect direct responses from individuals regarding their awareness, usage, and perception of AI tools in academic and professional environments.

How we collected the Data

The primary data for this research was collected using a structured online questionnaire created through Google Forms. The questionnaire included multiple-choice questions related to AI usage, productivity improvement, skill development, and the importance of AI skills in employment.

The survey link was shared through online platforms such as LinkedIn, WhatsApp, and other professional and student networks to reach a diverse group of respondents.

Sample Size and Respondents

A total of 52 responses were collected for this study. The respondents included:

- 27 Working Professionals
- 15 Students
- 10 Job Seekers

This distribution ensures that the research includes perspectives from both academic and pro- fessional environments

Data type used:

This study is based on primary data, which was directly collected from respondents through the survey. The data reflects real opinions, experiences, and usage patterns of AI tools among students, job seekers and professionals.

Research Instrument

The research instrument used was a structured questionnaire consisting of questions related to:

- Awareness of AI tools
- Frequency of AI tool usage
- Types of AI tools used
- Impact of AI on productivity
- Role of AI in skill development
- Importance of AI skills in employment

The purpose of this methodology is to ensure systematic data collection and accurate analysis to understand how AI tools influence employability skills and job readiness among students and professionals.

VIII. DATA ANALYSIS

The collected data was analyzed using descriptive statistical methods. Responses were summarized using:

- Tables
- Pie charts
- Bar Charts
- Percentage Analysis

Table 5: Respondent Category

Category	Number of Respondents	Percentage
Student	15	28.8%
Job Seeker	10	19.2%
Working Professional	27	51.9%
Total	52	100%

Source: Primary Data (Survey Responses, 2026)

Analysis: The majority of respondents were working professionals (51.9%), followed by students (28.8%) and job seekers (19.2%). This indicates that the survey reflects strong input from professionals who are already part of the workforce. Their responses provide valuable insights into how AI tools are used in real workplace environments.

Table 6: AI Tool Usage Level

Usage Level	Number of Respondents	Percentage
Yes, regularly	22	42.3%
Sometimes	24	46.2%
Rarely	5	9.6%
Never	1	1.9%
Total	52	100%

Source: Primary Data (Survey Responses, 2026)

Analysis: Most respondents use AI tools either sometimes (46.1%) or regularly (42.3%). Only a Small percentage rarely (9.6%) or never (1.9%) use AI tools. This show that AI tools have already become widely adopted among students, job seekers and professionals.

Table 7: Frequency of AI Tool Usage

Frequency	Number of Respondents	Percentage
Daily	22	42.3%
Several times a week	20	38.4%
Once a week	4	7.6%
Rarely	5	9.6%
Never	1	1.9%
Total	52	100%

Source: Primary Data (Survey Reponses, 2026)

Analysis: A large number of respondents use AI tools daily (42.3 %) or several times a week (38.4%). This indicates that AI tools are becoming part of regular academic and professional activities. Frequent usage reflects the growing dependence on AI for productivity and task completion.

Table 8: Impact of AI on Productivity

Response	Number of Respondents	Percentage
Yes, significantly	31	59.6%
Yes, slightly	17	32.6%
No change	2	3.8%
Not sure	2	3.8%
Total	52	100%

Source: Primary Data (Survey Responses, 2026)

Analysis: The majority of respondents (59.6%) reported that AI significantly improved them Productivity, while 32.6% reported slight improvement. This clearly shows that AI tool Help users complete tasks faster and more efficiently.

Table 9: AI and Skill Development

Response	Number of Respondents	Percentage
Yes	41	78.8%
No	4	7.6%
Not sure	7	13.4%
Total	52	100%

Source: Primary Data (Survey Reponses, 2026)

Analysis: Most respondents (78.8%) reported that AI tools helped them learn new skills. This Shows that AI plays an important role in skill development and learning, which Contributes to job readiness.

Table 10: Importance of AI skills for Jobs

Response	Number of Respondents	Percentage
Very Important	30	57.6%
Somewhat Important	19	36.5%
Not Important	2	3.8%
Not sure	1	1.9%
Total	52	100%

Source: Primary Data (Survey Reponses, 2026)

Analysis: A majority of respondents (57.6%) consider AI skills very important, and 36.5% Consider them somewhat important. This indicates that AI skills are

now essential for Employment and career growth

Table 11: Employer Demand for AI Skills

Response	Number of Respondents	Percentage
Yes	28	53.8%
Not yet, but expected	17	32.6%
Not applicable	5	9.6%
No	2	3.8%
Total	52	100%

Source: Primary Data (Survey Reponses, 2026)

Analysis: More than half of respondents (53.8%) reported that employers have asked about AI Skills. This shows that AI skills are increasingly important in recruitment and hiring Processes.

The data analysis shows that AI tools are widely used among students, job seekers and profession- also Most respondents use AI tools regularly and believe that AI improves productivity and helps in skill development. A large percentage of respondents also consider AI skills important for employment, and many employers are already demanding AI knowledge. This indicates that AI plays a significant role in improving job readiness and employability skills.

DATA ANALYSIS WITH CHARTS

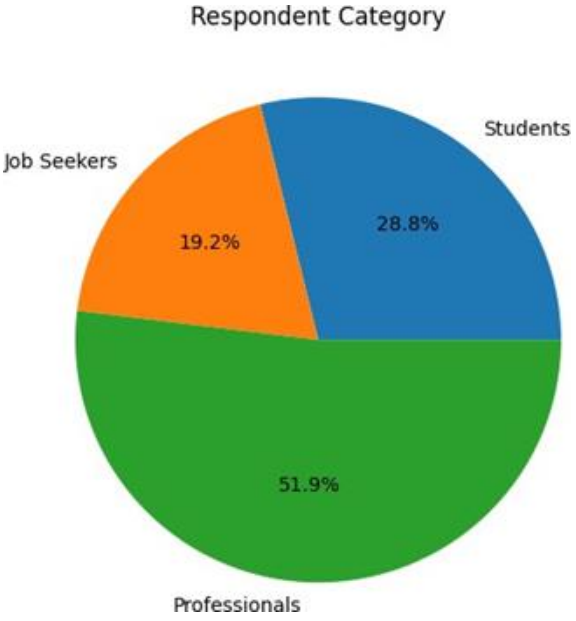

Figure 1: Respondents Category

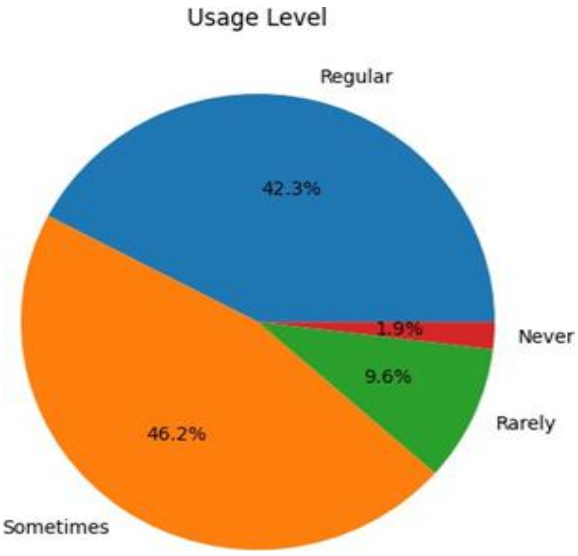

Figure 2: Usage Level

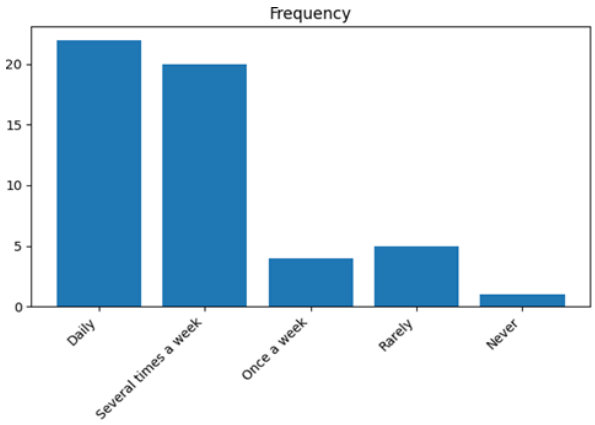

Figure 3: Frequency

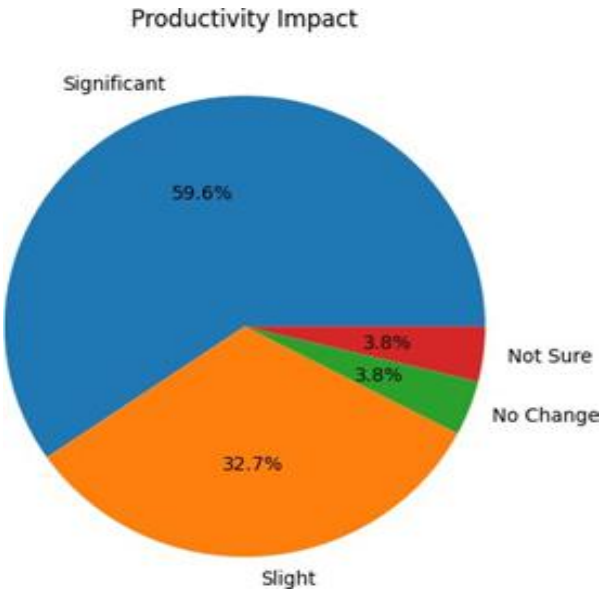

Figure 4: Productivity Impact

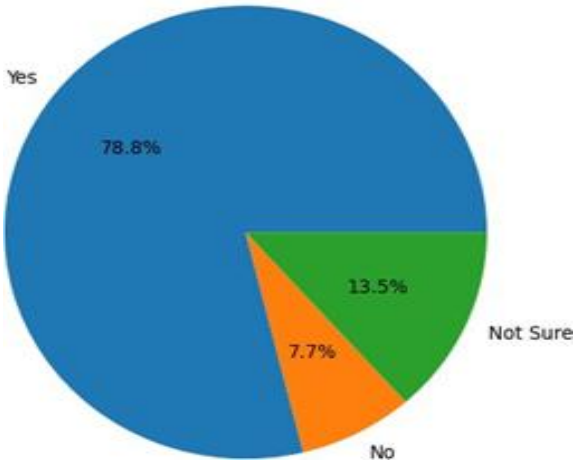

Figure 5: Skill Development

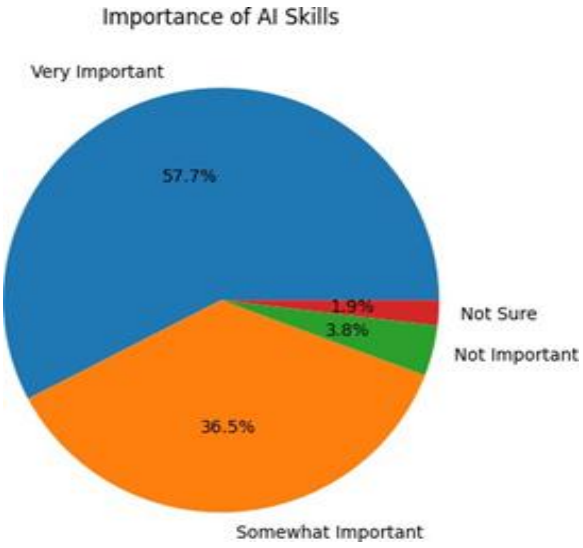

Figure 6: Importance of AI skills

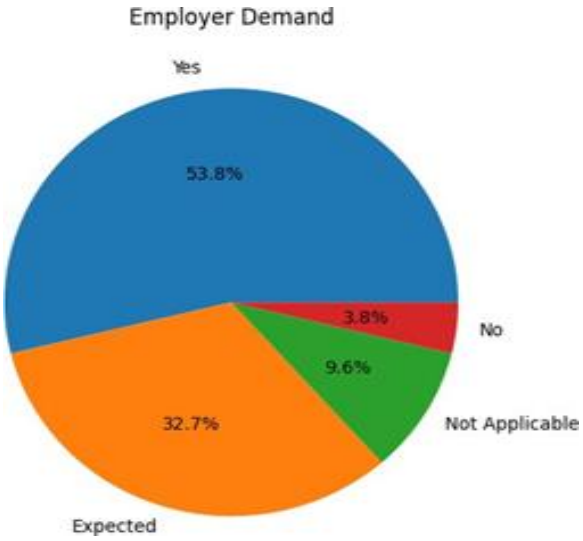

Figure 7: Employer Demand

IX. CONCLUSIONS

The study examined the impact of Artificial Intelligence (AI) tools on job readiness and employability skills among students, job seekers and working professionals. The findings of the survey clearly indicate that AI tools have become an essential part of academic and professional activities.

The majority of respondents reported regular or frequent use of AI tools for tasks such as writing, research, data analysis and communication. Most participants agreed that AI tools significantly improve productivity and help in learning new skills. The results also show that AI skills are considered very important for employment, and many employers are already demanding knowledge of AI tools during recruitment processes.

However, the study also highlights the existence of a skill gap, especially among students and job seekers, due to limited practical exposure and access to advanced AI technologies. Financial Constraints and outdated educational curricula further contribute to this gap. As a result, many learners are still in the early stages of AI skill development.

Therefore, it is essential for educational institutions, training centres, and policymakers to integrate AI-based learning programs, practical workshops, and industry-oriented training into the curriculum. Continuous learning, internships and certifications programs can help individuals improve their technical competencies and adapt to AI -driven workplaces.

In conclusion, Artificial Intelligence plays a significant role in enhancing job readiness, employability skills, and career growth. By promoting proper training and awareness, students and professionals can effectively utilize AI tools and remain competitive in the evolving job market.

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