



RAJEEV INSTITUTE OF TECHNOLOGY

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(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

X Deploy :

Data Analyst Job Market Analysis & Salary Prediction

Domain: Finance Analyst | Tools: Python, ML, Streamlit

Navigation

Go to:

- Dashboard
- EDA Analysis
- Salary Prediction
- Conclusion

Job Market Overview

Total Jobs: 2252 | Average Salary: \$72K | Top Job Title: Data Analyst

Top 10 Job Titles

Data Analyst	Blue Bar
Senior Data Analyst	Orange Bar
Junior Data Analyst	Green Bar

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

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Navigation

Go to:

- Dashboard (selected)
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Job Market Overview

Total Jobs: 2252 | Average Salary: \$72K | Top Job Title: Data Analyst

Top 10 Job Titles

Job Title	Count
Data Analyst	2252
Senior Data Analyst	1800
Junior Data Analyst	1200

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

X Deploy :

✖ Navigation

Go to:

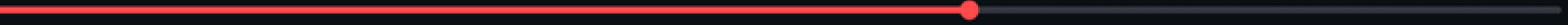
- Dashboard
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Data Analyst Job Market Analysis & Salary Prediction

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Salary Prediction Using Machine Learning

Company Rating

1.00  3.50 5.00

Python Required

Excel Required

Predict Salary

 Predicted Average Salary: ₹5,990,016.16 per year

3. Salary Prediction

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

RESULTS

X Deploy :

Domain: Finance Analyst | Tools: Python, ML, Streamlit

📌 **Project Conclusion**

Key Insights:

- Data Analyst roles are in high demand across industries
- California locations offer the highest salary packages
- Python and Excel skills significantly impact salary levels
- Sector and location influence salary more than company rating

Outcome: This project delivers an end-to-end job market analysis and salary prediction system that supports data-driven decision making for job seekers and recruiters.

⬇️ **Download Project Files**

[⬇️ Download Dataset \(CSV\)](#) [⬇️ Download Jupyter Notebook](#)

Developed as an Academic Main Project | Data Analyst & Finance Domain

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

