

PROJECT REPORT: DATA SCIENCE HIRING FUNNEL & SALARY DETERMINANTS (2025)

1. EXECUTIVE SUMMARY

This project explores the Data Science job market for the year 2025. By analysing a dataset of over 900 job postings, we examined the relationship between job titles, seniority levels, required skills, and salary expectations. The goal is to provide actionable insights for job seekers (specifically freshers) and recruiters regarding current market trends.

2. DATASET OVERVIEW

- **Source:** Data Science Job Posts 2025 Dataset.
- **Volume:** 944 unique job postings.
- **Features Analysed:** Job Title, Salary, Seniority Level, Company Location, Skills, and Company Industry.
- **Data Cleaning:**
 - Removed duplicate records to ensure analysis integrity.
 - Parsed complex salary strings (e.g., "€100k - €150k") into numeric values for statistical analysis.
 - Standardized missing values in seniority and company ownership fields.

3. KEY FINDINGS

3.1 Salary Trends

- **Typical Range:** The majority of Data Science salaries fall between **\$50,000 and \$150,000**.
- **Impact of Seniority:** There is a clear progression in salary bands. Senior and Lead roles command significantly higher compensation compared to Entry-level positions, though Entry-level roles have a wider availability.

3.2 Job Market Composition

- **Top Roles:** The market is dominated by three primary job titles:
 1. Data Scientist
 2. Data Analyst
 3. Machine Learning Engineer
- **Seniority Demand:** The highest volume of openings is found at the **Entry and Mid-level** tiers, indicating a healthy market for new professionals.

3.3 Skill Requirements

- **Core Stack:** The most frequently requested skills across all job titles are:
 - **Python** (Foundational)

- **SQL** (Database Management)
- **Machine Learning** (Predictive Modeling)
- **Data Analysis** (Insight Generation)

3.4 Location Dynamics

- Hiring is concentrated in major "Tech Hubs," but there is a significant prevalence of **Remote** and **Hybrid** work options, expanding the accessible market for candidates regardless of geography.

4. RECOMMENDATIONS

- **For Job Seekers:** Focus on mastering the "Core Stack" (Python & SQL). Candidates should target Entry/Mid-level roles which offer the highest probability of hiring.
- **For Freshers:** While high salaries are attractive, initial focus should be on skill acquisition. Remote roles are a viable entry point if local tech hubs are inaccessible.

5. CONCLUSION

The 2025 Data Science landscape remains robust for entry-level candidates who possess strong foundational skills in Python and SQL. While salary determinants are heavily influenced by seniority, strategic upskilling in Machine Learning can unlock higher compensation tiers.