

# **Impact of AI on Labour Markets using IPA Tools**

## **CAPSTONE PROJECT**

### **Introduction**

**Artificial Intelligence (AI) and Intelligent Process Automation (IPA) are transforming modern industries by automating repetitive tasks, improving efficiency, and changing job roles. IPA combines AI, Machine Learning, Robotic Process Automation (RPA), and analytics to automate complex business processes.**

**This project analyzes how AI and IPA tools influence employment patterns, job roles, and skill requirements across different sectors.**

### **Objectives**

- To study the impact of AI and IPA on various job sectors.
- To analyze automation risks in different occupations.
- To identify emerging job roles created by AI adoption.
- To visualize employment trends using data analytics tools.

### **Technologies and Tools Used**

- Python
- Pandas, NumPy
- Matplotlib / Seaborn
- Jupyter Notebook
- IPA Concepts (RPA, AI, ML integration)

## **IPA Tools and Concepts**

**Intelligent Process Automation (IPA)** integrates multiple technologies:

### **1. Robotic Process Automation (RPA)**

- Automates repetitive, rule-based tasks.
- Example: Data entry, invoice processing.

### **2. Artificial Intelligence (AI)**

- Enables decision-making capabilities.
- Example: Chatbots, recommendation systems.

### **3. Machine Learning (ML)**

- Learns patterns from data to improve predictions.
- Example: Fraud detection, demand forecasting.

### **4. Natural Language Processing (NLP)**

- Processes and understands human language.
- Example: Sentiment analysis, voice assistants

## **Advantages of AI and IPA in Labour Markets**

- Increased productivity.
- Reduction in human error.
- Faster business processes.
- Creation of new tech-based jobs.

## Key Features of the Project

- **Automation risk classification.**
- **Sector-wise employment analysis.**
- **Visual dashboards for insights.**
- **Data-driven conclusions on AI impact.**

## Conclusion

The study shows that AI and IPA significantly reshape labor markets. While automation reduces demand for repetitive jobs, it creates new opportunities in technology-driven roles. Organizations and individuals must focus on **reskilling and adapting to AI-driven environments** to stay competitive.