



Data Science Job Salaries Analysis Dashboard

An End-to-End Internship Project at Unified
Mentor Pvt. Ltd.

Exploring global salary patterns in the Data Science industry using **Python**, **Power BI**, and Machine Learning

Data Science Job Salaries Analysis Dashboard

Large

Medium

Small

Total Salary
107M

Average Salary
193.82K

Highest Salary Department
Data Scientist

Highest Salary by State
United States

Company Size vs Salary

Large

Medium

43M

Small

49M

Types of Employment VS Salary

Part-time 1M (0.8%)



Full-time 105M (98.55%)

● Full-time ● Part-time ● Contract ● Freelance

Salary by Job Position

● Contract ● Freelance ● Full-time ● Part-time

Senior-level

Mid-level

Entry-level

Executive-level

0M

20M

40M

company_location	Sum of salary
Algeria	100000
American Samoa	1335000
Australia	391000
Austria	256000
Belgium	145000
Brazil	195600
Canada	3267900
Total	106599532

Average of salary by job_title

Lead Data Scientist
Lead Data Analyst
Data Science Manager
Big Data Engineer
3D Computer Vision Researcher
Business Data Analyst
AI Scientist

0.0M

0.2M

0.4M

0.6M

0.8M

1.0M

1.2M

Salary By Residence of Employees



Microsoft Bing

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Project Objective & Business Questions

Objective: To perform an end-to-end analysis of Data Science job salaries to uncover patterns, relationships, and predictive insights.

Business Questions Solved:

1 Experience Level Impact

How do salaries vary by experience level (Entry, Mid, Senior, Executive)?

2 Employment Type Influence

What is the impact of employment type (Full-time, Part-time, Contract, Freelance)?

3 Job Title Salaries

Which job titles command the highest average salaries?

4 Company Size Effect

How does company size (Small, Medium, Large) influence salary distribution?

5 Remote Work Ratio

What is the effect of remote work ratio (On-site, Hybrid, Remote)?

6 Geographic Differences

How do salaries differ by employee residence vs company location?

7 Salary Prediction

Can we predict salaries based on job-related attributes?

Methodology & Tools Used

Workflow Steps:

01

Data Collection & Understanding

Imported global salary dataset for Data Science roles.

02

Data Cleaning & Preprocessing

Handled missing values, standardised currency (USD), and encoded categorical variables.

03

Exploratory Data Analysis (EDA)

Distribution by job title, experience, location. Salary comparison by employment type and company size.

04

Visualisation using Power BI

Created an interactive dashboard for dynamic insights.

05

Machine Learning Model

Built a salary prediction model using Linear Regression & Random Forest.

06

Insight Derivation & Reporting

Compiled findings and actionable recommendations.

Tools & Libraries:



Python



Scikit-learn



Seaborn



Power BI



Pandas



Matplotlib

Key Insights & Dashboard Highlights

Senior-Level Salaries

 Senior-level professionals receive the highest salary investment.

Employment Dominance

 Full-time employees dominate total salary share ($\approx 98.5\%$).

Top Earners

 Lead Data Scientists earn the highest average salary globally.

Company Size Impact

 Large companies invest more per employee; small companies employ more data engineers.

Geographic Trends

 India leads in mid-level employment across data domains.

Dashboard Highlights:

- Salary comparison by Job Title, Experience, Company Size, and Country
- Interactive World Map for residence-based salary visualisation
- Dynamic filtering by company size and employment type

Outcome, Learnings & Future Scope

Project Outcome

- Built a comprehensive analytics dashboard to visualise salary trends
- Developed a predictive ML model to estimate salaries
- Delivered actionable insights for HR and business strategy teams

Key Learnings

- End-to-End Data Analytics workflow (Python → Power BI → ML)
- Enhanced understanding of data storytelling and business communication
- Hands-on experience with real-world datasets

Future Scope

- Integrate live job APIs for real-time salary updates
- Deploy predictive model as a web app
- Automate dashboard with Power BI Gateway



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