

# Data Science Job Salary Analysis

DATE: JANUARY 2024

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# Agenda

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# Introduction

Welcome to my presentation: 'Decoding Data Science Salaries.' In today's age of big data and rapid technological progress, data science plays a pivotal role in driving innovation, efficiency, and strategic decision-making across industries. With organizations leaning heavily on data-driven insights, the demand for skilled data scientists has soared, creating a competitive job market where salary structures are key. Join me as we delve into a comprehensive exploration, uncovering patterns, trends, and geographical variations that define compensation packages in this dynamic field.



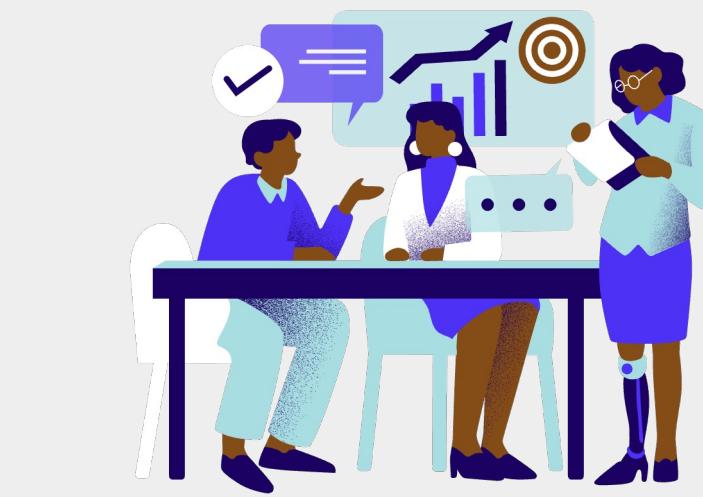
# Motivation

Empowering Careers: Unveiling the Significance of Data Science Job Salary Analysis for Informed and Strategic Decision-Making.



## Informed Career Decisions:

- Understand earning potential in data science.
- Align career expectations with market standards.
- Make informed decisions for a rewarding career.



## Negotiation Power:

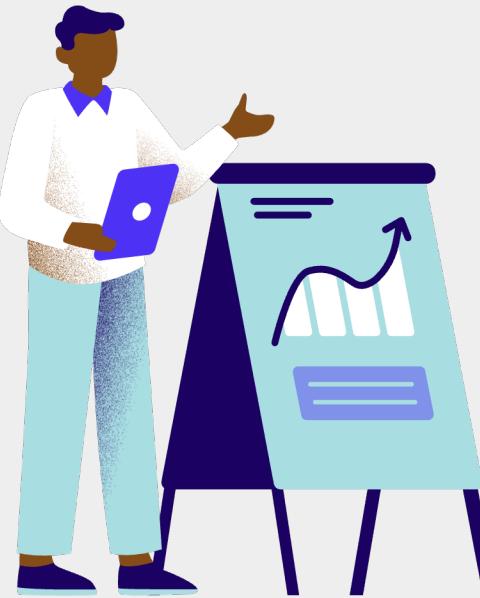
- Equip yourself with salary insights for negotiations.
- Knowledge of industry standards enhances bargaining.
- Maximize earning potential through strategic negotiation.



## Market Trends and Career Planning:

- Identify trends for informed career planning.
- Recognize industries and regions with higher compensation.
- Strategically align skills for both passion and financial success.

# Data Sources:



## Data Source 1:

**Data URL:** <https://www.kaggle.com/datasets/thedevastator/jobs-dataset-from-glassdoor/>

**Data Type:** CSV format

**Total datasize:** 741 **Dataset Year:** 2017-2018

**About:** This dataset encapsulates job postings sourced from Glassdoor.com, spanning the period of 2017-2018 and focusing on positions within the United States. The dataset is enriched with a diverse set of features providing comprehensive insights into each job listing.

## Data Source 2:

**Data URI:** <https://www.kaggle.com/datasets/arnabchaki/data-science-salaries-2023>

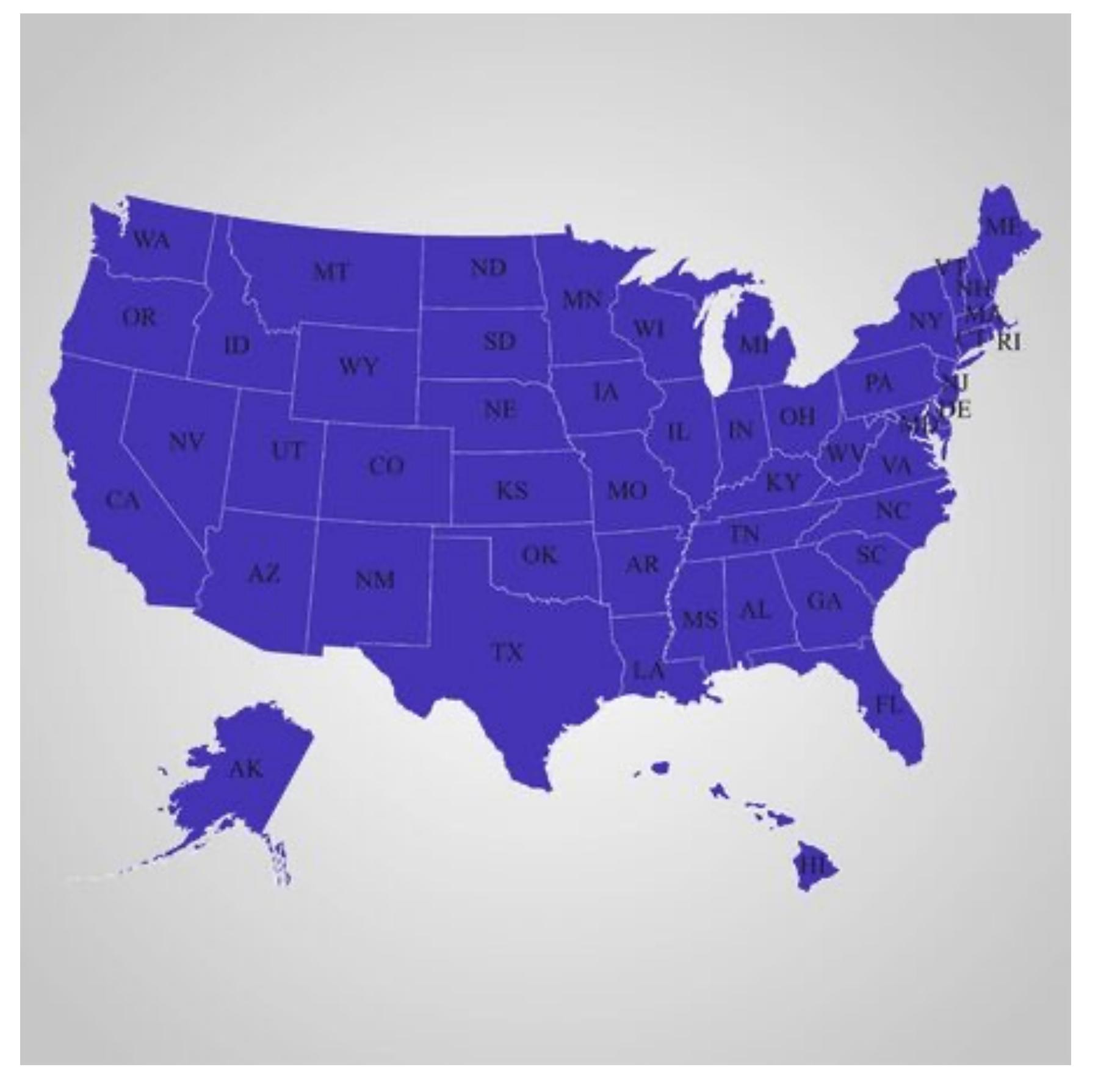
**Data Type:** CSV format

**Total datasize:** 3755 **Dataset Year:** 2020-2023

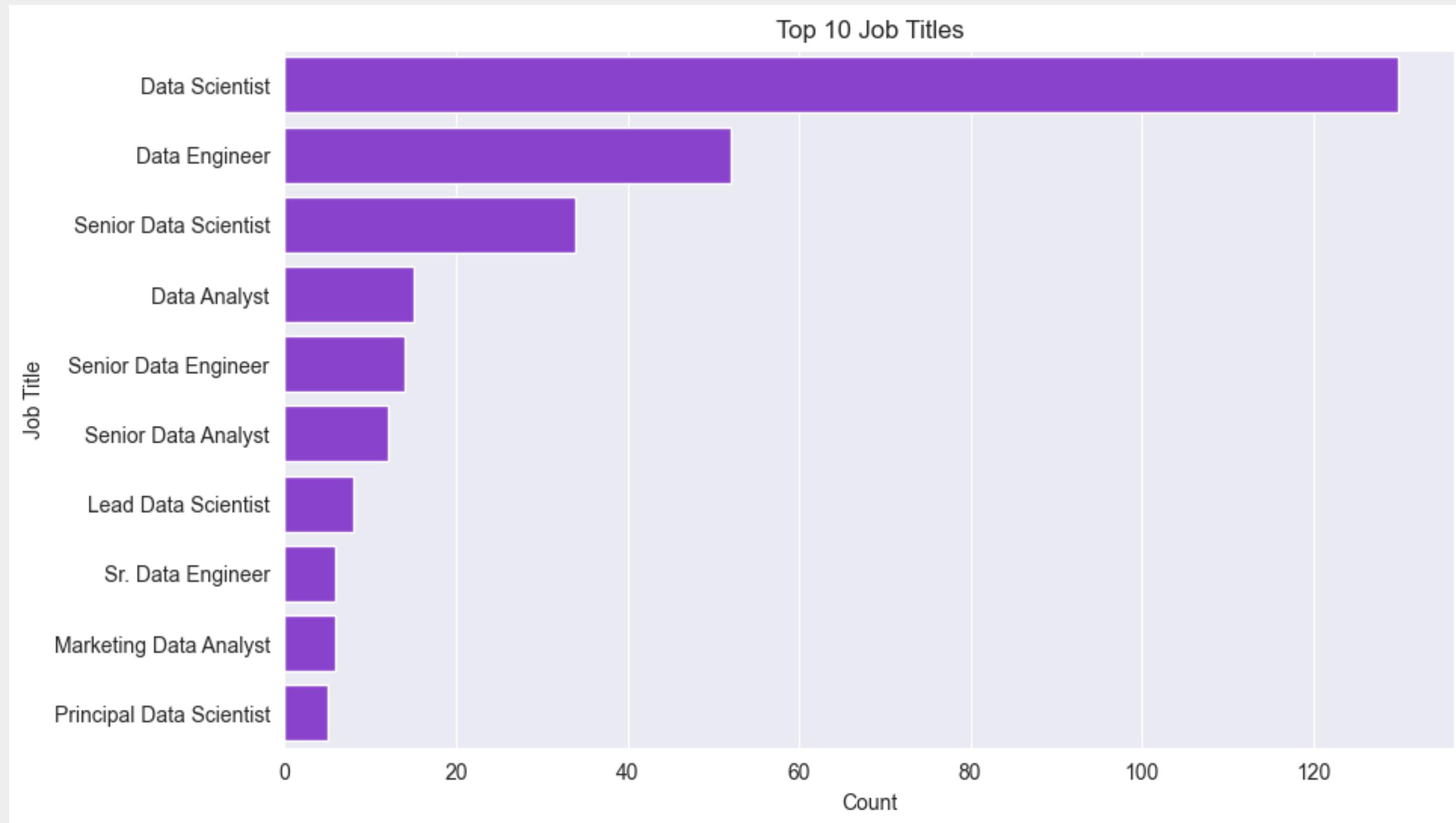
**About:** The analysis was conducted utilizing a dataset that encompasses pertinent information regarding Data Scientists from 2020-2023.

# Analysis

**Let us start  
with.....**



# 1. What are the Top 10 Job titles in United-States?



## **2. What are the different types of ownership and their counts in the United States?**

**Private : 402 and Public: 193**

## **3. What are the top five industries with the most job listings in the United States?**

**Biotech & Pharmaceuticals**

**Which are those top 5 Biotech & Pharmaceuticals companies?**

Proportion of Average Salaries in Top 5 Biotech & Pharma Companies

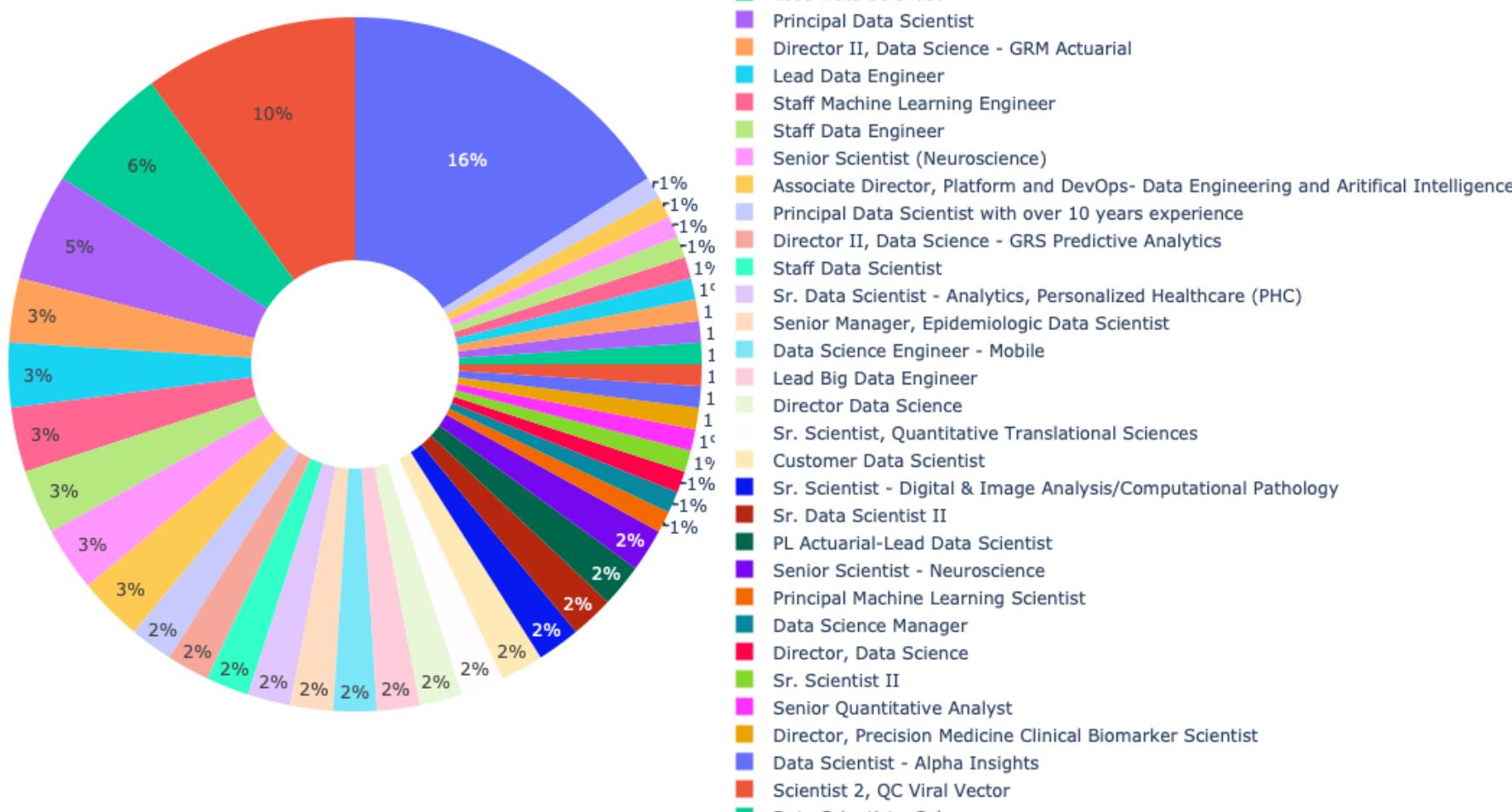


## **4. How is the revenue distributed among the companies?**

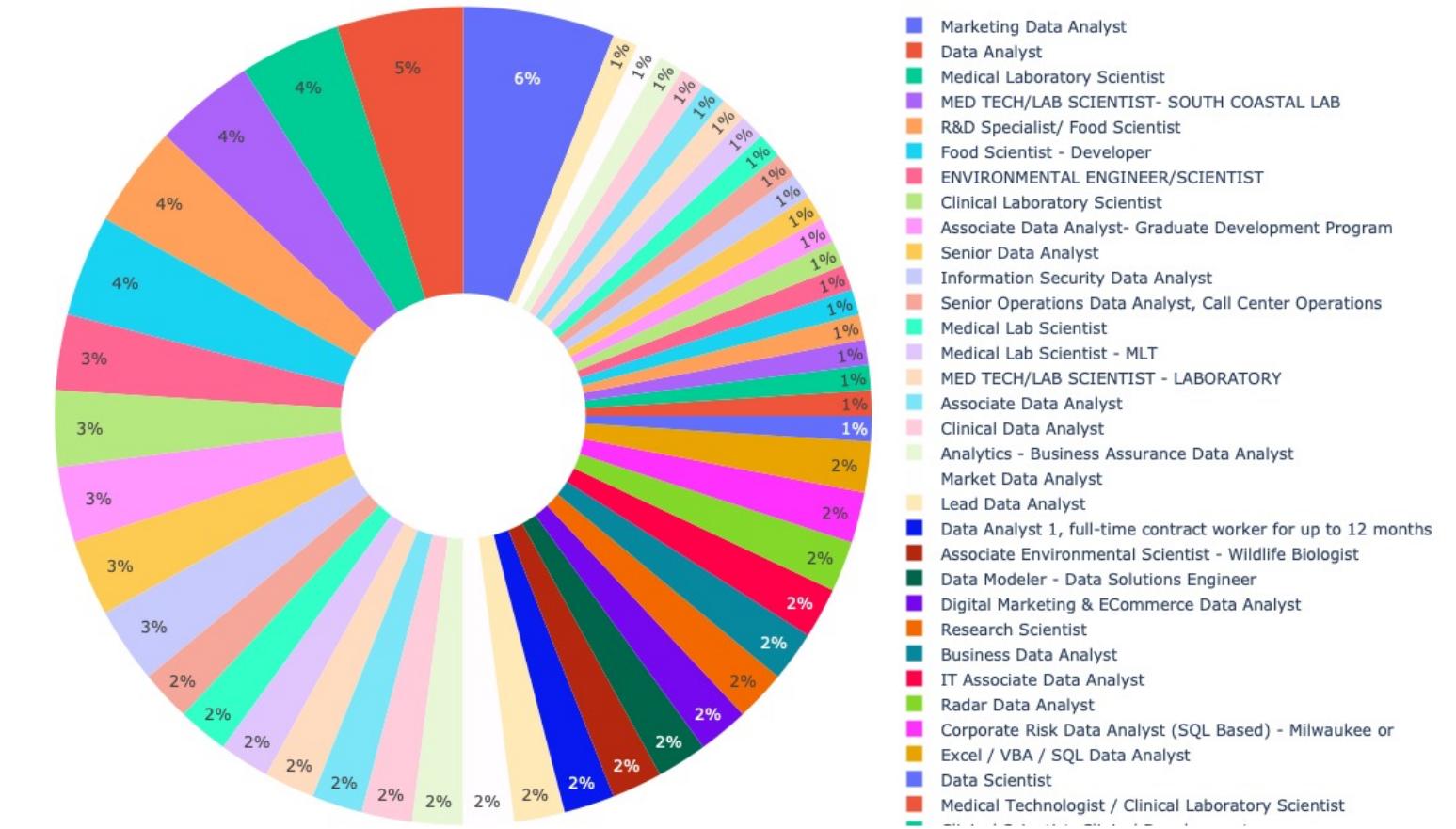
Major corporations, predominantly in the 10+ billion (USD) bracket, feature prominently among companies with disclosed revenue figures, while a diverse mix is evident with a significant representation in the mid-range, spanning from 100 million to 2 billion (USD)

## 5. What are the high and low salary job titles in the field of data?

High Salary Job



Low salary Job



## 6. Which city in the United States have the highest and lowest salary in the field of data?

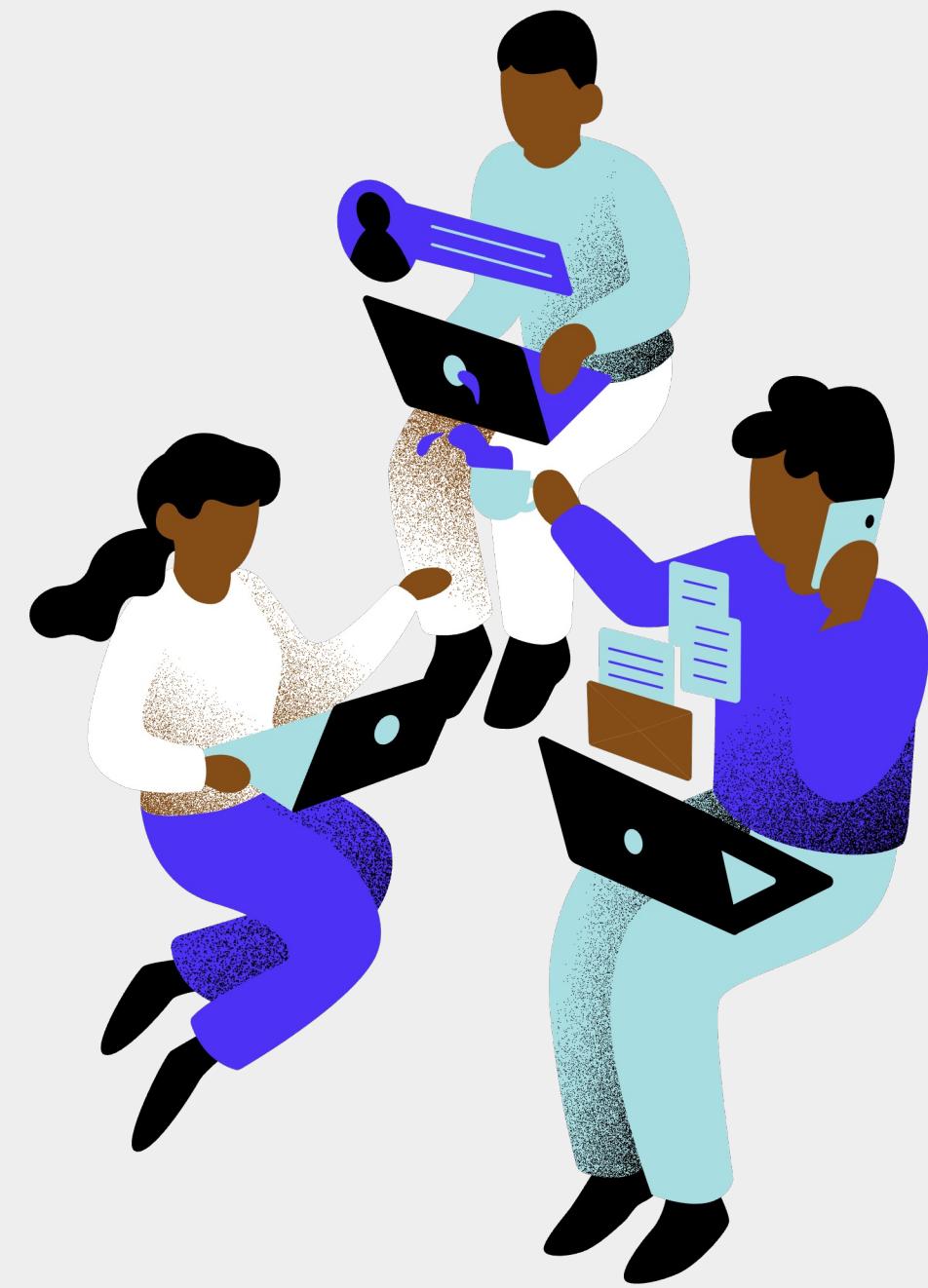
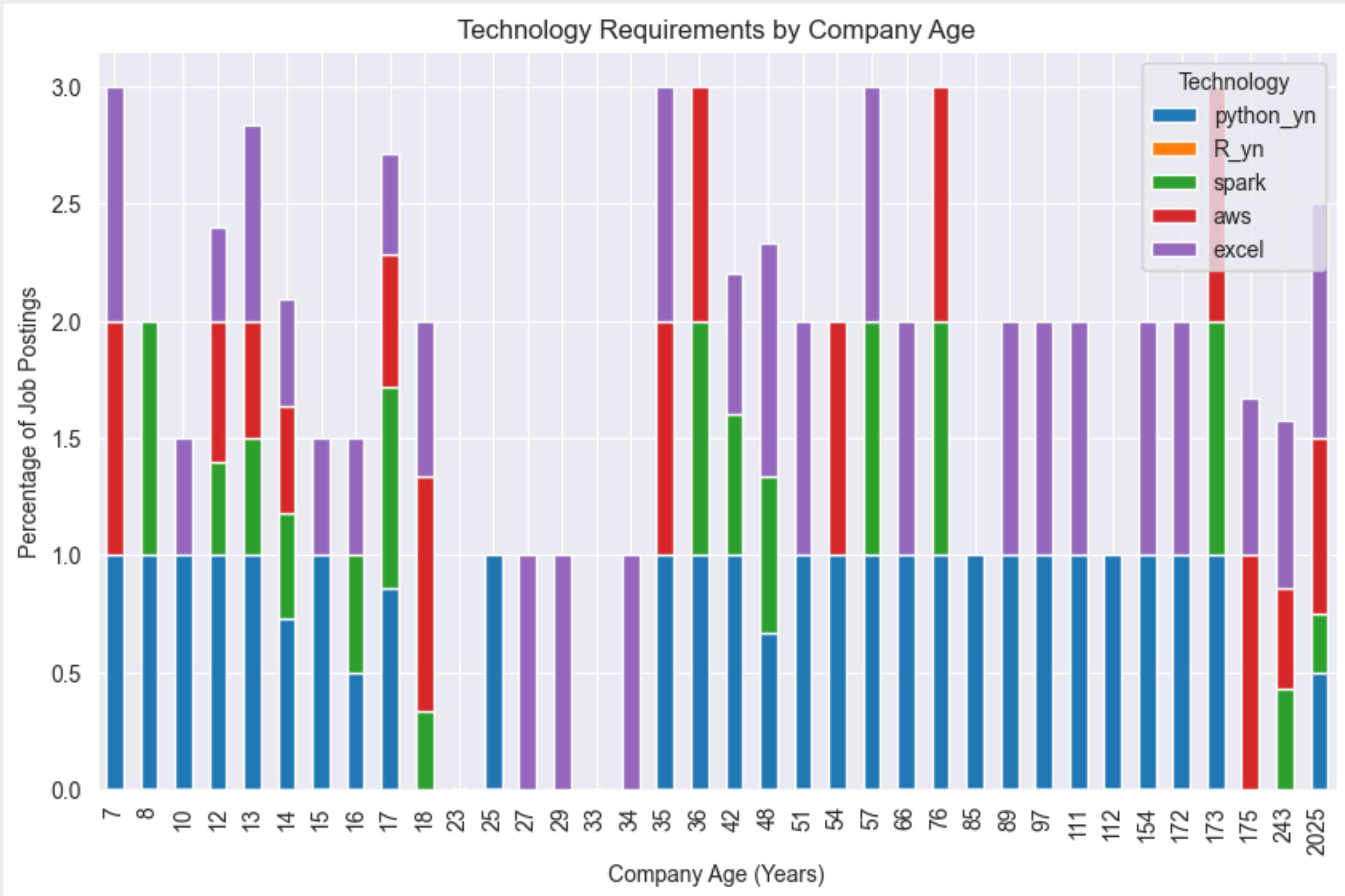
City with highest salary in US



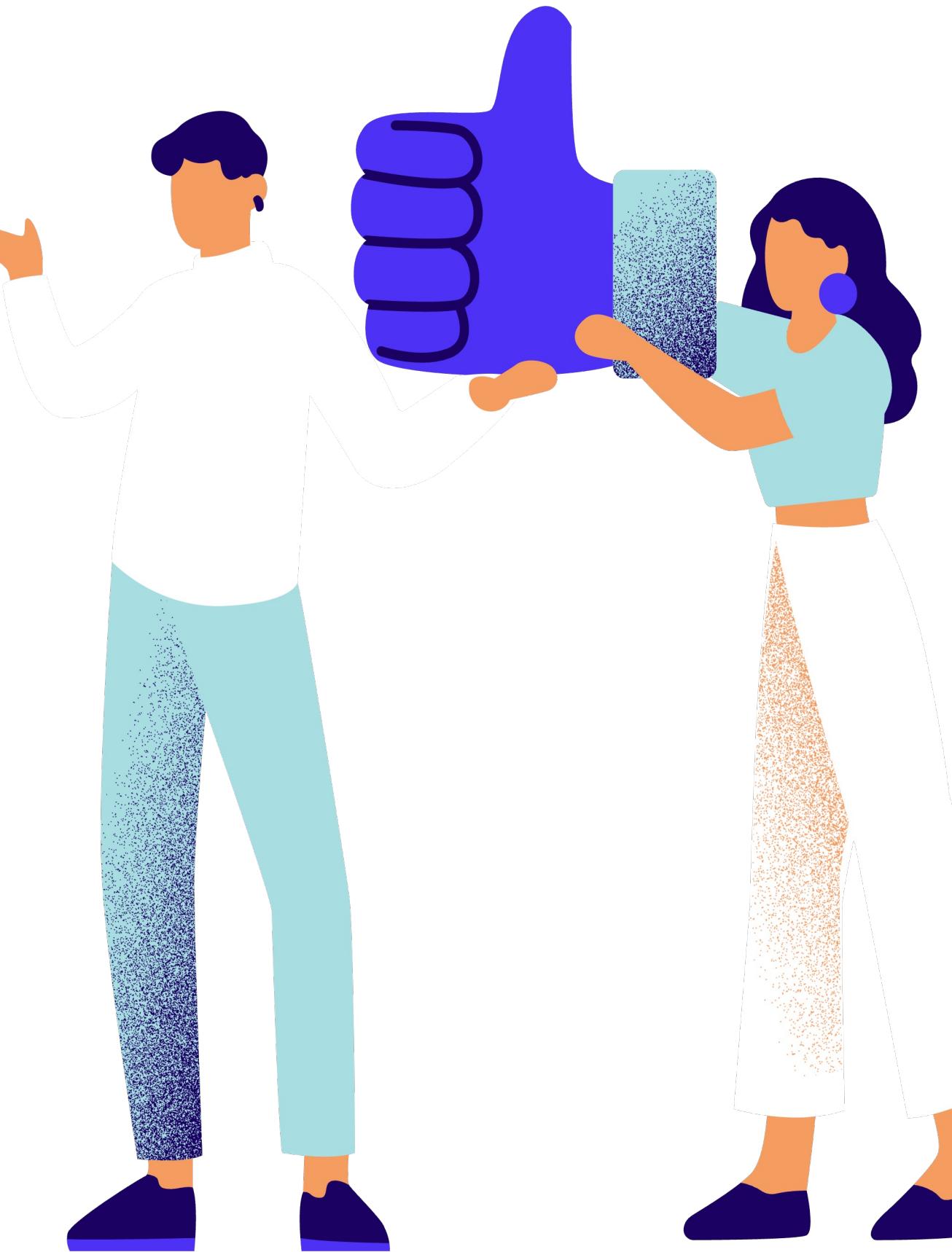
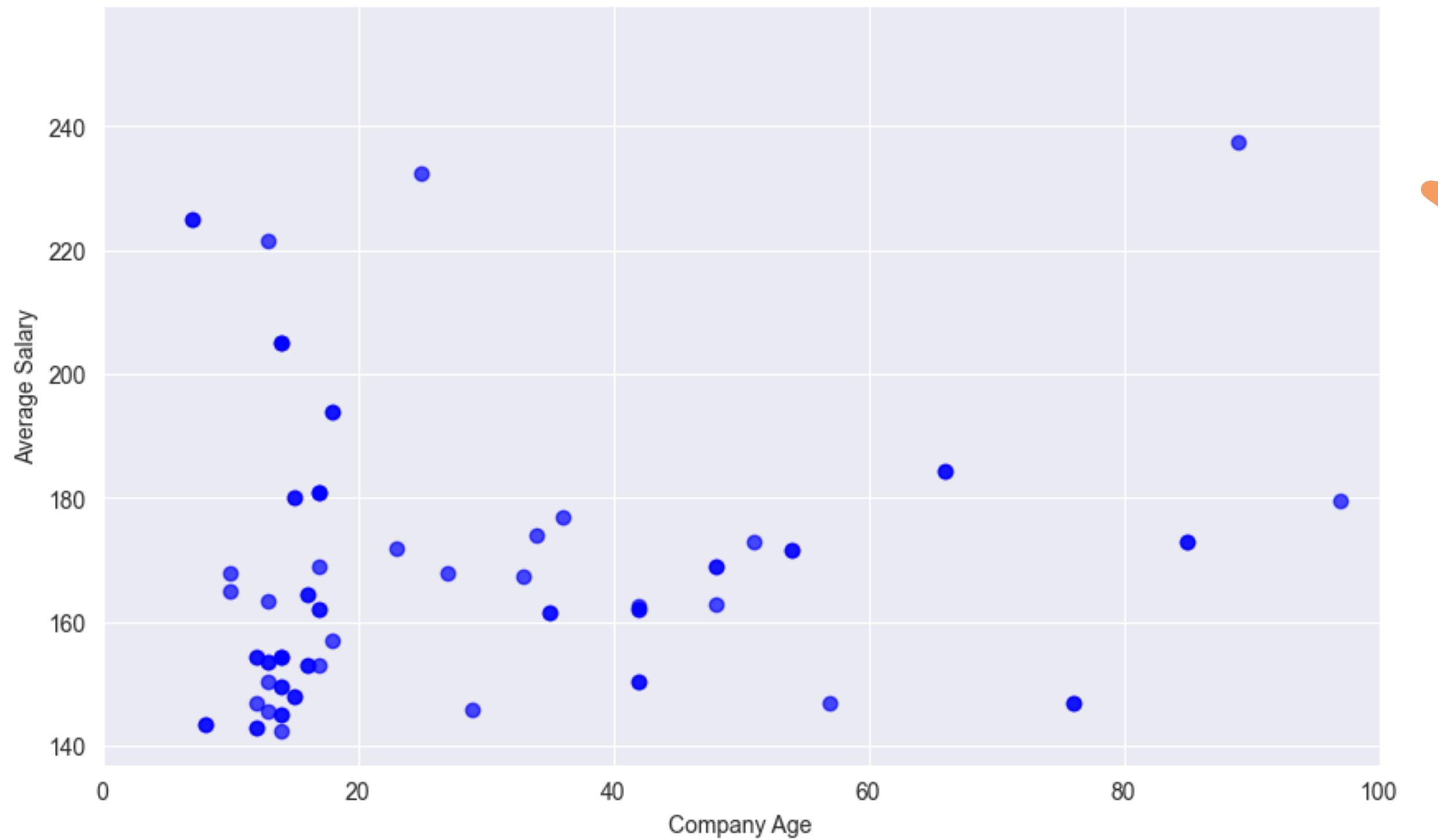
City with lowest salary in US



## 7. What is the technology requirements by high salary company age?



Scatter Plot: Company Age vs Average Salary

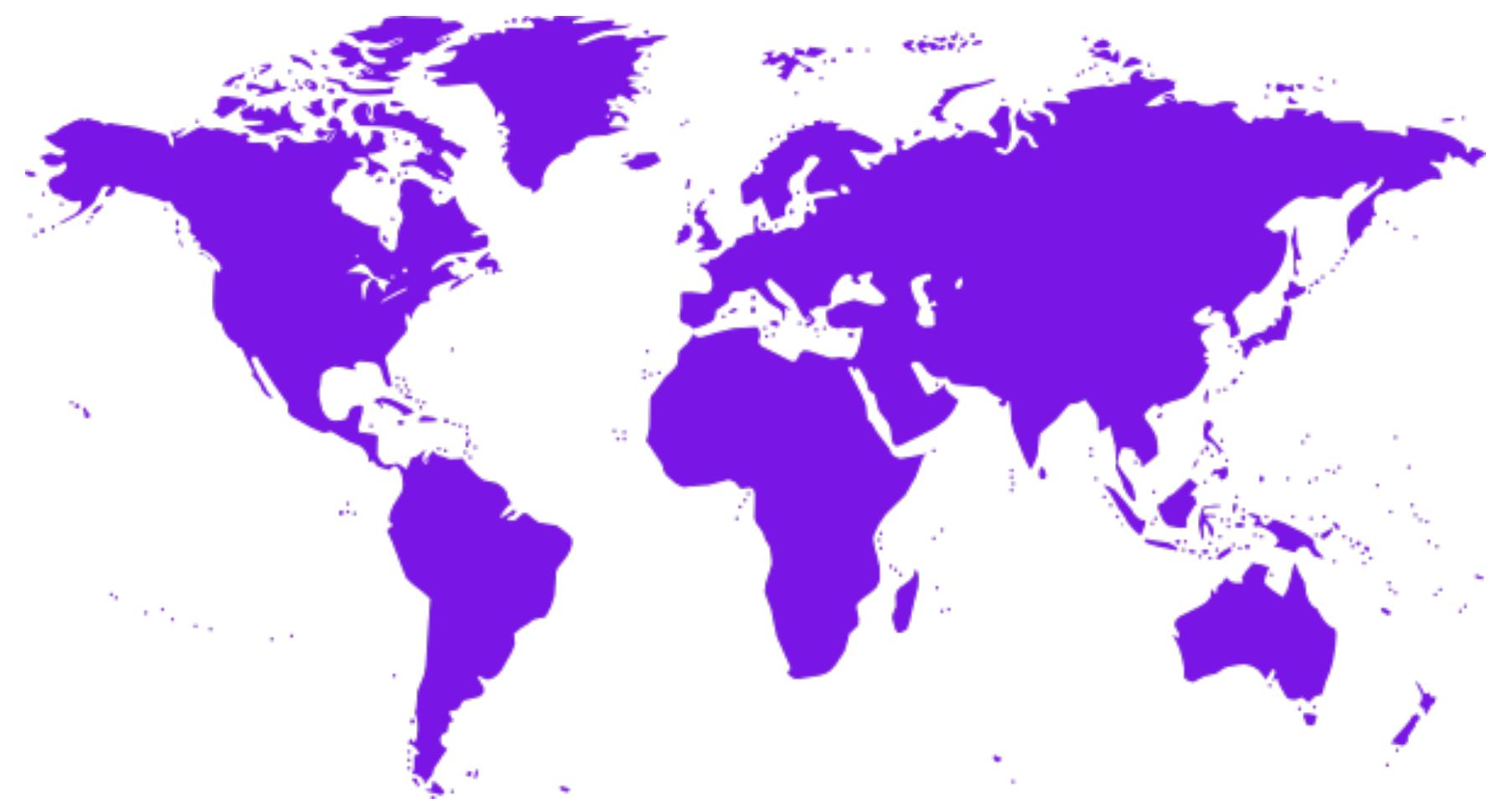


# Salary Prediction

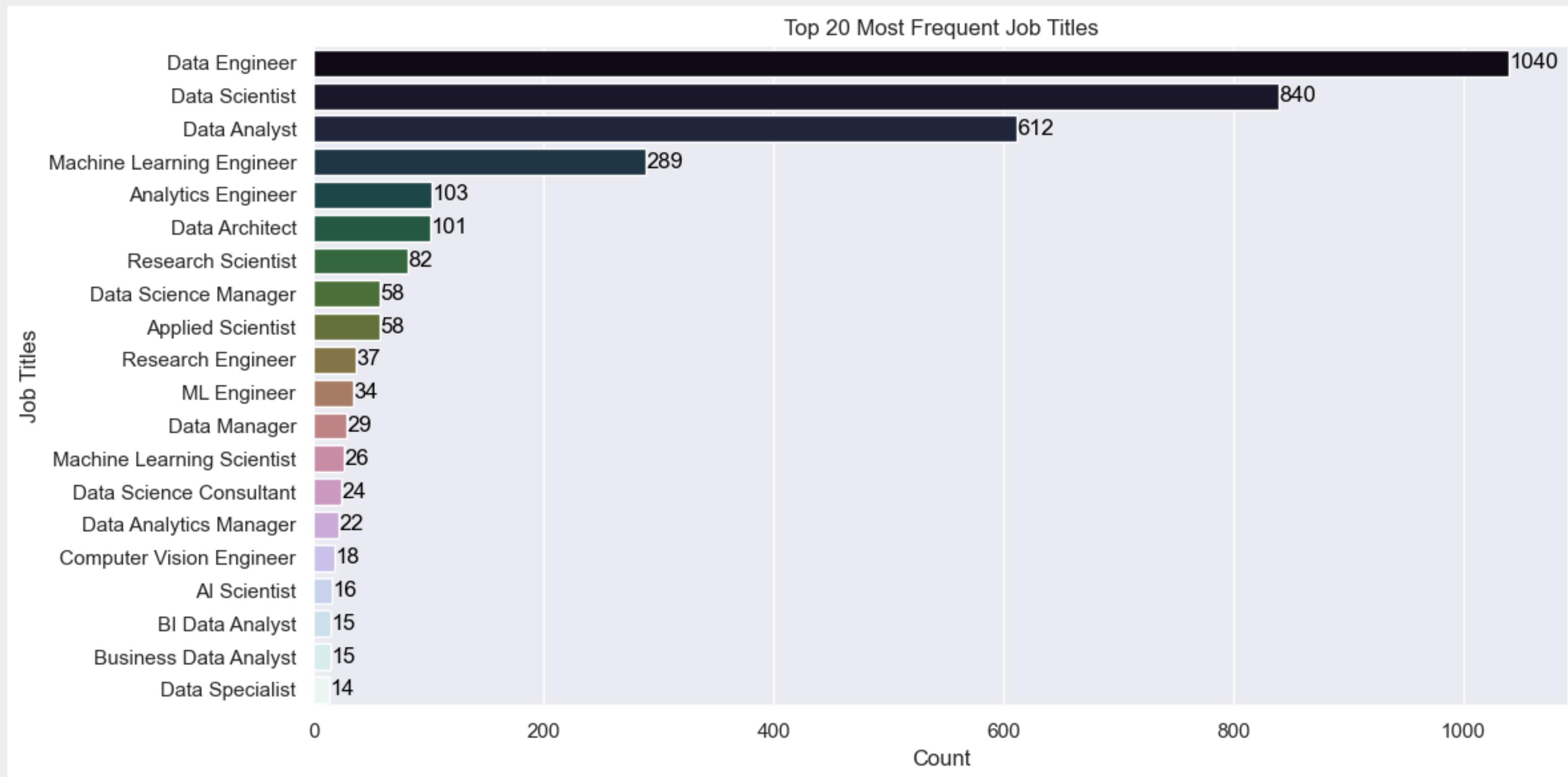
Based on Job Description using Machine Learning



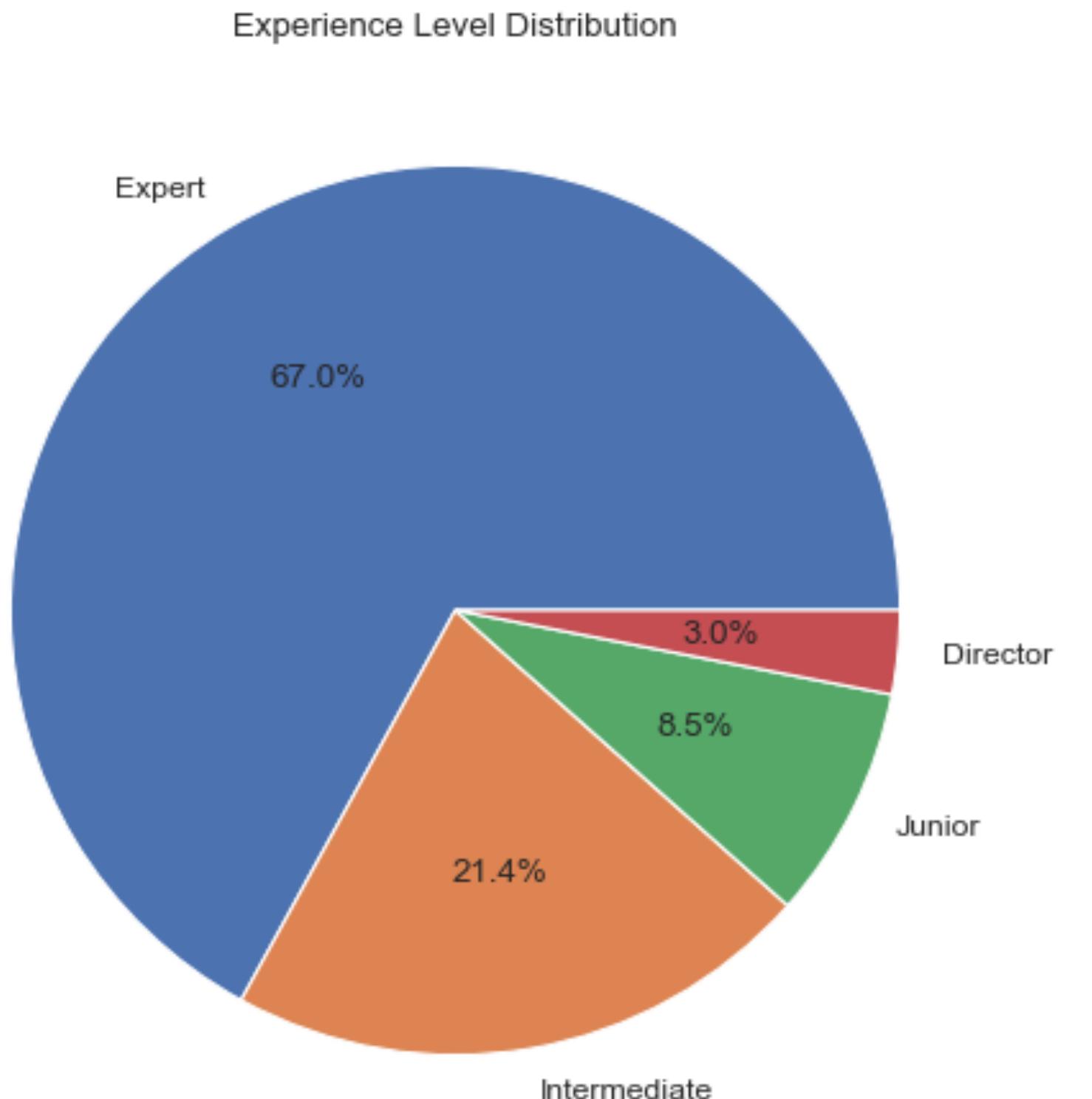
# Global Analysis



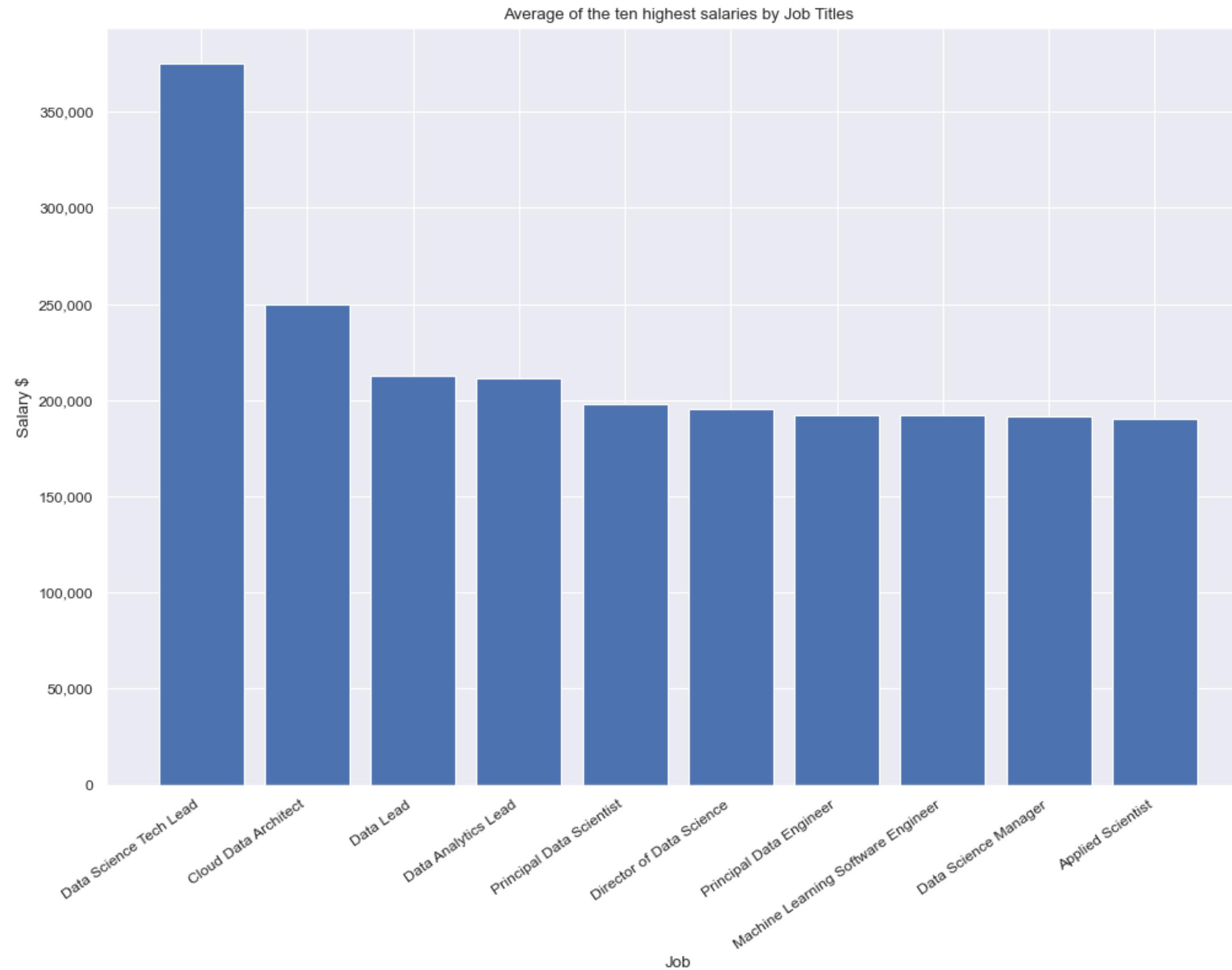
# 1. What are the Top 10 Job titles globally?



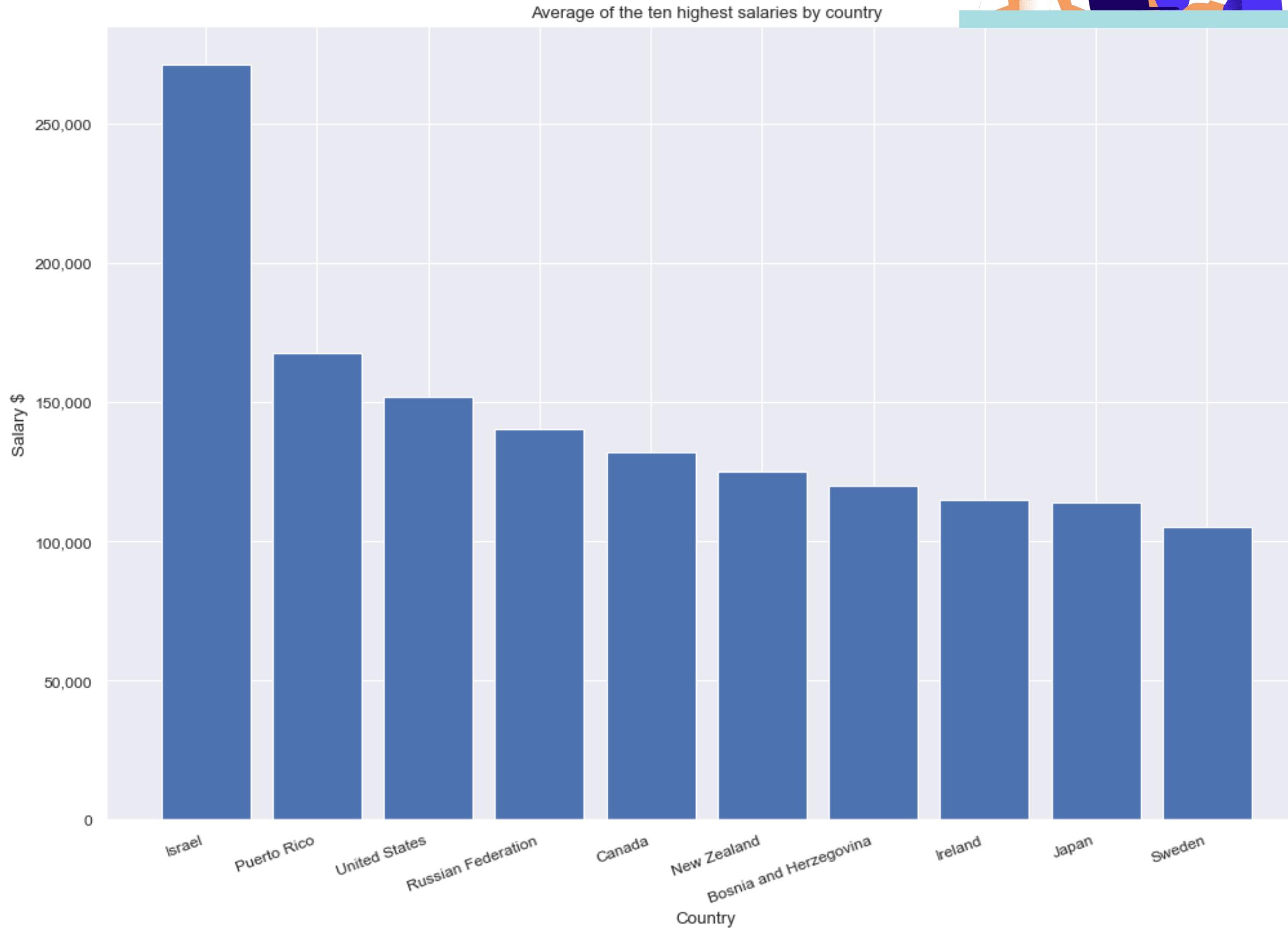
## 2. What is the experience level distribution?

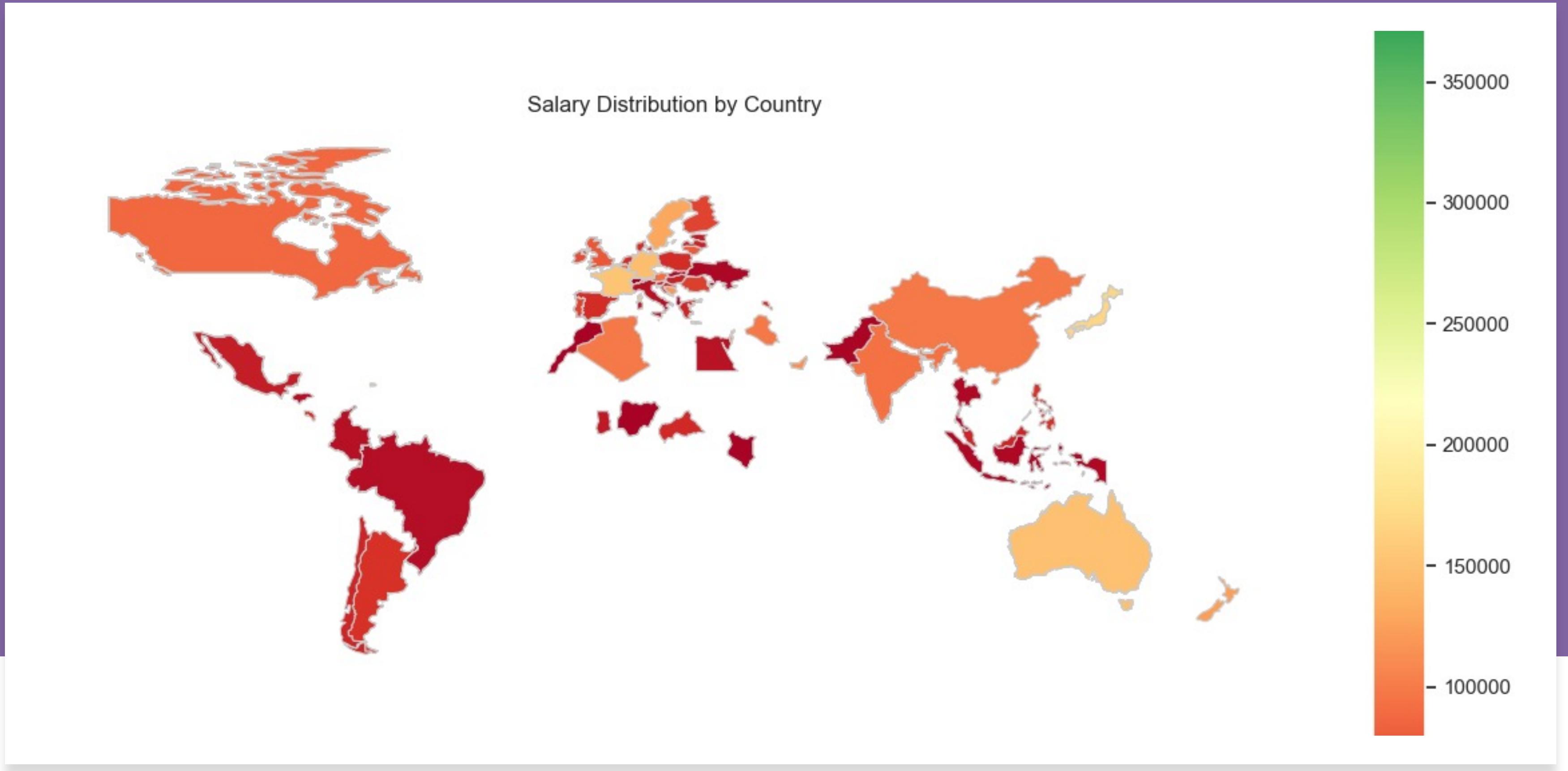


### 3. Which job titles have the highest salary?

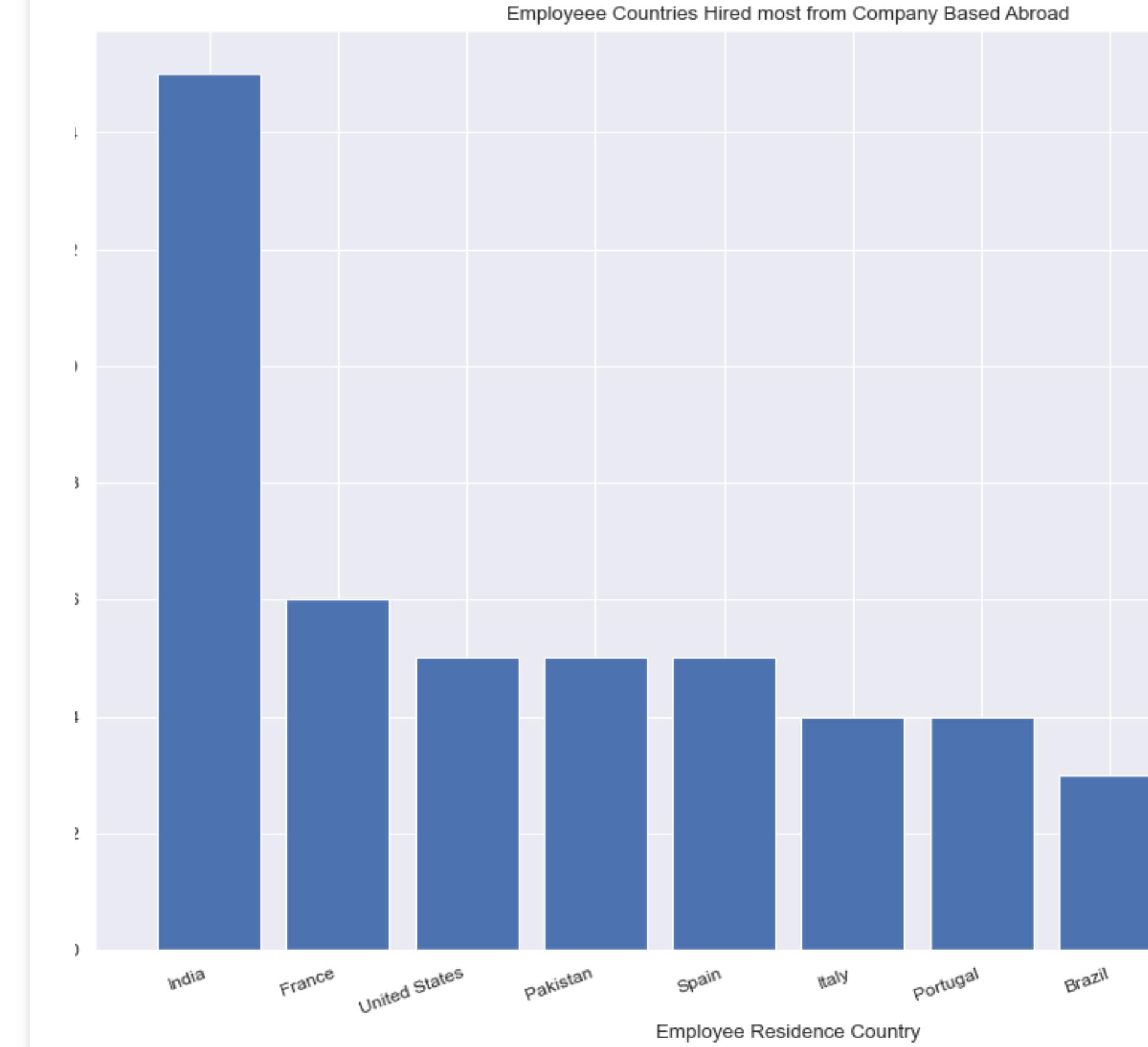


#### 4. Which are the top 10 countries who provide highest salary?



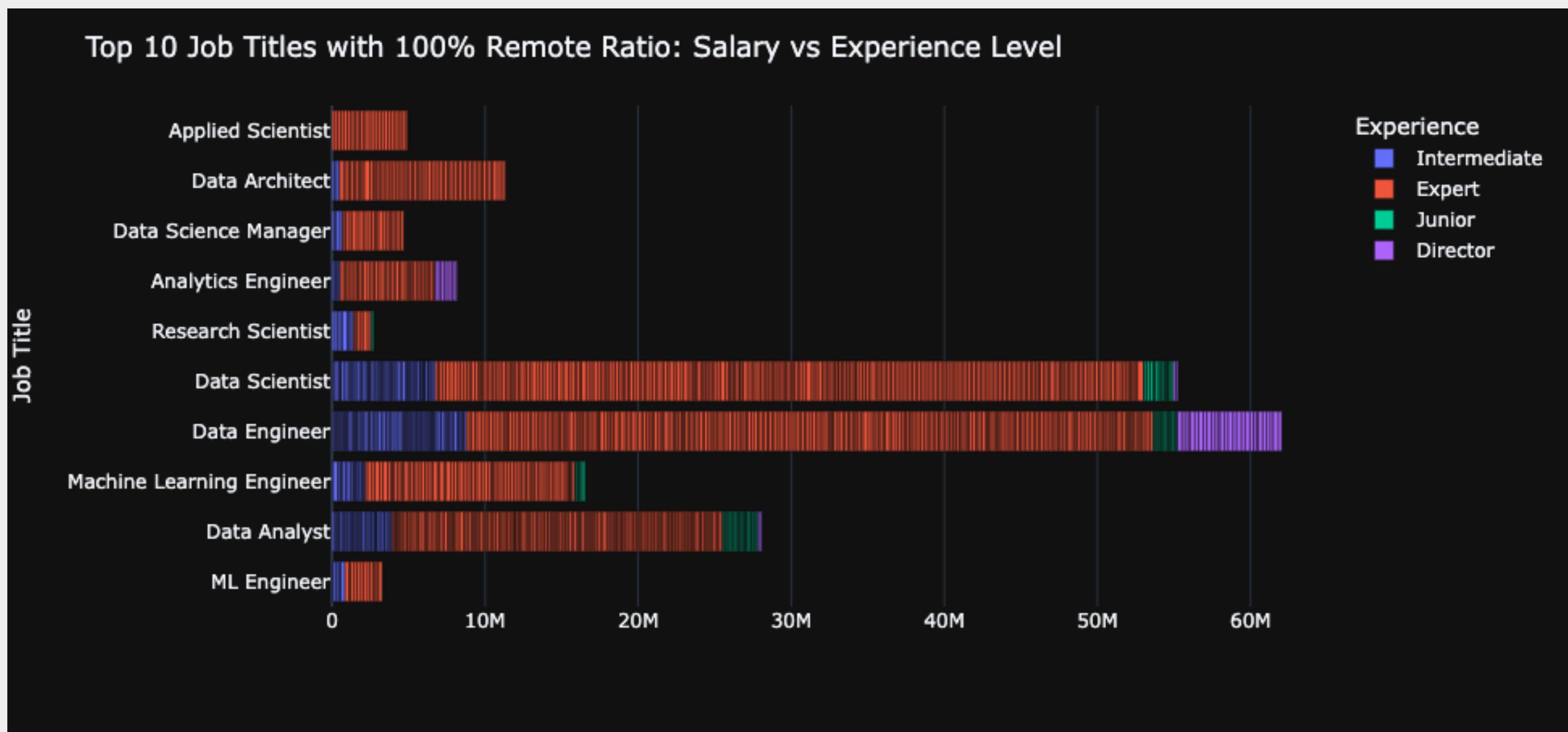


# 5. Which countries is hired most from company based abroad?



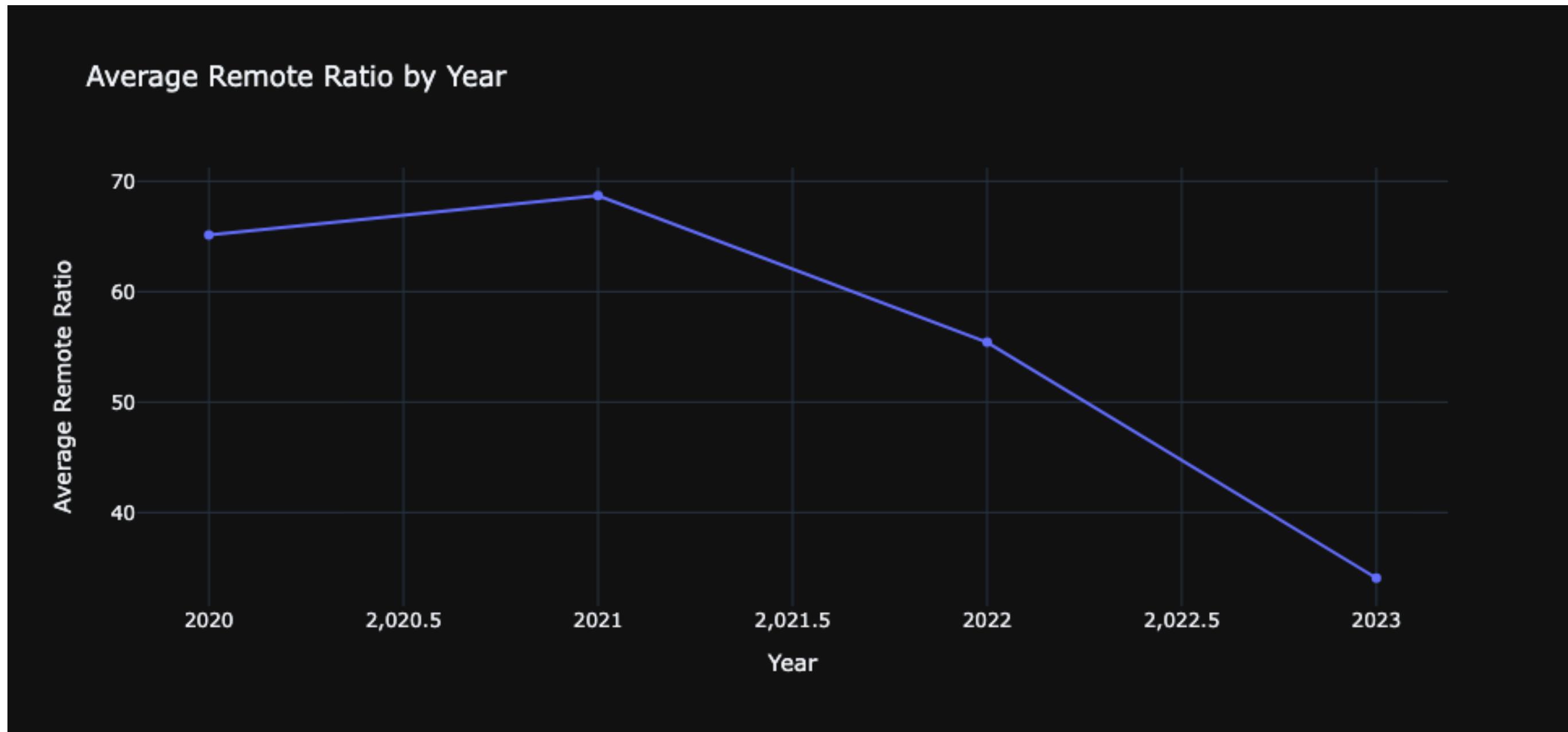
# Remote Jobs

## 6. For remote jobs in data field, how experience level matters?

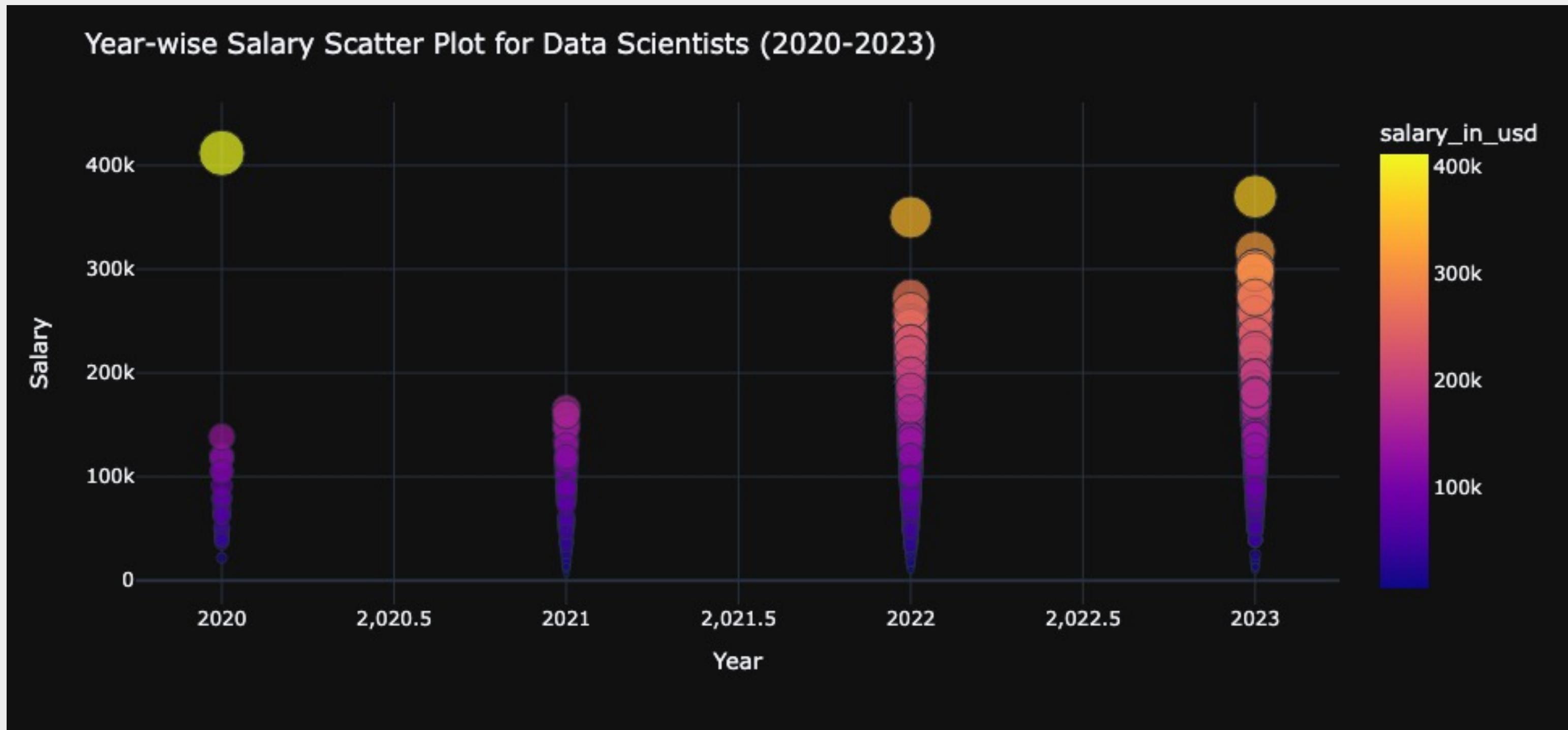


# Remote Jobs

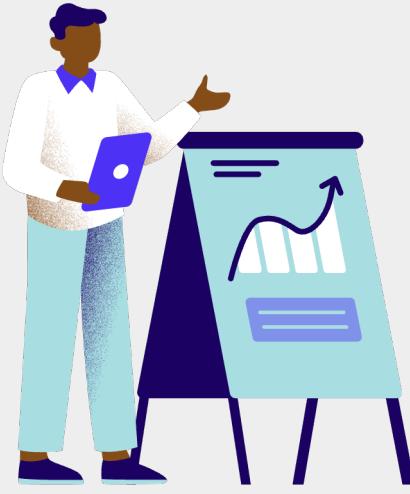
7. What is the current trend of remote working?



# Data Scientist Salary Trend



# Conclusion



## 1. Job Demand Disparity:

**United States vs. Global:** The analysis highlights a notable discrepancy in job demand, with the United States having a higher concentration of data scientist positions, while globally, data engineering roles are in greater demand.

## 2. Salary Discrepancy:

**Data Scientist Compensation:** Despite the global demand for data engineering roles, the salaries for data scientists, both globally and within the United States, surpass those of data engineers, indicating a premium on data science skills.

## 3. Remote Job Expertise:

**Expertise in Remote Jobs:** Examination of available data shows that remote job opportunities predominantly favor experts, with limited prospects for intermediate and junior-level professionals.

# Conclusion



## 4. Global Technology Trends:

**Technology Proficiency:** While global data on technology skills is lacking, the US perspective implies that Python and Excel are pivotal technologies, substantiating their significance for excelling in the broader field of data.

## 5. Global Salary Disparities:

**Top Salaries Globally:** The analysis identifies Israel as having the highest salaries globally, with the United States securing the third position. This sheds light on the variance in compensation structures on a global scale.

## 6. International Workforce Dynamics:

**Indian Workforce Abroad:** The data reveals that Indians significantly dominate the workforce for companies based abroad, showcasing a strong international presence and the global demand for Indian talent.

## 7. Post-Pandemic Remote Work Landscape:

**Remote Job Trends Post-COVID:** While there is a observed slowdown in remote job opportunities from 2020 to 2023, salaries for data scientists continue to rise. This suggests a promising future for the data science profession, demonstrating resilience and adaptability post the COVID-19 pandemic.

# Discussion

## Future Work:

### 1. Enhancement of Salary Prediction Model:

- Refine the model with diverse algorithms and advanced natural language processing for increased accuracy.

### 2. Global Salary Prediction Model:

- Develop a comprehensive global model, using diverse datasets for calibration across regions, including economies like India and Germany.

### 3. Cross-Industry Exploration:

- Explore salary predictions in diverse industries for insights into compensation trends, demand dynamics, and skill valuation.

### 4. International Salary Comparisons:

- Thoroughly examine salary structures in different countries, providing a comprehensive analysis of global economic landscapes and regional variations.

### 5. Diversification Beyond Data:

- Expand focus to include salary prediction models for various professional sectors, uncovering unique trends and patterns within each industry.



# Questions?

If you have any questions or need clarification regarding this analysis report, then please don't hesitate to reach out to me..

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# Thank you!