Job Trends in Data Science

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Overview

Objective: What are the best paying jobs in Data Science?

Dataset: "Jobs and Salaries in Data field 2024" by Murilo Zangari via Kaggle.com

# work_year	△ experienc...	△ employme...	△ job_title	# salary	△ salary_curr...	# salary_in_...	△ employee_...	△ work_setti...	△ company_l...	△ company_...	△ job_categ...
2024	Entry-level	Freelance	Applied Data Scientist	30000	USD	30000	United Kingdom	Remote	United Kingdom	M	Data Science and Research
2024	Executive	Full-time	Business Intelligence	230000	USD	230000	United States	In-person	United States	M	BI and Visualization
2024	Executive	Full-time	Business Intelligence	176900	USD	176900	United States	In-person	United States	M	BI and Visualization
2024	Senior	Full-time	Data Architect	171210	USD	171210	Canada	In-person	Canada	M	Data Architecture

Questions

1. What are the most common job titles?
2. What Countries pay the best salaries?
3. How does experience influence salary?

# work_year	A experienc...	A job_title	# salary_in_...	A employee_...	A work_setti...	A company_l...
2024	Executive	Business Intelligence	176900	United States	In-person	United States
2024	Senior	Data Architect	171210	Canada	In-person	Canada
2024	Senior	Data Architect	92190	Canada	In-person	Canada
2024	Mid-level	Data Science	57753	United Kingdom	In-person	United Kingdom

Details

14, 000+ rows of data

Timeframe: 2020 -2024

Countries: 74

Salary Range: $15,000-$450,000

Experience level: Entry, Mid, Senior, Executive

Job Titles: 149

Work Setting: In-person, Remote, Hybrid

work_year	experience_level	employment_type	job_title	salary
2024	Entry-level	Freelance	Applied Data Scientist	30000
2024	Executive	Full-time	Business Intelligence	230000
2024	Executive	Full-time	Business Intelligence	176900
2024	Senior	Full-time	Data Architect	171210
			Data	

Job Growth

- We will look at the most popular jobs and how they have changed over the years 2020-2024
- We will take a specific look at the percentage of data science jobs based on popularity through the those years
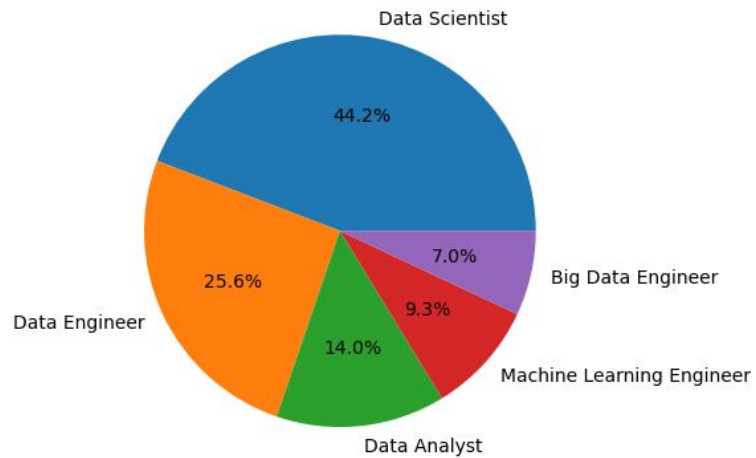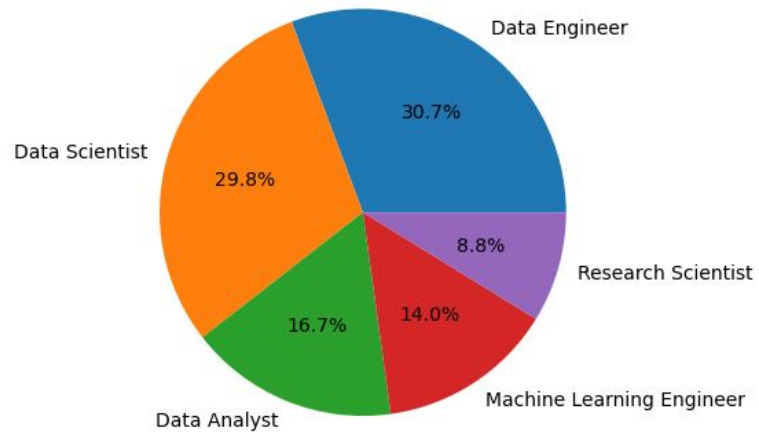- We will determine which four data science jobs are the most popular throughout the years

Job Growth
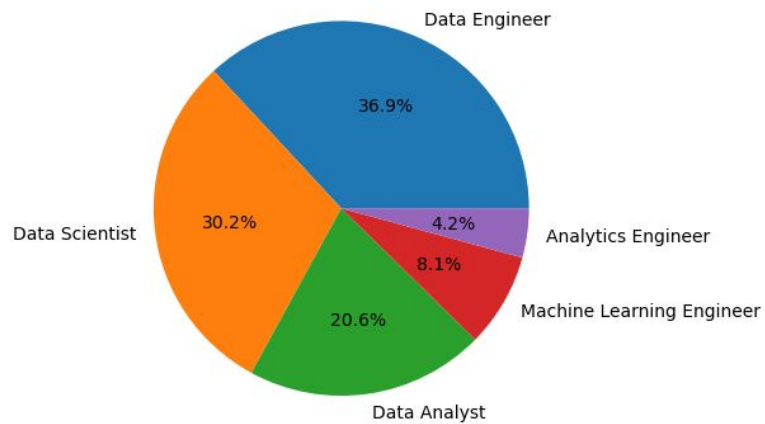

Year-on-Year Comparison of Job Categories
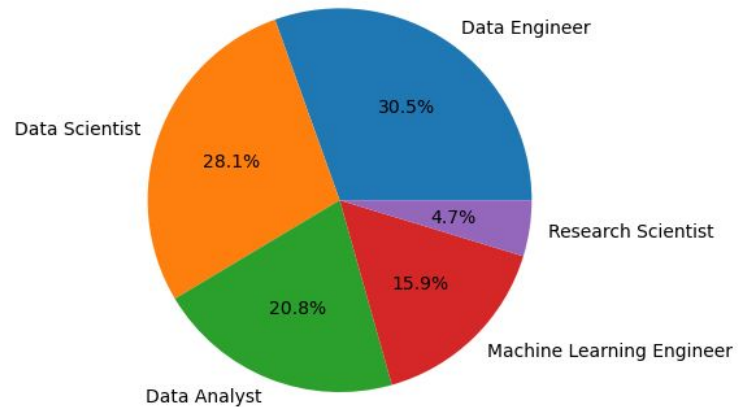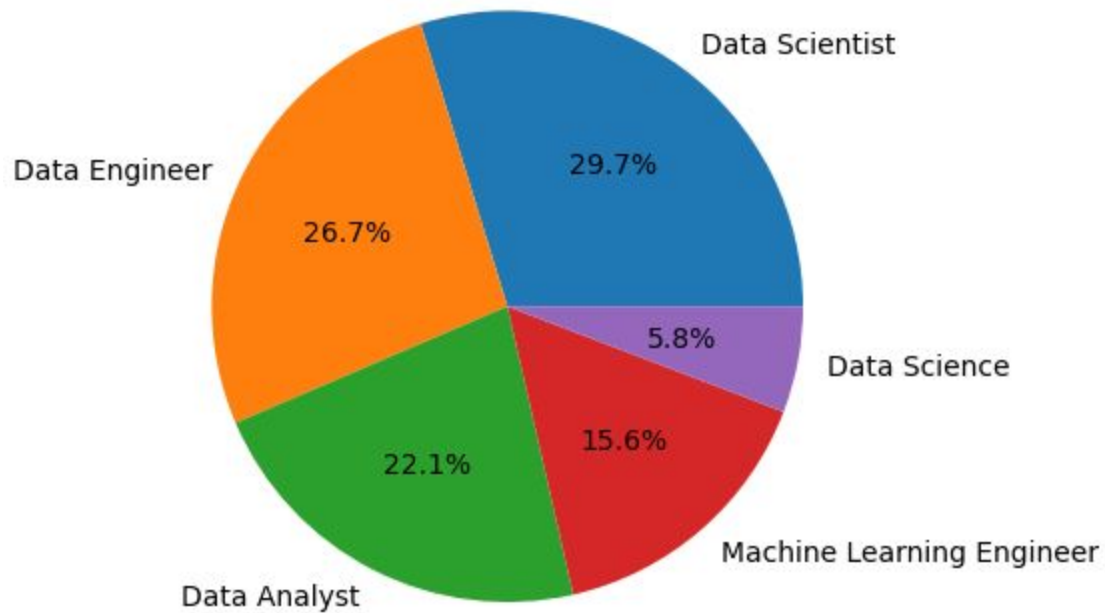
2020

- Data Scientist — 44.2%
- Data Engineer — 25.6%
- Data Analyst — 14.0%
- Machine Learning Engineer — 9.3%
- Big Data Engineer — 7.0%

2021

- Data Engineer — 30.7%
- Data Scientist — 29.8%
- Data Analyst — 16.7%
- Machine Learning Engineer — 14.0%
- Research Scientist — 8.8%

2022

- Data Engineer — 36.9%
- Data Scientist — 30.2%
- Data Analyst — 20.6%
- Machine Learning Engineer — 8.1%
- Analytics Engineer — 4.2%

2023

- Data Engineer — 30.5%
- Data Scientist — 28.1%
- Data Analyst — 20.8%
- Machine Learning Engineer — 15.9%
- Research Scientist — 4.7%

2024

Data Scientist 29.7%

Data Engineer 26.7%

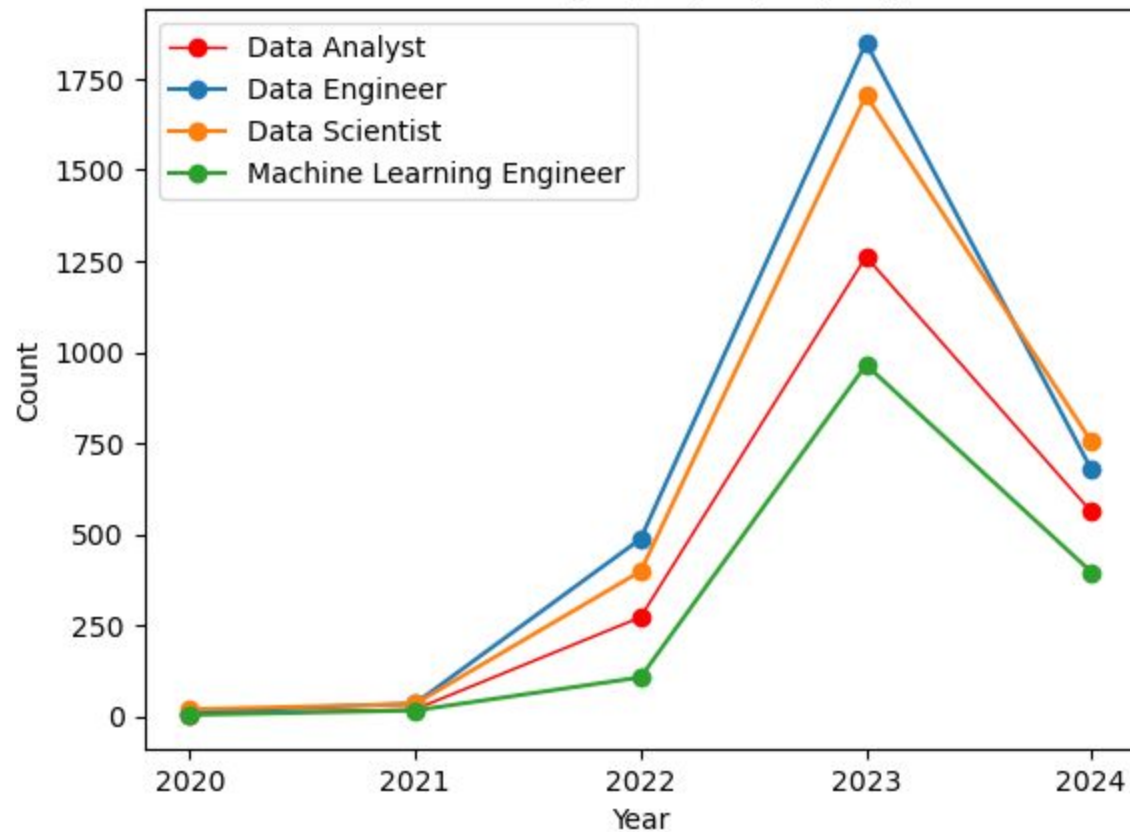Data Analyst 22.1%

Machine Learning Engineer 15.6%

Data Science 5.8%

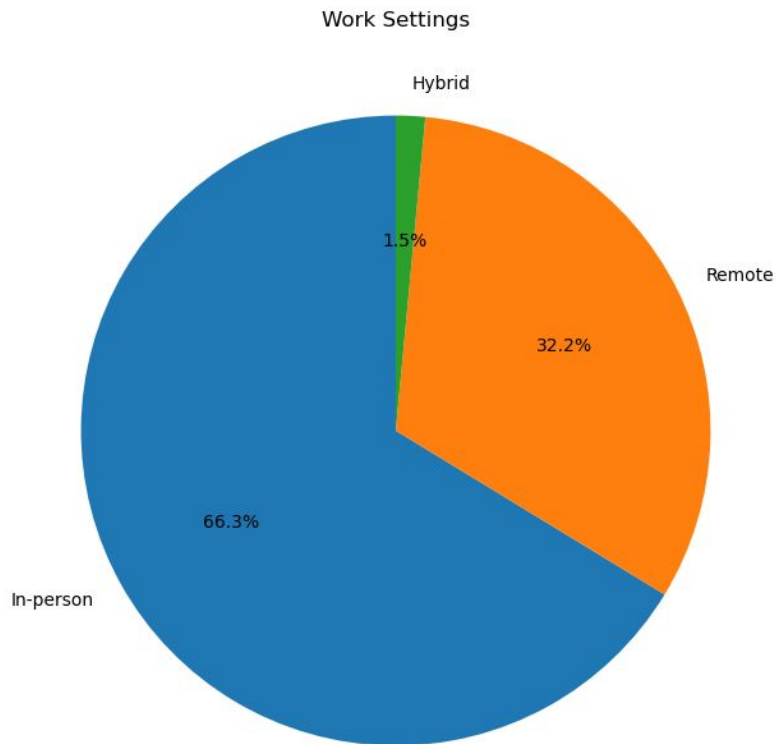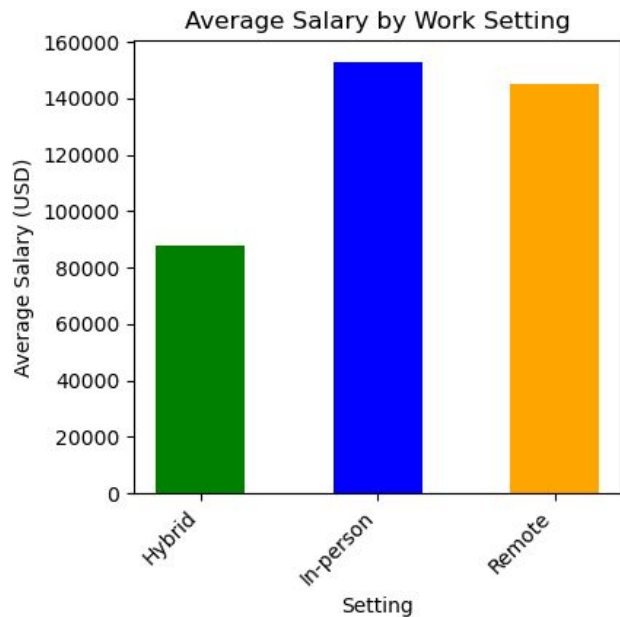The amount of people per job per year

Salary by Country

- We will look at the different types of work settings available
- We will look at which countries currently have the most jobs
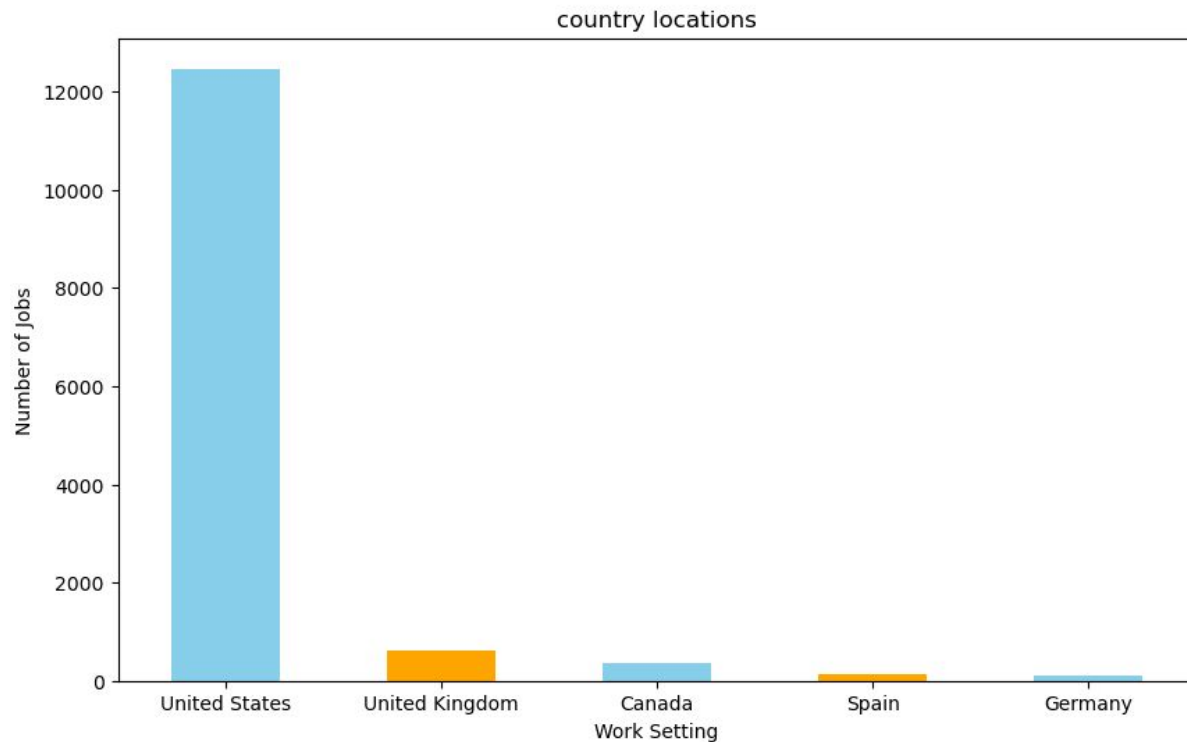- We will look at the average salaries broken down by their country
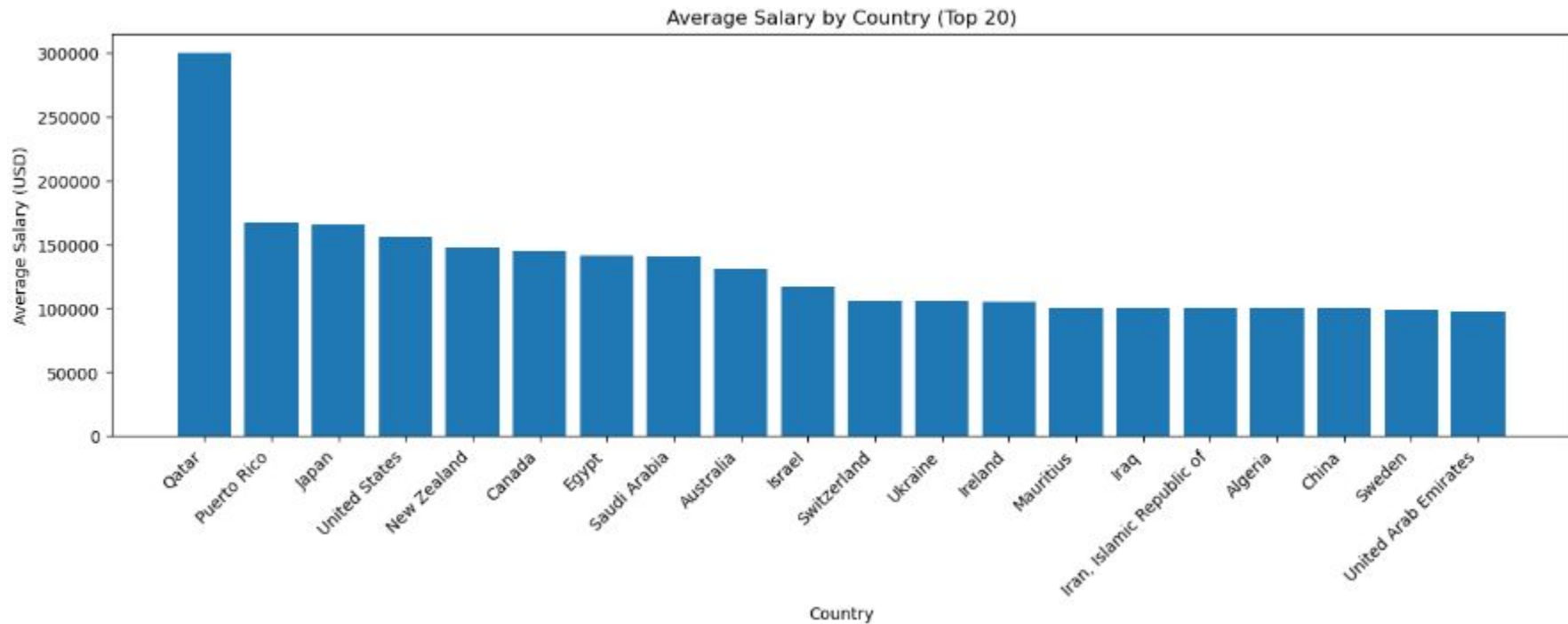
Work Settings

Number of Jobs by Country

country locations

Average Salary by Country


Average Salary by Country (Top 20)

Salaries by Experience

- We will look at the average salaries separated by the level of experience an employee has
- We will look at the ranges of the maximum and minimum salaries determined by experience
- We will looks at the average salaries of the top jobs we have previously found and break them down by experience level
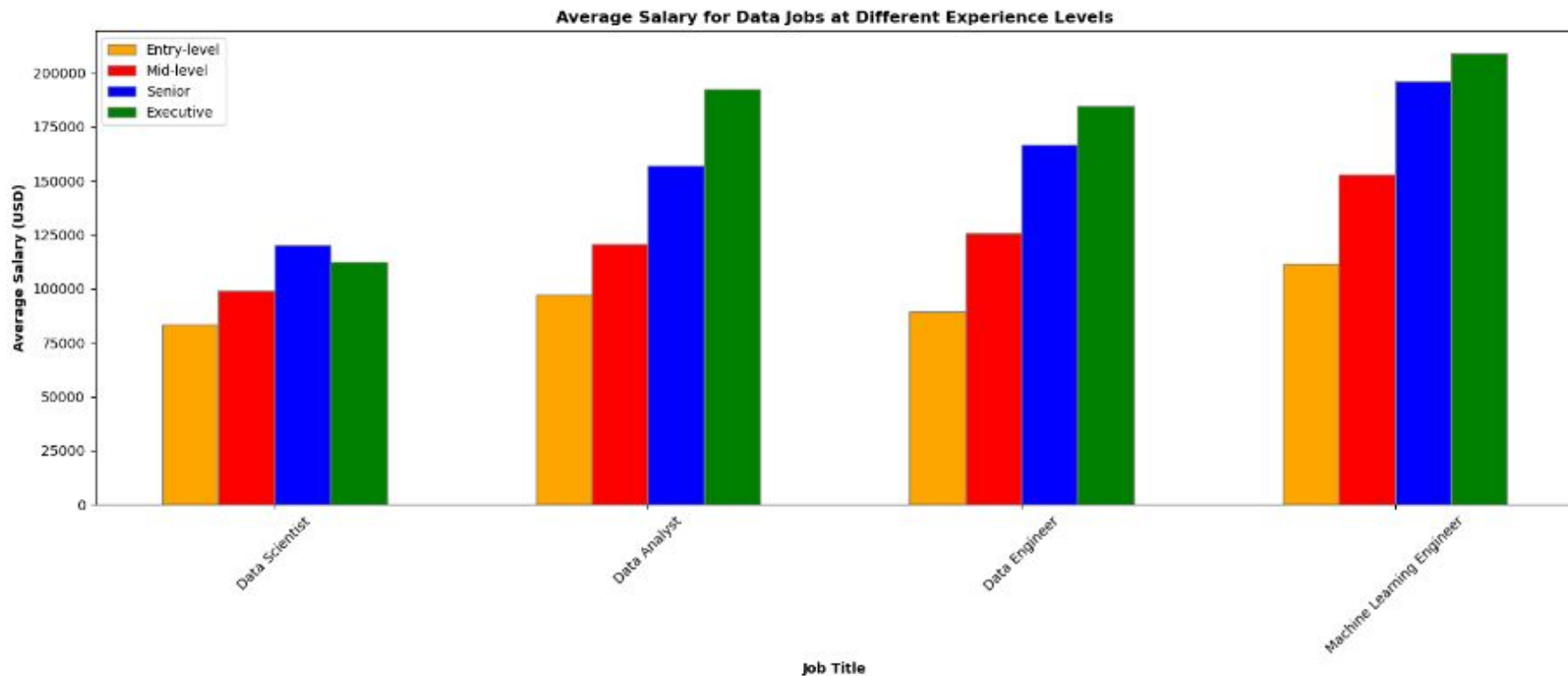
Salaries by Experience

Salaries per Experience Levels
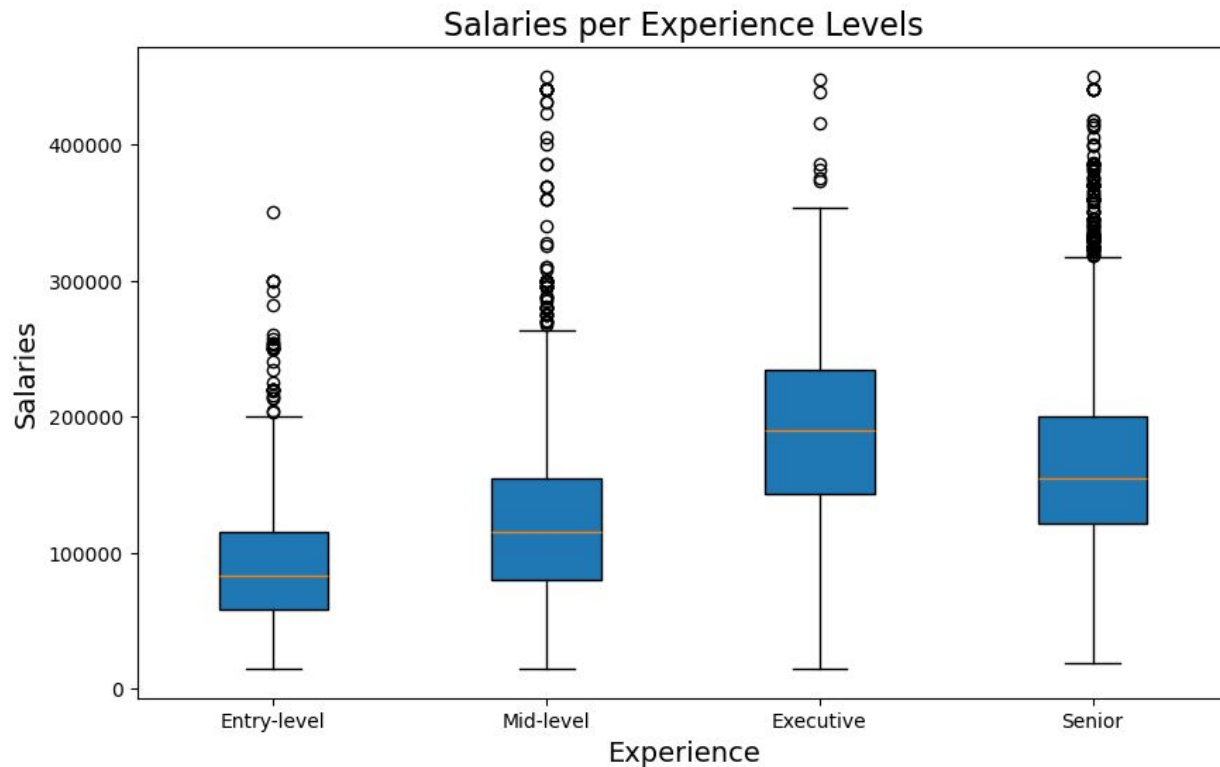
Salaries by Experience

Min to Max Ranges:

- Entry Level: $15,000-$350,000
- Mid Level: $15,000-$450,000
- Senior Level: $18,381-$450,000
- Executive Level: $15,000-$448,000

Salaries by Experience

Average Salary for Data Jobs at Different Experience Levels

Conclusions

- The most popular job in 2024 job was Data Scientist despite it not having the highest average salary overall.

- The US and Canada contain the majority of data science jobs and are among the top countries for highest average salaries.

- The highest paying job in the US for an entry-level position in 2024 would be Machine Learning Engineer, with an average salary of $126k.

- For remote work, the highest paying job is Data Scientist with an average salary of $105k. Overall, average salaries between remote and in-person positions are not much different.

Questions Requiring Further Analysis

- A further explanation for why there are less of the highest average paying job than others
- A further explanation of the big jump of jobs in 2023 compared to all other year that were looked at
- If the data set was biased based on a particular country, type of job, or other details of the employees surveyed
- If this data set is a good/accurate representation of the population at large