Salary Hypothesis Testing

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Average Salary of Job Role
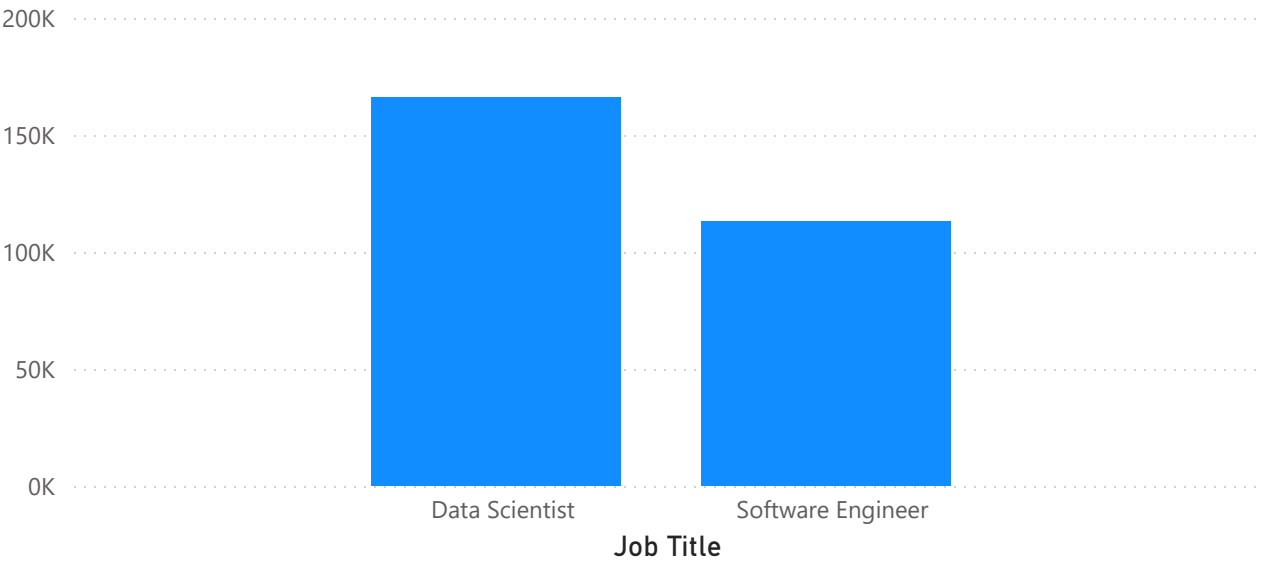
Salary Comparison - Boxplot
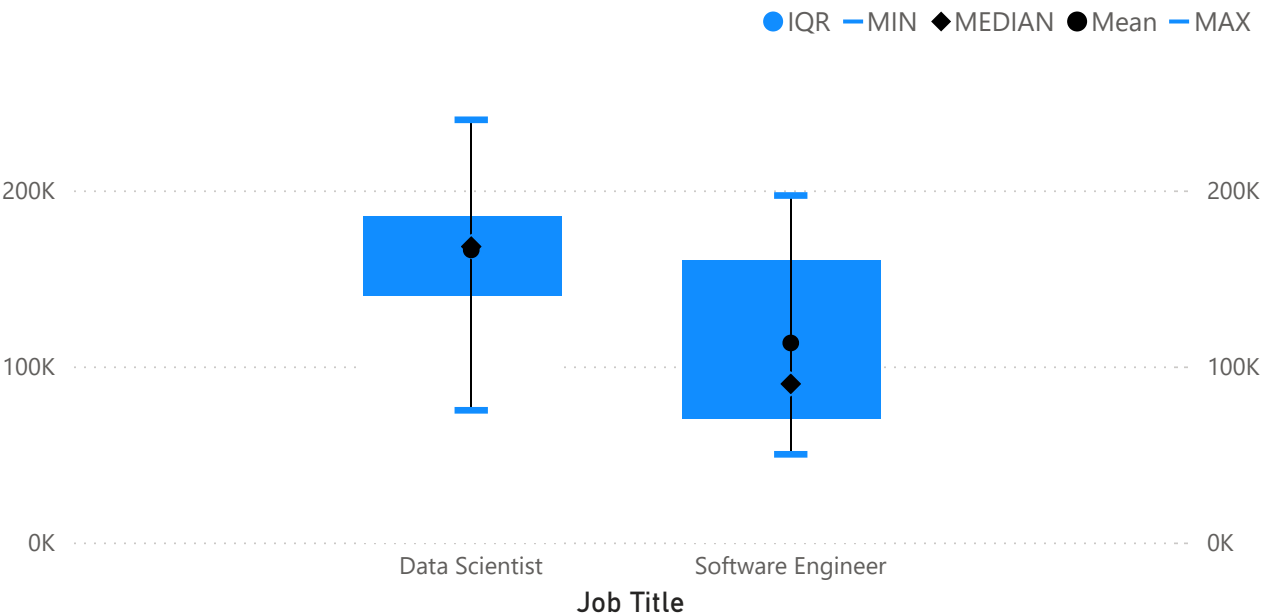
● IQR — MIN ◆ MEDIAN ● Mean — MAX

Data Scientist	Software Engineer
75000	50000
Min	Min
166,105.96	113,243.24
Mean	Mean
168,000.00	90,000.00
Median	Median
240000	197000
Max	Max
453	518
Count	Count

Insight:

The average salary for **Data Scientists** is significantly higher than for **Software Engineers** in this dataset.

Statistical result:

A Welch's t-test shows a **very large mean gap** (~$53,000) with a **p-value near zero**, so we confidently **reject the null hypothesis** that the roles have equal mean pay.

Interpretation:

This suggests that, on average, Data Scientists are paid more, while Software Engineer salaries show greater variation.

Note:

Other factors like experience, seniority, or location may also affect this difference.