



Capstone III Presentation

PROJECT: ANALYSIS OF DATA SCIENCE JOB SALARIES OF
2022

PRESENTED BY: UCHENNA DURU

The Dataset

- ▶ The Dataset being used contains Data Science Job Salaries around the world. For reference, [Data Science Job Saleries of 2022](#)
- ▶ There are over 600 records across 11 fields, but in this analysis we will focus on 3 fields. They are:
 1. Salary in USD
 2. Job Title
 3. Company size

Research Questions

- ▶ There are 2 questions that I would like answered in this analysis.
- ▶ 1. Who pays a bigger salary for a data analyst in large companies and medium companies?
- ▶ 2. Which job pays on average the most between a Data Scientist and Data Analyst?
- ▶

The Hypothesis

- ▶ There are 2 Hypotheses that are related to the research questions. They are:
 - ▶ **Hypothesis 1:** null- there is no significance difference of mean salaries between large companies and medium companies.
 - ▶ Alternate- There is a significance difference of mean salaries between large companies and medium companies.
 - ▶ **Hypothesis 2:** null- there is no significance difference of mean salaries between Data Scientists and Data Analysts.
 - ▶ Alternate- There is a significance difference of mean salaries between Data Scientists and Data Analysts.

Data Testing The Hypothesis

- ▶ The Data will be used to test the Hypothesis in the following ways:
- ▶ 1. I will use visualizations to show the difference between salaries paid out by large and medium sized companies.
- ▶ 2. I will utilize t-tests to test the significance of salary differences between a Data Scientist and a Data Analyst.

Use of Findings



Aspiring Employees in Data Science and Data Analytics would like to know:



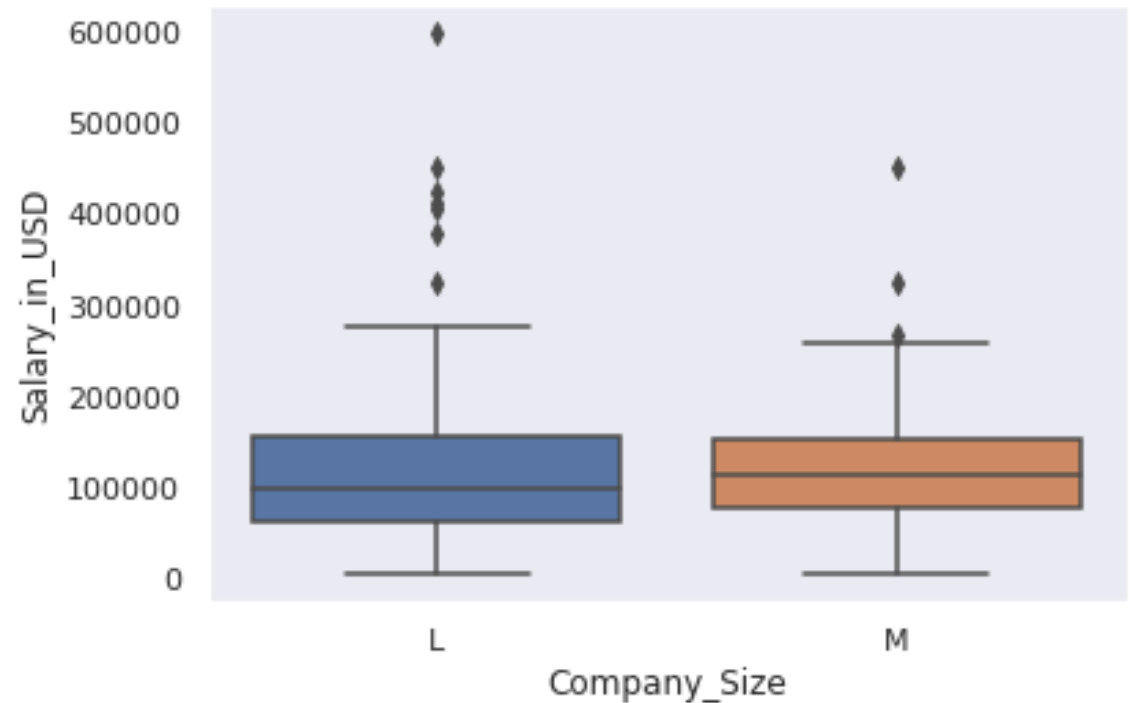
1. Analyst will be able to understand which job is more economically attractive.



2. Future Data Analyst will know which size company to send their job applications to so that they will be well paid for their services.

The Analysis: Hypothesis 1

- ▶ **For Hypothesis 1:** Visualizations were used to show the comparison of salaries paid in large and medium sized companies.
- ▶ As seen in the visualization on the right, there is no significant difference in the mean salaries of large and medium companies.

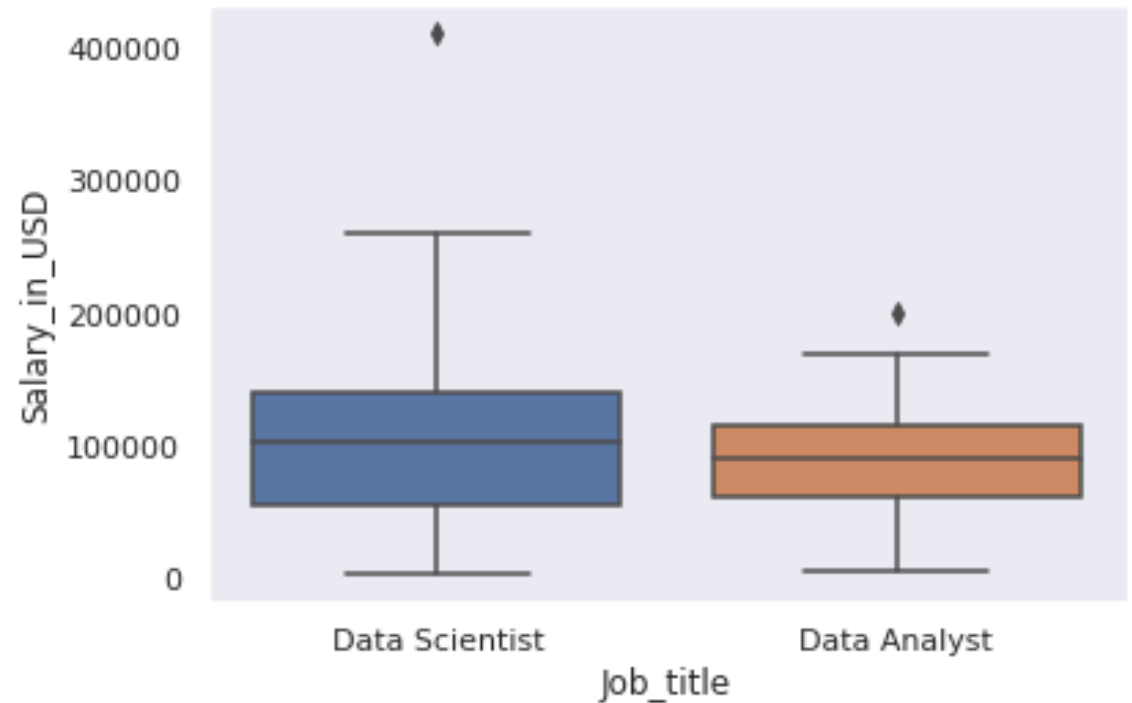


The Analyses: Hypothesis 1 (Contd.)

- ▶ Also, an independent sample t-test was conducted to further support the hypothesis. With a p-value of 0.7135648542555824, the t-test rejects the Hypothesis(Alternate) that there is a significant difference in the mean salaries between large companies and medium companies. Rather, the statistical evidence shows the opposite. Thus, supporting the Hypothesis(Null).

The Analyses: Hypothesis 2

- ▶ **For Hypothesis 2:** Visualizations were used to show the comparison of mean salaries between a Data Scientist and a Data Analyst.
- ▶ In the visualization to the right, there is a significant difference between the mean salaries of a Data Scientist and a Data Analyst.



The Analyses: Hypothesis 2(Contd.)

- ▶ Also, an independent t-test was conducted to further support the hypothesis. With a p-value of 0.0377215709893397, the t-test supports the hypothesis(Alternate) that there is a significant difference in the mean salaries of Data Scientist and Data Analyst. Therefore, it rejects the Hypothesis(Null).

Summary and Recommendations

- ▶ **Hypothesis 1(Rejected):** result shows there is no significant difference for the mean of salary between the large and middle size company. With that said, the size of company has no contribution to determine the salary pay.
Hypothesis 2(Confirmed): result shows there is a significant different between the job title. Data scientist do gets more paid on an average due to their skillsets of components. These tests will help the job seeker in job searching or whether they want to continue to do more training to advance their skillsets for more pay. there are also opportunities for researching.
- ▶ **Recommendation:** I believe that Data Science should be a preferred education choice due to lucrative advantages it has in the world of job seeking. Also, it doesn't matter what type of company you go to the salary will be paid based on your skillset.
- ▶ For Reference, Collab Notebook: [Thinkful](#)
[Capstone 3 project](#)