Analyzing the Job Market for Data Positions

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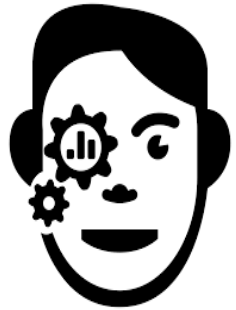Valentina Pineda

AGENDA

Introduction

- Our mission is to analyze the data job market in the United states based on salary, position and company type. Through data visualization, we will evaluate the difference between data analyst and data scientist from a dataset.
- The data set used to provide insight was extracted from Glassdoor it includes: location, position type, estimated salary, degree requirements and Industry type.
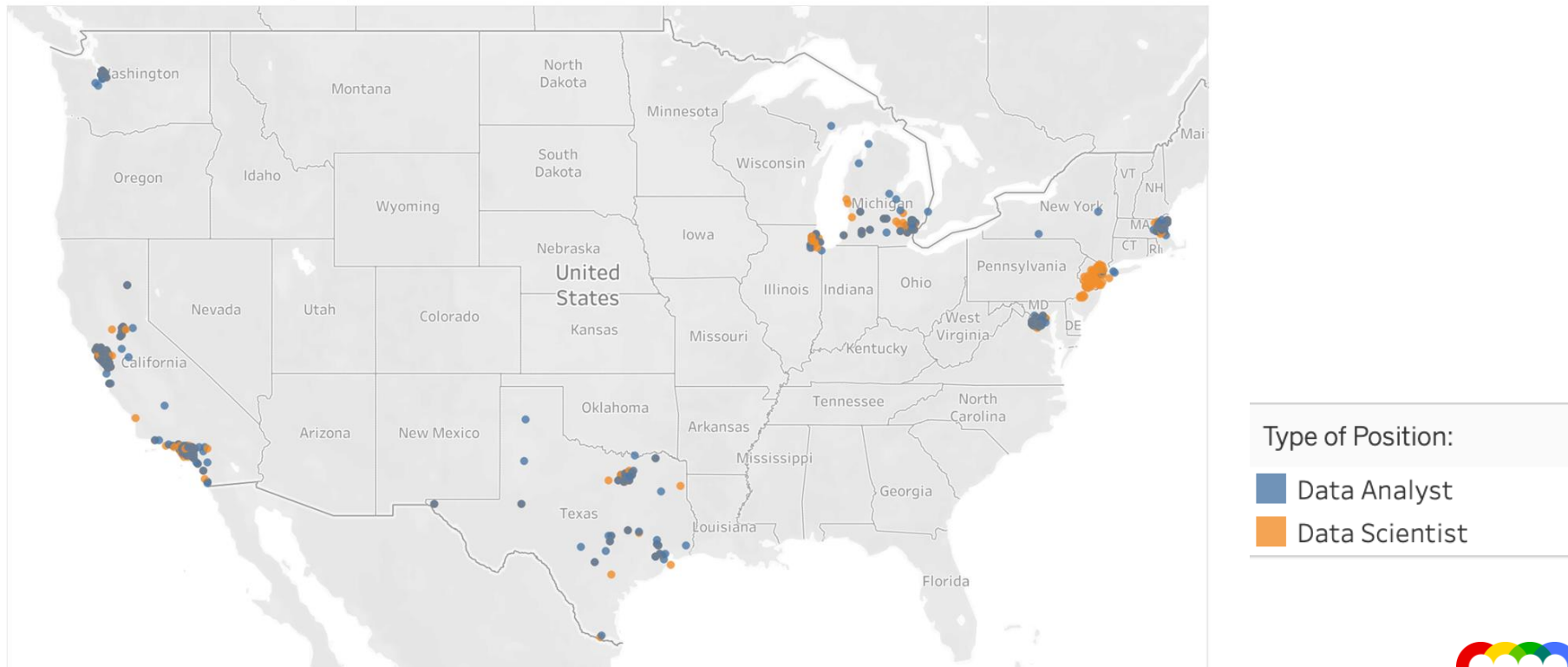- The 4 main differences between Data Analyst and Data Scientist

Allow myself to introduce…

Data Analyst vs. Data Scientist

Data Analyst	Data Scientist
Develop answers and solution to question	Use data to formulate questions and decide which solutions benefit the business
Typically work on SQL and simpler structures with other tools	Build statistical models and be well versed in machine learning and advanced programming
Only address business problems	Give accurate prediction of the value of the business once the problem is solved
Technical skills- data mining/data warehouse, data modeling, R or SAS, SQL, statistical analysis, database management & reporting, and data analysis	Technical Skills- machine learning, software development, Hadoop, Java, data mining/data warehouse, data analysis, python, and object-oriented programming

Open Data Positions by City

Available Data Jobs by City

Type of Position:
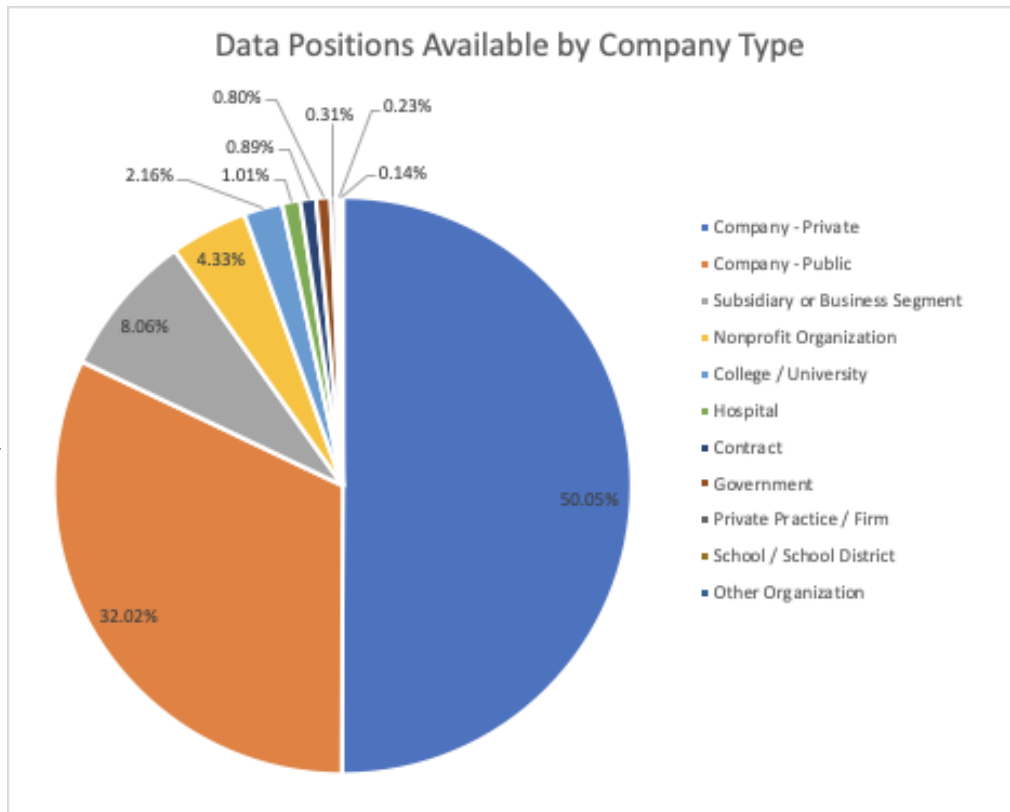- Data Analyst
- Data Scientist
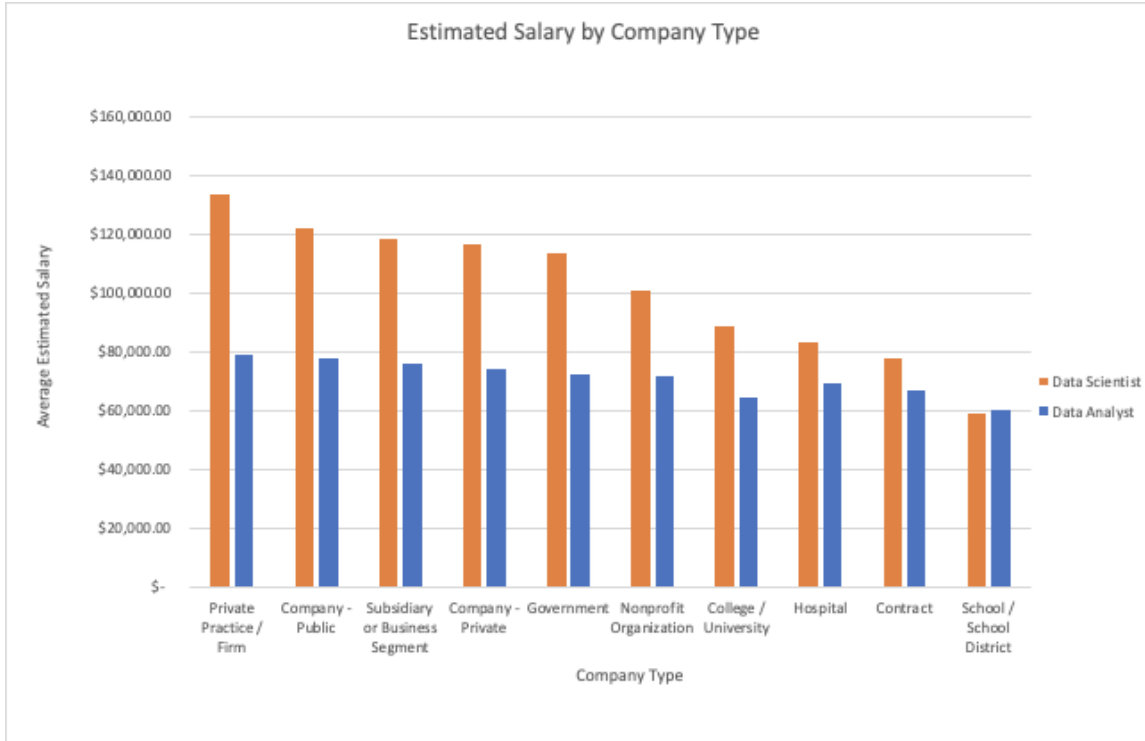
Positions Available by Company Type

Top 3 Company Types with the most Available Open Positions:

1. Private
2. Public
3. Subsidiary or Business Segment

Aggregate of total jobs collected within an industry between DA / DS roles.

Data Positions Available by Company Type

0.80%   0.31%   0.23%
0.89%
2.16%   1.01%   0.14%
4.33%
8.06%

50.05%

32.02%

- Company - Private
- Company - Public
- Subsidiary or Business Segment
- Nonprofit Organization
- College / University
- Hospital
- Contract
- Government
- Private Practice / Firm
- School / School District
- Other Organization

Salary by Company Type
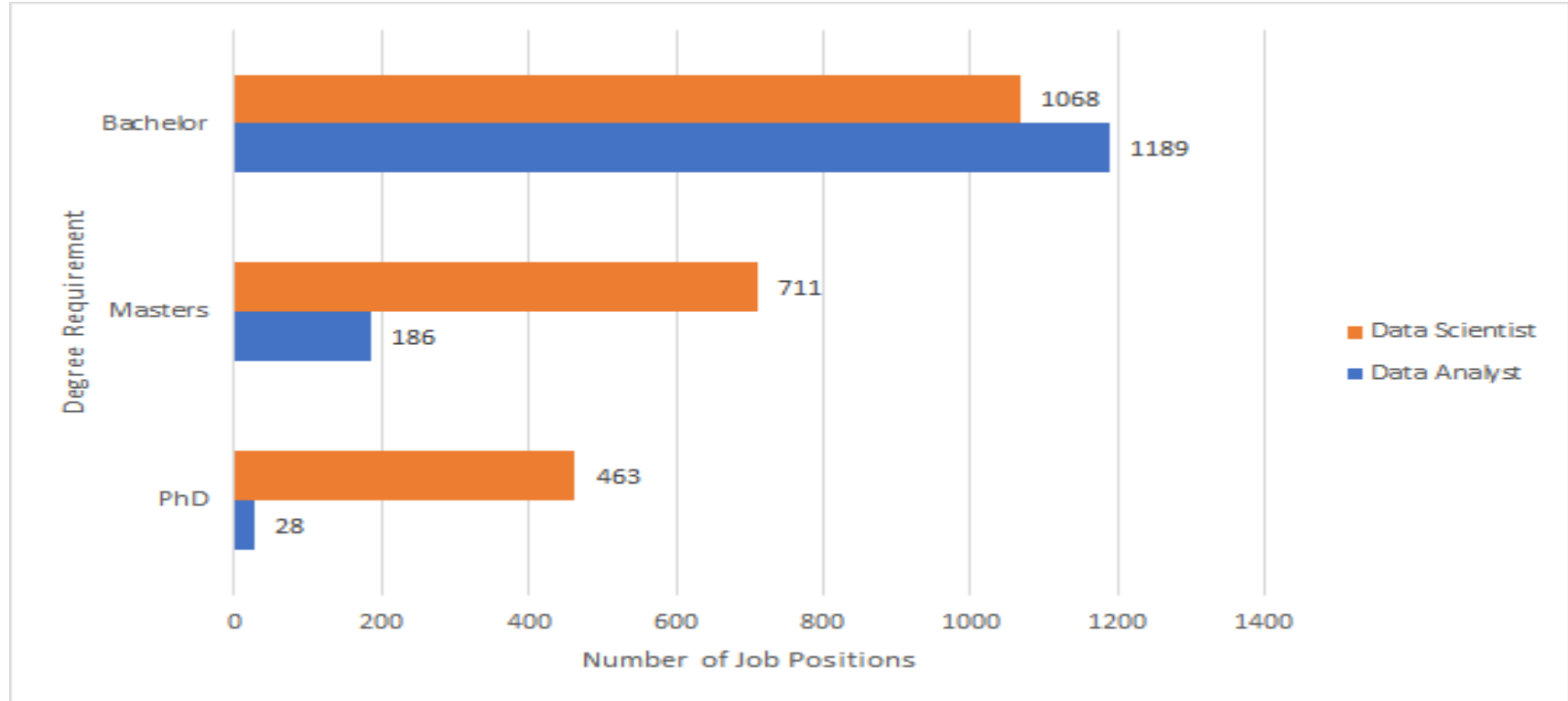

Estimated Salary by Company Type

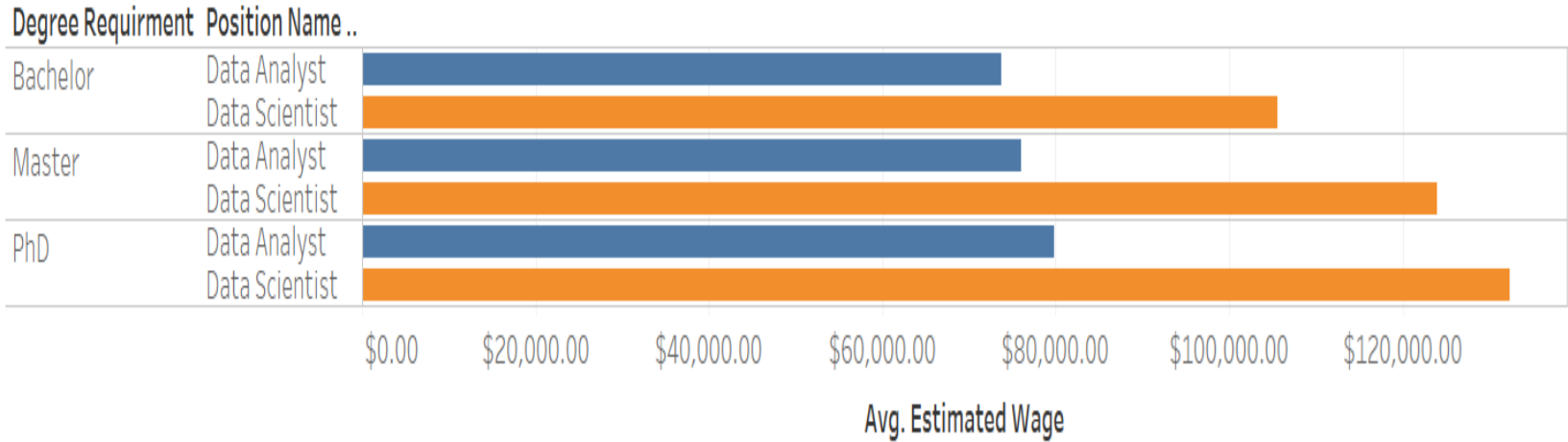**Top 3 Company Types with Highest Average Salary:**

1. Private Practice/ Firm
2. Public
3. Subsidiary or Business Segment

Number of Job Positions Available Based on Degree Requirements

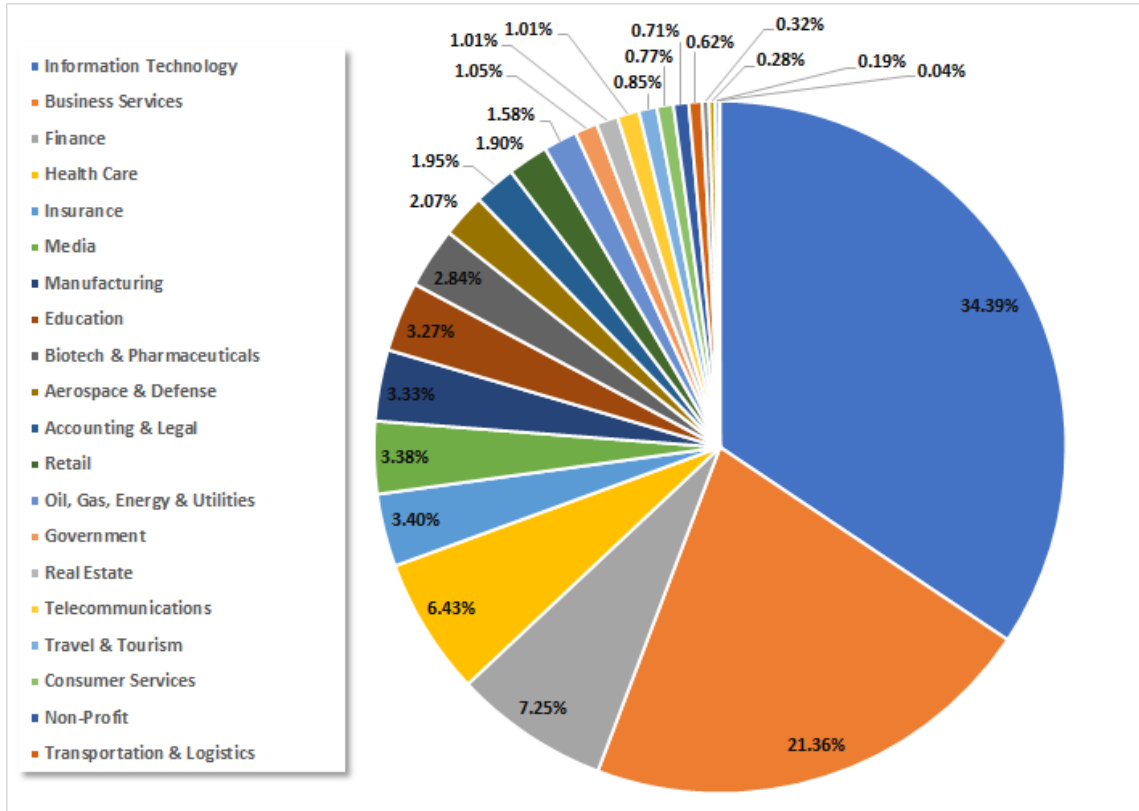# Avg. Estimated Salary & Degree Requirements

Overview of Open Data Positions By Industry

Legend:
- Information Technology
- Business Services
- Finance
- Health Care
- Insurance
- Media
- Manufacturing
- Education
- Biotech & Pharmaceuticals
- Aerospace & Defense
- Accounting & Legal
- Retail
- Oil, Gas, Energy & Utilities
- Government
- Real Estate
- Telecommunications
- Travel & Tourism
- Consumer Services
- Non-Profit
- Transportation & Logistics

Pie chart values: 34.39%, 21.36%, 7.25%, 6.43%, 3.40%, 3.38%, 3.33%, 3.27%, 2.84%, 2.07%, 1.95%, 1.90%, 1.58%, 1.05%, 1.01%, 1.01%, 0.85%, 0.77%, 0.71%, 0.62%, 0.32%, 0.28%, 0.19%, 0.04%
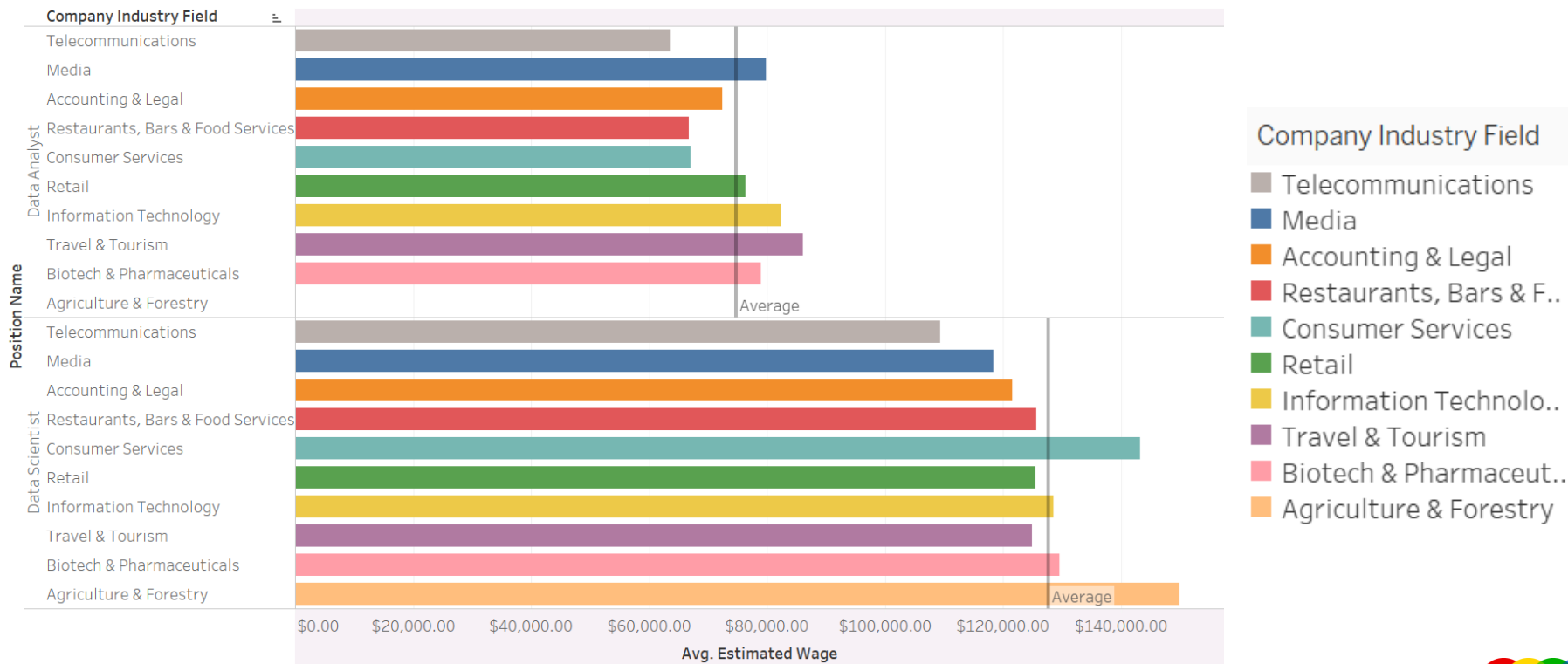
Top 5 Industries With Most Available Open Positions:

- Information Technology
- Business Services
- Finance
- Health Care
- Insurance

Aggregate of total jobs collected within an industry between DA / DS roles.

Industry Type & Avg. Estimated Salary

How is Data Utilized in Certain Industries?

- **AGRICULTURE & FORESTRY:**
  - Manage Crops & Diseases
  - Combat Climate Change
  - Make Yield Predictions
- **BIOTECH & PHARMACEUTICALS:**
  - Research & Development
  - Conduct & Analyze Clinical Trials
  - Blockchain / AI / Machine Learning
- **TRAVEL & TOURISM:**
  - Route Optimization
  - Personalized Market & Customer Segmentation
  - Sentiment Analysis

Conclusion

- Which data track is right for you? What is your preferred way of working with data?
  - **Data Analysts** work with large data sets to identify trends and create visualizations to help businesses make better strategic decisions.
  - **Data Scientists** work with data by designing advanced data modeling and automation frameworks.
- Of the two positions, our data showed that **Data Scientist** has the highest estimated avg. salary.

Recommendations

- If **Data Science** is the career path for you…
  - Additional studying and acquisition of other skills is needed outside of COOP.
- Location limitations on the dataset we used.
- Analyzing the job market after COVID-19.

Sources

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