

# Navigating the Data Science Job Market

Ethan DeMott  
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## Abstract

Inspired by Wired.com's observation of heightened anxiety and competitiveness in the tech job market, this research project aims to offer clarity and insights to individuals facing overwhelm. The poster acts as a guide, highlighting trending career opportunities, entry-level positions, remote work impact, and geographic influences for those interested in the data science job market.

## Introduction

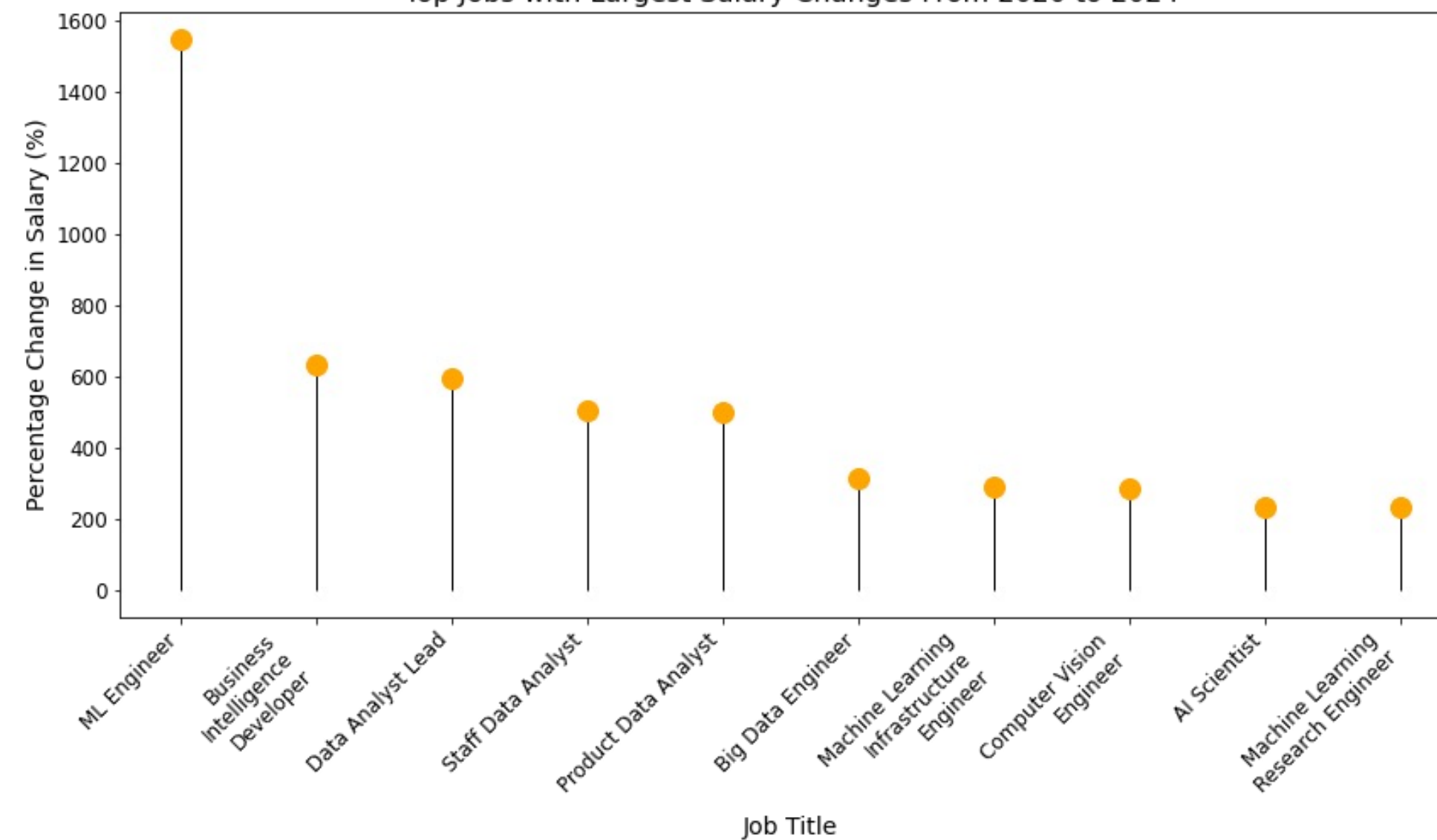
This project aims to analyze five years of recent data from the tech job market, providing insights to ease the transition from college to full-time employment. By offering trends and guidance, it seeks to empower viewers and alleviate the stress of job hunting, fostering a sense of readiness to tackle market challenges.

## Methodology

- Utilized Kaggle's 'Jobs and Salaries in Data Science' dataset from 2020-2024, encompassing salary, location, work settings, experience levels, and more.
- Employed Python libraries like NumPy, Matplotlib, Seaborn, and Plotly Express for thorough data analysis.
- Generated visually compelling static and interactive visualizations.
- Investigated findings through research and cross-referencing with current articles.

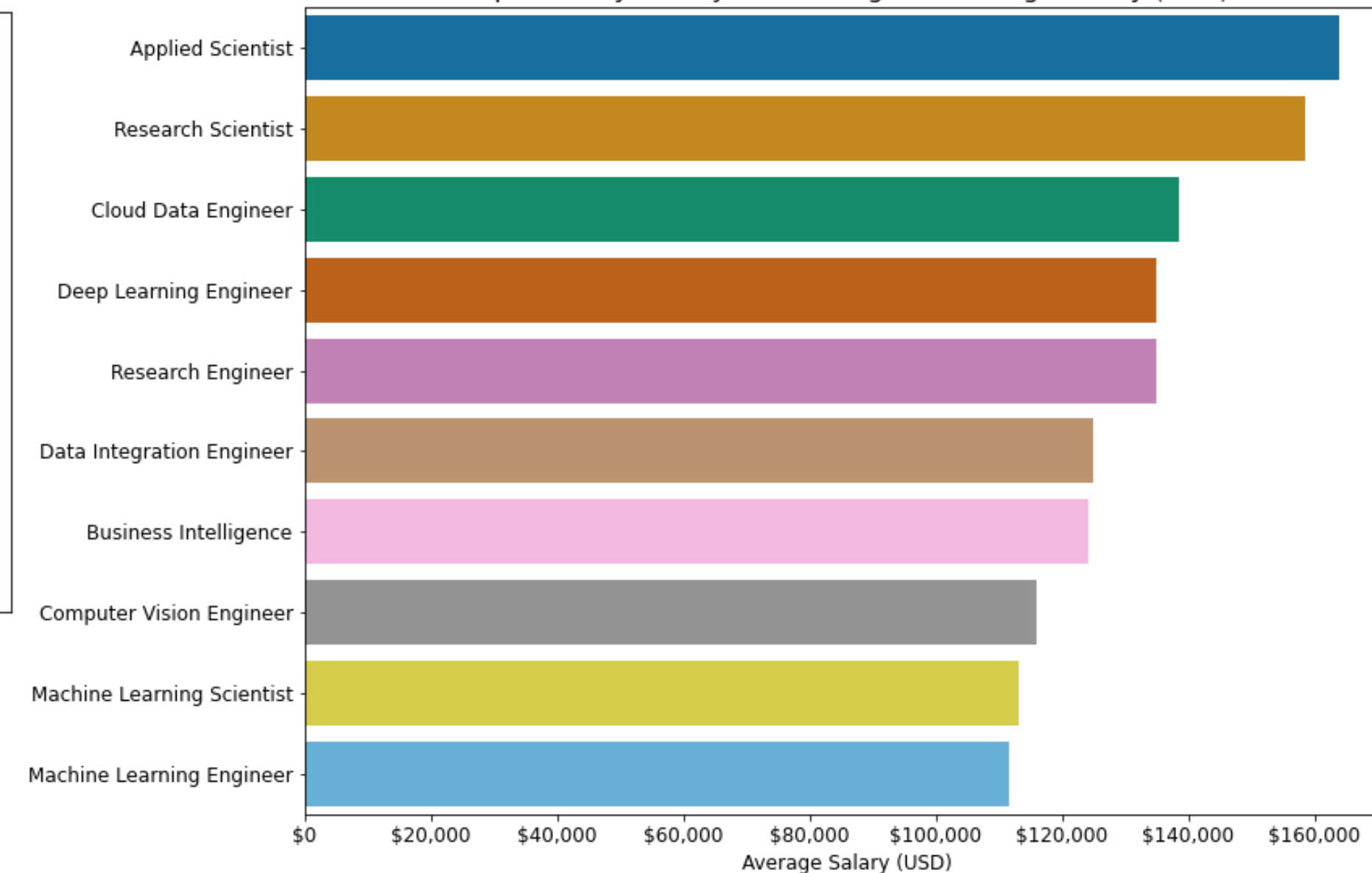
## Results

Top Jobs with Largest Salary Changes From 2020 to 2024



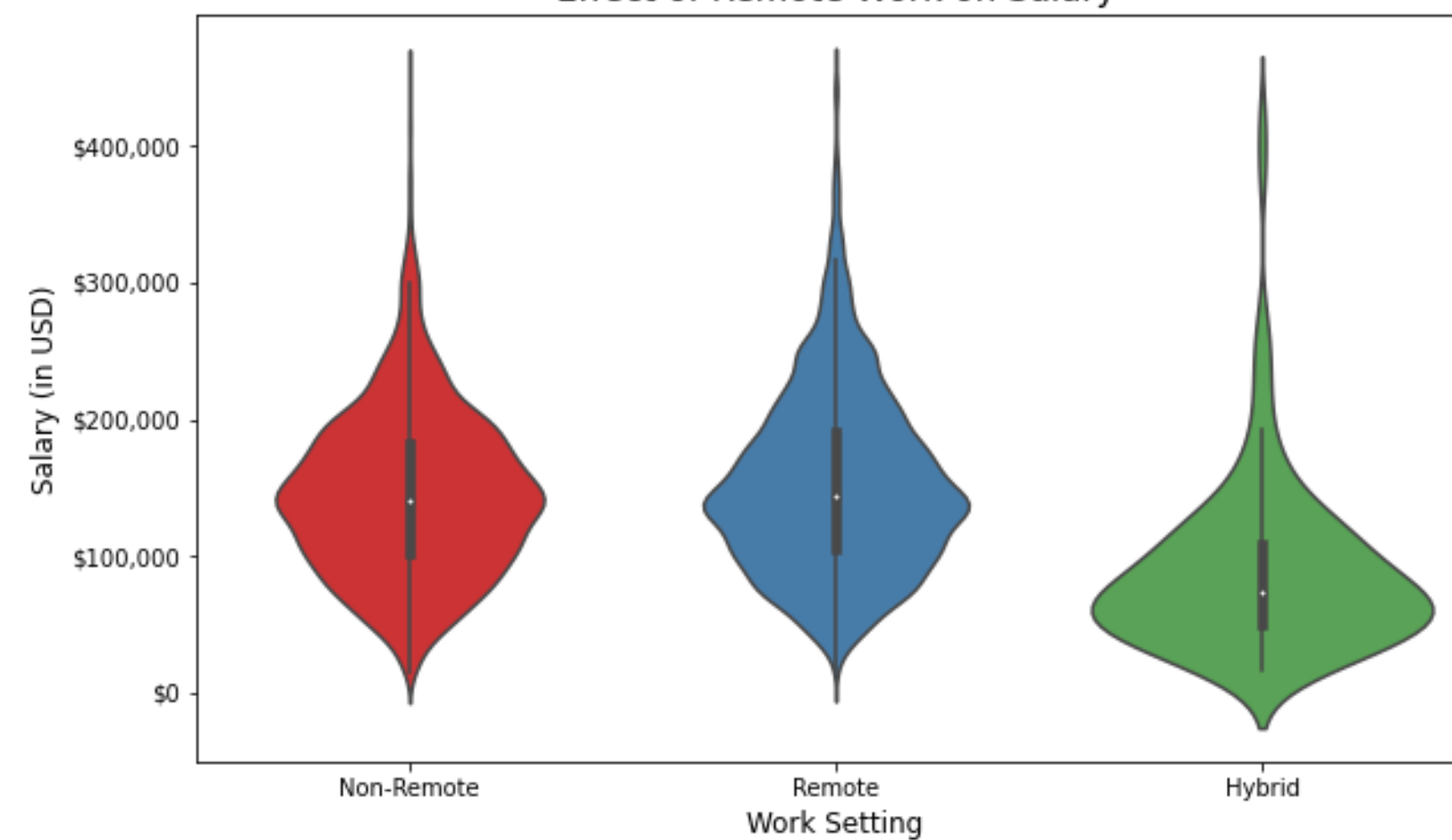
- Jobs related to Artificial Intelligence have exploded over the last 5 years.
- LinkedIn states that demand for ML engineers is extremely high and sought after, clearly reflected in this graph.

Top 10 Entry-Level Jobs with Highest Average Salary (USD)



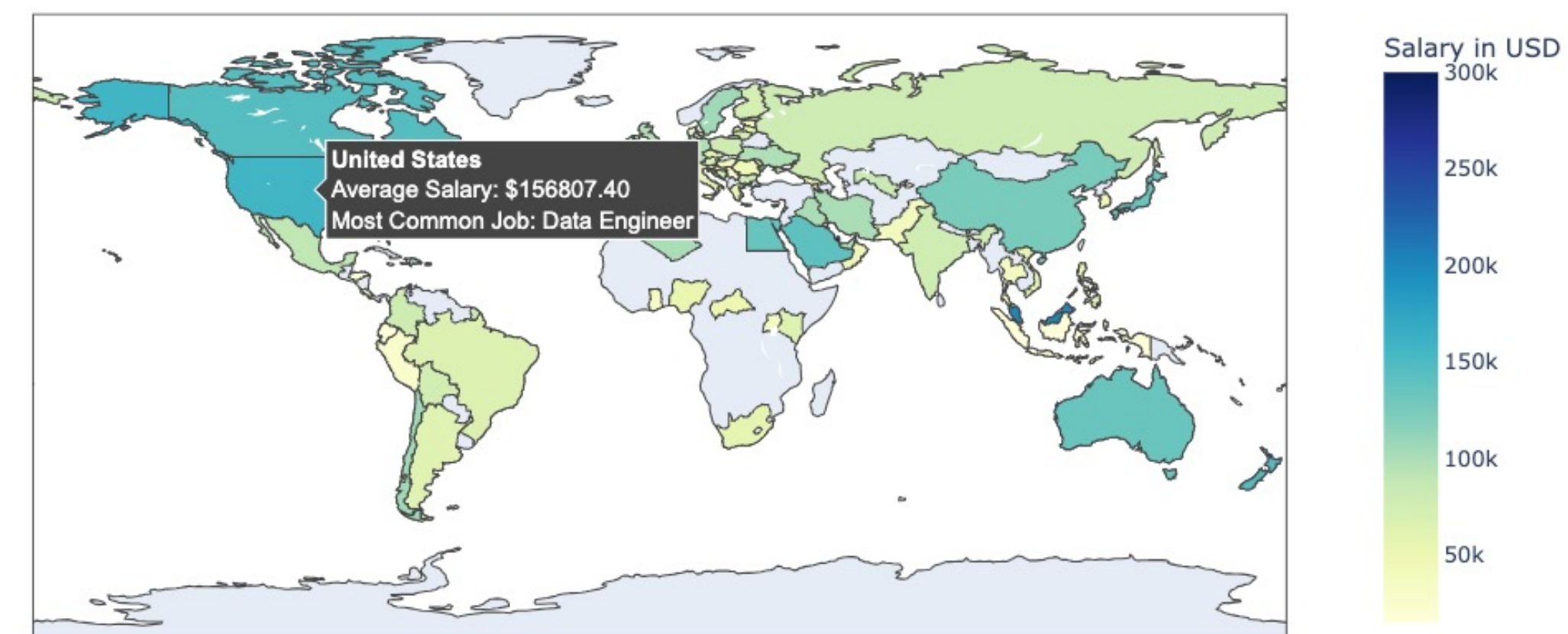
- One could be bringing in a salary of up to \$160,000 per year at an entry-level
- Many of these jobs at the entry level are possible to attain and are realistic.

Effect of Remote Work on Salary



- Remote and Non-Remote work setting has approximately the same distribution.
- Hybrid work has a very different shape with much more dispersion in the data with a lower average salary despite having a similar range.
- Hybrid distribution for data science goes against general research stating that "hybrid workers earn more than remote and in-person workers (CNBC)."

Average Salary in USD by Country (Employee Residence)



- Interactive world choropleth map shows average salary and most common job for each country.
- Map is based off employee residence, as companies adjust salary based on location.
- When zoomed in, Qatar, Malaysia, and Puerto Rico are the top three respectively, then the U.S.

## Conclusion

This poster provides valuable insights into the dynamic data science job market and broader tech job landscape. By exploring top-paying entry-level positions, geographic job distribution, trending roles with salary changes, and prevalent work settings, viewers gain enhanced clarity and confidence in navigating employment complexities. The project aims to foster a more informed and less stressful job search experience for aspiring professionals.

## References

- <https://www.wired.com/story/tech-jobs-layoffs-hiring/>
- <https://www.kaggle.com/datasets/hummaamqaasim/jobs-in-data/data>
- <https://www.linkedin.com/pulse/humans-only-rising-demand-machine-learning-engineers-michiel-klompen/>
- <https://www.cnbc.com/2023/02/10/hybrid-workers-earn-more-than-remote-and-in-person-workers-new-research.html>