# Predicting the effect of AI on job trends using Datamanipulation


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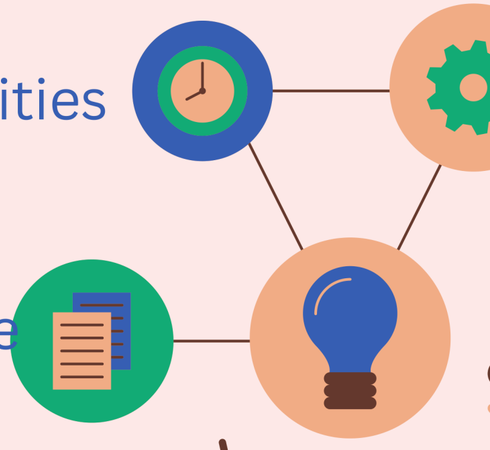
# Introduction

- Overview: This project aims to explore how AI will influence job trends by utilizing data manipulation techniques.
- Importance: Understanding AI's impact on employment is crucial for workforce planning and economic policy-making.
- Approach: Analyze extensive datasets on employment and AI adoption to predict future job market changes. With attributes Job titiles, AI Impact, Tasks, AI models, AI_Workload_Ratio, Domain.
- Goals: Identify job roles at risk of automation and new job opportunities created by AI.
- Outcome: Provide insights that help stakeholders prepare for the evolving job landscape influenced by AI.



# Execution Format

| Goal #1 | Goal #2 | Goal #3 | Goal #4 | Goal #5 |
| --- | --- | --- | --- | --- |
| Review Research papers | Collect Datasets | Run Queries on the dataset to extract information | Review the output | Report Generation |

# Project execution

- from google.colab import drive drive.mount('/content/drive') import os os.chdir('/content/drive/MyDrive/AI_Project/')
- import pandas as pd data = pd.read_csv('My_Data.csv') print(data.head())
- data['AI Impact'] = data['AI Impact'].str.rstrip('%').astype(float)
- mean_impact = data.groupby('Job titiles')['AI Impact'].mean().sort_values()
- print("Job Title with the highest AI impact:")
- print(mean_impact.idxmax())
- print("Job Title with the lowest AI impact:")
- print(mean_impact.idxmin()
- unique_domains = data['Domain'].unique()
- print("Unique Domains:") for domain in unique_domains: print(domain)

# Project execution

- data_it_jobs = data[data['Domain'].isin(['Data & IT'])]

- mean_impact_data_it = data_it_jobs.groupby('Job titiles')['AI Impact'].mean()
- least_impact_job_data_it = mean_impact_data_it.idxmin()
- print("Job Title with the least AI impact within the Data & IT domains:", least_impact_job_data_it)

- threshold = 0.8 AI_Workload_Ratio = 50 high_workload_jobs = data[data['AI_Workload_Ratio'] > threshold]

- print("High Workload Jobs:")
- print(high_workload_jobs)

- top_ai_models = data['AI models'].value_counts().head(10)

- print("\nTop AI Models Used:")
- print(top_ai_models)

- tasks_distribution = data.groupby('Job titiles')['Tasks'].apply(lambda x: ', '.join(map(st x))).reset_index()

- print(tasks_distribution)

# Conclusion

- The impact of AI on future jobs will be profound, leading to the emergence of new job titles such as AI specialists, data scientists, and AI ethicists, while transforming tasks across various sectors.
- AI models will automate routine tasks, enhancing productivity and enabling workers to focus on more complex and creative endeavors.
- The AI_Workload_Ratio will shift, with machines handling repetitive functions and humans overseeing strategic and nuanced operations.
- Domains such as healthcare, finance, manufacturing, and retail will see significant changes, particularly in areas like diagnostics, trading, quality control, and customer service.
- Effective database management systems will be crucial in managing the vast amounts of data required for AI applications, ensuring efficiency and reliability in data handling for small to large enterprises.
- This transition requires a balanced approach to reskilling the workforce and developing supportive policies to maximize the benefits of AI while mitigating its challenges.

THANK

# YOU