Big Data Visualization Report

Task 1: Connecting Big Query and Tableau

For this project, I connected Google's Diversity Annual Report data hosted on Bigquery to Tableau. This process involved setting up the BigQuery connector in Tableau, ensuring that my Google Cloud project settings allowed for data access. The connection allowed for direct querying of the database, facilitating real-time data analysis and visualization.

Task 2: Purpose

The questions I am set to answer are how the attrition rate among different races in Google US is and how is the hiring among the dominating races. Workforce representation for different races and how different workforces are dominated by genders.

What number of employees have self identified globally which helps to better understand the nuances within communities, and power our Diversity, Equity, and Inclusion (DEI) efforts globally.

These questions are designed to identify strengths and pinpoint areas for improvement within Google's DEI strategies, ensuring the company not only fosters but also retains a diverse workforce.

Visualizations and Data Analysis

1. Attrition Rates by Race and Gender:

- The bar graph detailing attrition rates shows varying levels of retention across different racial and gender groups. Notably, certain minority groups exhibit higher attrition rates, suggesting potential areas where inclusivity efforts could be strengthened.
- Among Asian Men and Women, the attrition rates are increasing, while white men and women have an decreasing attrition rate, where other Race or ethnicity ahve different patterns for different gender.

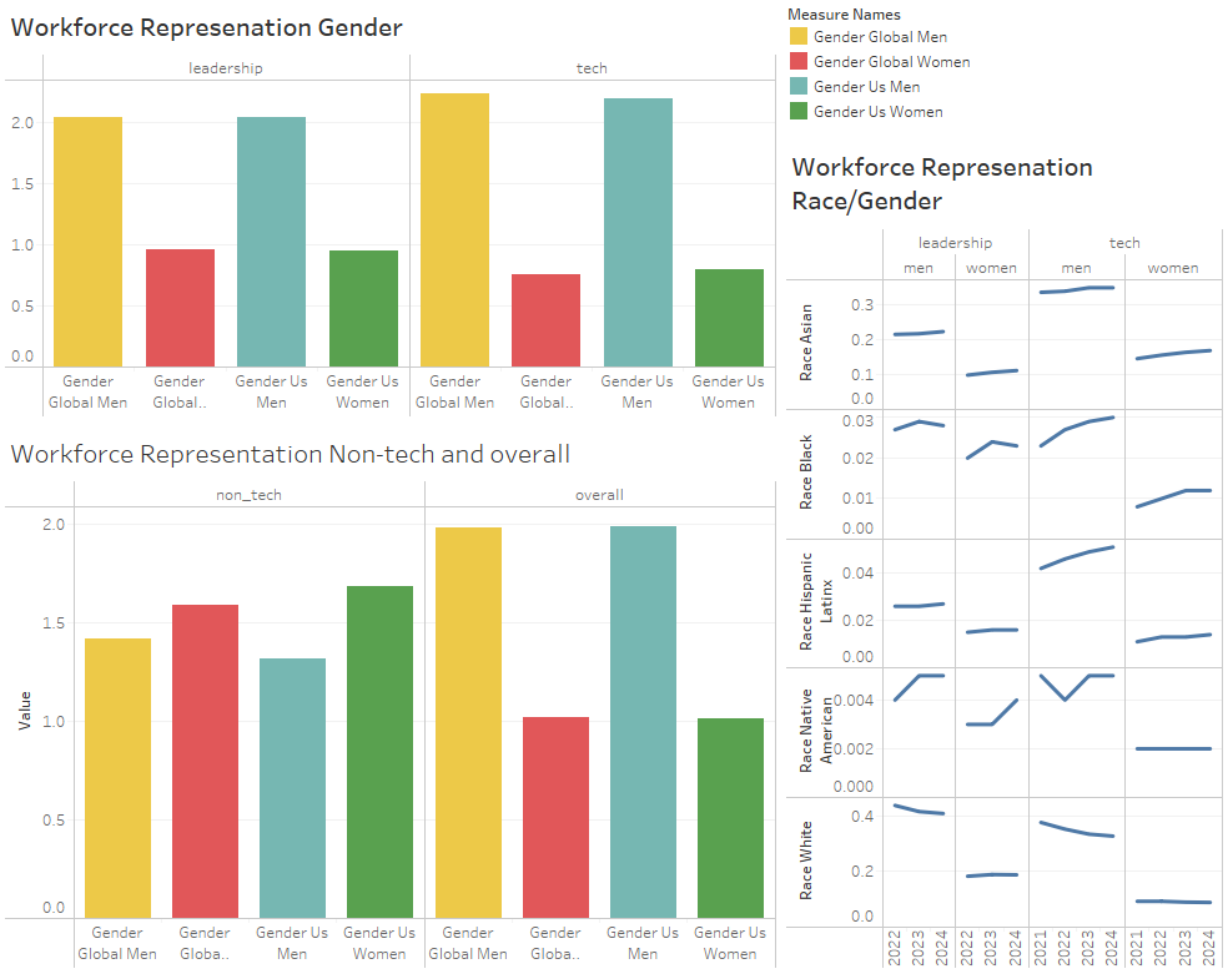
- Which made me to analyze the hiring patterns for Asian and white race showing that the hiring has be increasing for Asian and there is an uneven pattern for white people.

2. Hiring Trends Among Dominating Races:

- The analysis of hiring trends provides insights into which racial groups are being recruited more actively at Google. This helps understand if Google's hiring practices are aligning with its goals to promote racial diversity within its workforce.

3. Workforce Representation by Race and Gender:

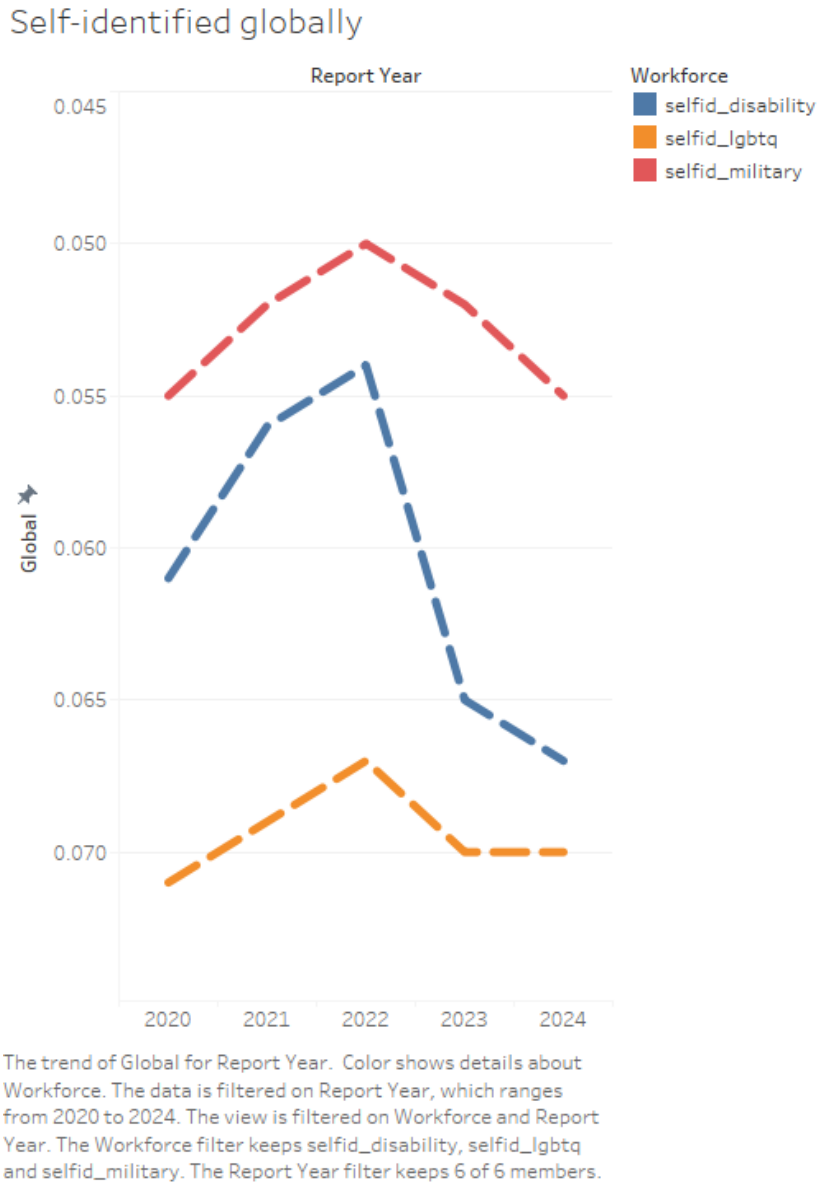
Detailed charts illustrate the distribution of workforce roles segmented by race and gender, highlighting the presence or lack thereof in leadership and technical positions. This visualization serves to evaluate how diverse representation varies across different job functions and seniority levels.



- In examining workforce representation at Google, it is evident that gender disparities persist within leadership and technical roles both globally and within the US. Women are consistently underrepresented in these sectors, with the data indicating that men hold a significantly higher proportion of positions in leadership and technology-oriented roles. This trend underscores a critical area for ongoing diversity and inclusion efforts, particularly in empowering and elevating women within these high-impact areas. In contrast, non-technical roles show a more balanced, and in some cases favorable, representation of women, highlighting their stronger presence in these segments of the workforce.
- When dissecting the data further by race, Asian and White men are notably predominant in leadership and technical positions, suggesting that these groups are more likely to ascend to the upper echelons of the company in these domains. Among women, White and Asian females lead in representation compared to other racial groups, although they still lag behind their male counterparts. This racial and gender analysis not only illuminates the existing gaps within Google's workforce but also points to potential areas where targeted initiatives could effectively bolster diversity, particularly among underrepresented groups in strategic, high-value roles.

4. Global Self-Identification Trends:

- A line graph displaying self-identification trends over time for disability, LGBTQ+, and military status helps assess the effectiveness of Google's Self-ID initiative. The fluctuations in self-identification rates can provide insights into how comfortable employees feel disclosing their identities, which is a direct reflection of the inclusivity of the workplace environment.



The Story: Insights and Implications

The data tells a story of both progress and opportunity within Google's diversity efforts. While hiring practices have improved for some racial groups, the higher attrition rates among certain

minorities suggest that more needs to be done to support these employees post-hire. The workforce representation data reveals a commendable level of diversity in non-technical roles, yet indicates a need for more inclusive recruitment and promotion strategies in tech-centric and leadership positions.

The self-identification data underscores the importance of creating a supportive environment that encourages employees to embrace their identities. The observed trends provide critical feedback on the perceived safety and inclusivity of Google's workplace, directly influencing future DEI strategies.

Conclusion

Google's analysis of workforce diversity through advanced data tools illustrates a committed approach to understanding and enhancing DEI across its global operations. By continuing to leverage detailed demographic data and adapting its strategies accordingly, Google aims to not only reflect but also empower the diverse communities it serves. This report highlights both the achievements and challenges faced, setting the stage for informed, data-driven enhancements to Google's DEI initiatives.