RAJEEV INSTITUTE OF TECHNOLOGY

HASSAN-573021, KARNATAKA
(Affiliated to VTU, Belagavi., Approved by AICTE, New Delhi.)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

DATA ANALYST JOB MARKET ANALYSIS & SALARY PREDICTION

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ABSTRACT

- This project analyzes Data Analyst job market trends using real-world data.
- The dataset contains over 2000 job listings collected from Glassdoor.
- Exploratory Data Analysis is performed to study salary patterns and demand.
- Machine learning is used to predict average salary.
- An interactive Streamlit application is developed for visualization.
- The system helps job seekers and recruiters make data-driven decisions.

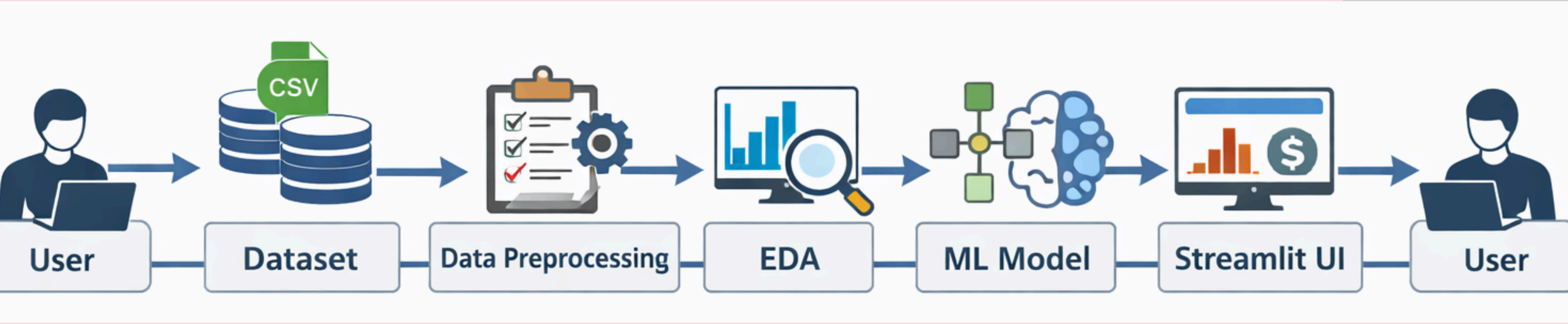
INTRODUCTION

- The job market changed significantly after the COVID-19 pandemic.
- Data Analyst roles gained importance across industries.
- Job seekers lack clarity on salary and skill requirements.
- This project studies job trends, salary patterns, and skills.
- Real-world data is used for practical analysis.
- The project combines analytics, ML and deployment.

OBJECTIVES

- To analyze Data Analyst job market trends.
- To identify high-paying job roles and locations.
- To study sector-wise and location-wise salary patterns.
- To analyze skill demand such as Python and Excel.
- To build a machine learning model for salary prediction.
- To develop an interactive Streamlit dashboard.

SYSTEM ARCHITECTURE



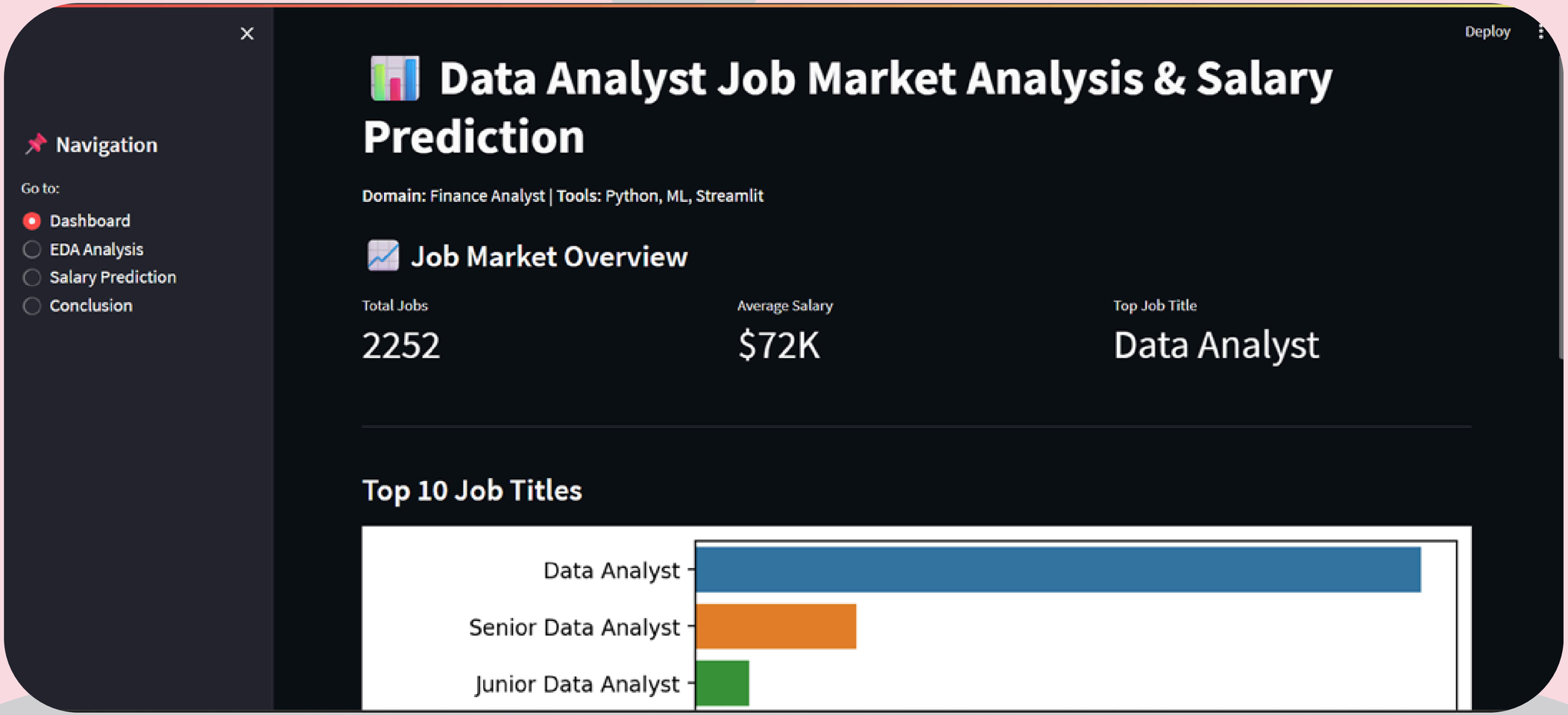
KEY TECHNOLOGIES USED

- Python for data processing and modeling.
- Pandas and NumPy for data manipulation.
- Matplotlib and Seaborn for visualization.
- Scikit-learn for machine learning.
- Streamlit for web application deployment.
- Jupyter Notebook for development and testing.

RESULTS

- Identified top-paying job roles and sectors.
- California locations offer the highest salaries.
- Python and Excel significantly impact salary.
- Salary prediction model provides reasonable estimates.
- Interactive dashboard improves user experience.

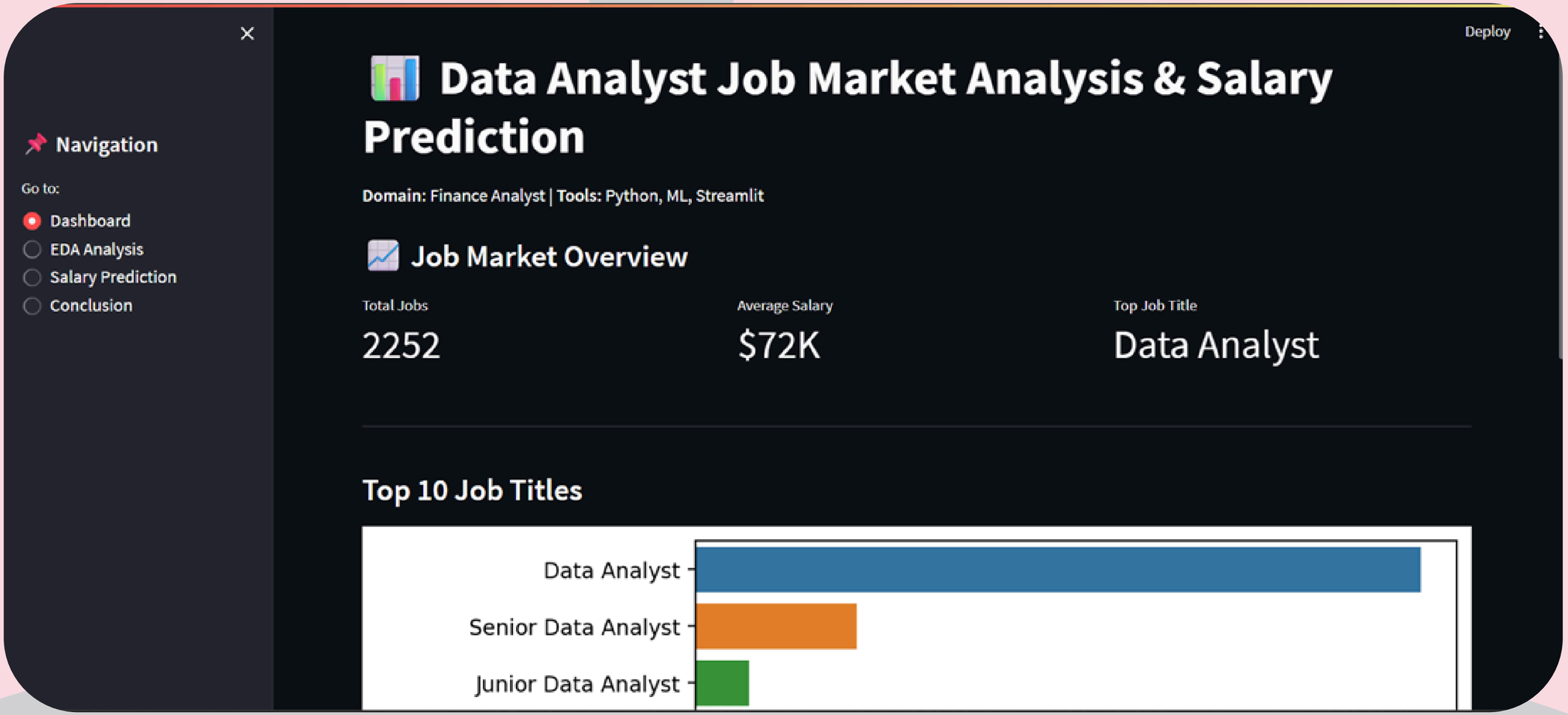
RESULTS



1. Dashboard

The dashboard provides an overall summary of the Data Analyst job market. It displays total job count, average salary, and most common job roles using interactive visualizations.

RESULTS



2. EDA Analysis

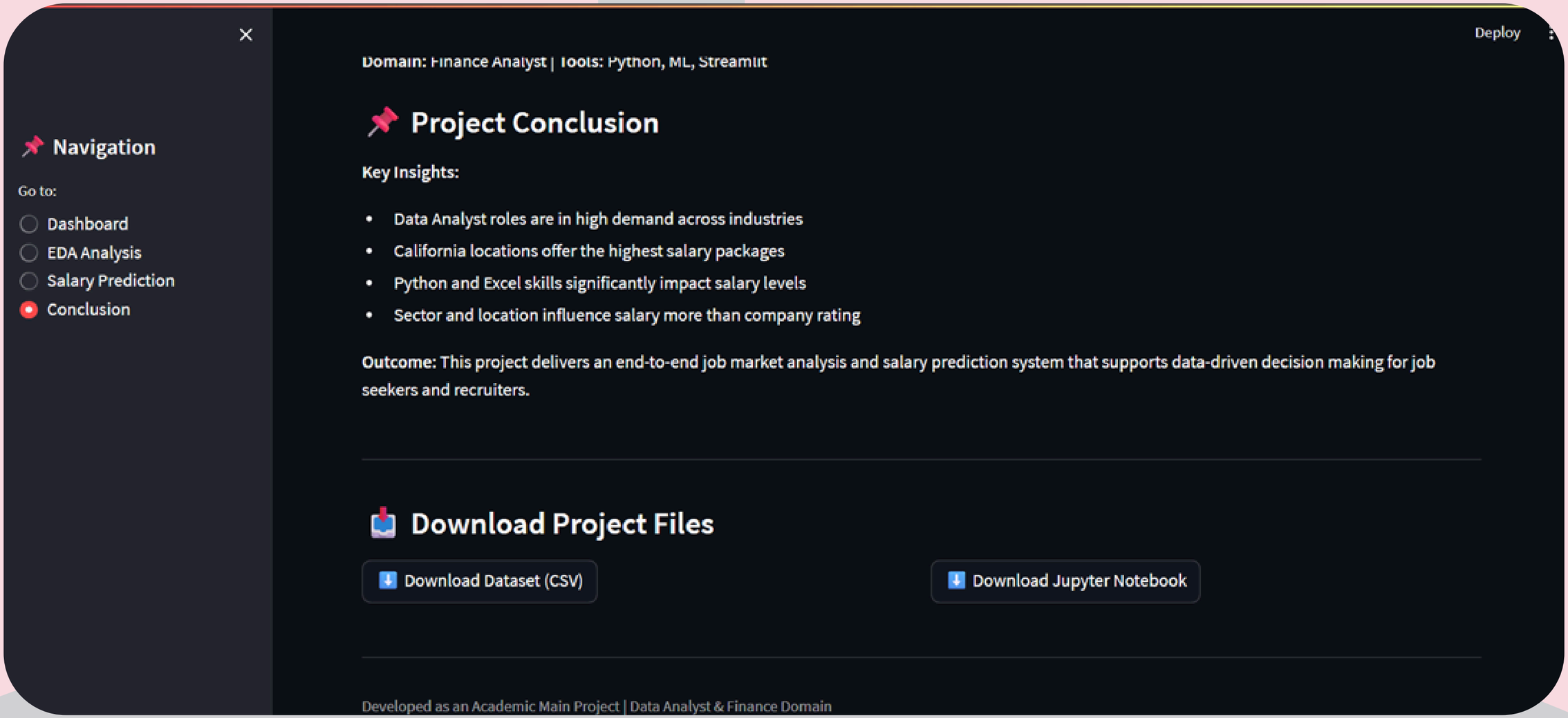
This section presents exploratory data analysis through charts and graphs. It highlights salary distribution, top-paying sectors, and high-paying job locations.

RESULTS

3. Salary Prediction

The salary prediction module uses a machine learning model to estimate average salary based on company rating and required skills.

RESULTS

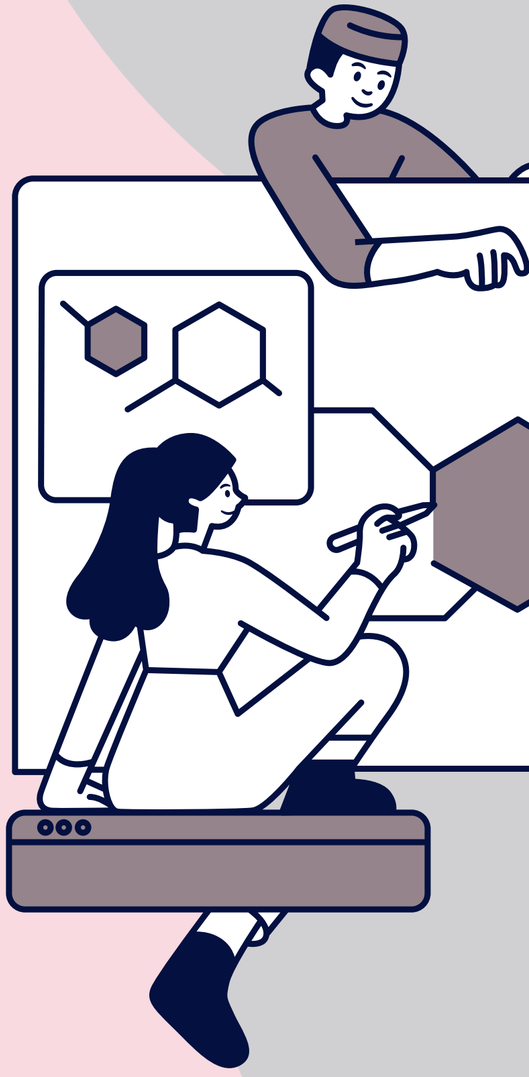


4. Conclusion

The conclusion screen presents summarized insights obtained from job market analysis and salary prediction. Allows users to download the dataset and project notebook for reference.

CONCLUSION

- The project successfully analyzes job market trends.
- It provides valuable insights for job seekers and recruiters.
- Machine learning enhances salary prediction capability.
- Streamlit deployment makes the system user-friendly.
- The project demonstrates real-world data analytics application.



REFERENCES

- Glassdoor Job Dataset (Kaggle)
- Scikit-learn Documentation
- Pandas Documentation
- Streamlit Documentation
- Matplotlib and Seaborn Documentation

THANK YOU