STACK OVERFLOW DEVELOPER SURVEY 2019

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OUTLINE

- Executive Summary
- Introduction
- Methodology
- Results
  - Visualization – Charts
  - Dashboard
- Discussion
  - Findings & Implications
- Conclusion
- Appendix

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EXECUTIVE SUMMARY

- Data contextualization and analysis goal.

- Methodology description
  - Data gathering
  - Data analysis
  - Data visualizations

- Results presentation supported with graphs and trends.

- Discussion of overall findings and implications regarding the results previously exposed.

- Final conclusions of the carried out research.

INTRODUCTION

- Stack Overflow's annual Developer Survey is the largest and most comprehensive survey of people who code around the world.

- Results don't represent everyone in the developer community evenly.

- early 90,000 developers.

- Trends to predict where the developers are going.

- Characterization of developers around the globe.

METHODOLOGY

- Collect survey data & explore its content
  - Web Scraping
  - APIs
  - Request library
- Data Wrangling
- Exploratory data analysis
  - Analyzing data distribution
  - Handling outliers
  - Correlations
- Data Visualization
  - Highlight distribution of data, relationships, the composition and comparison of data.
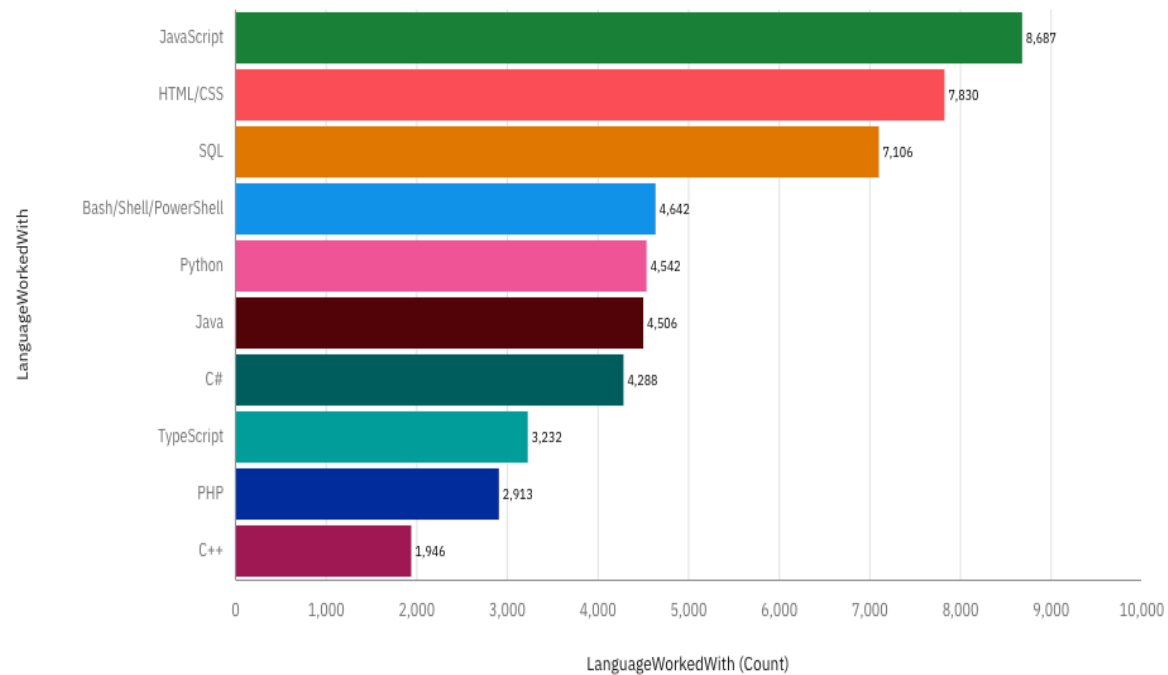- Dashboards

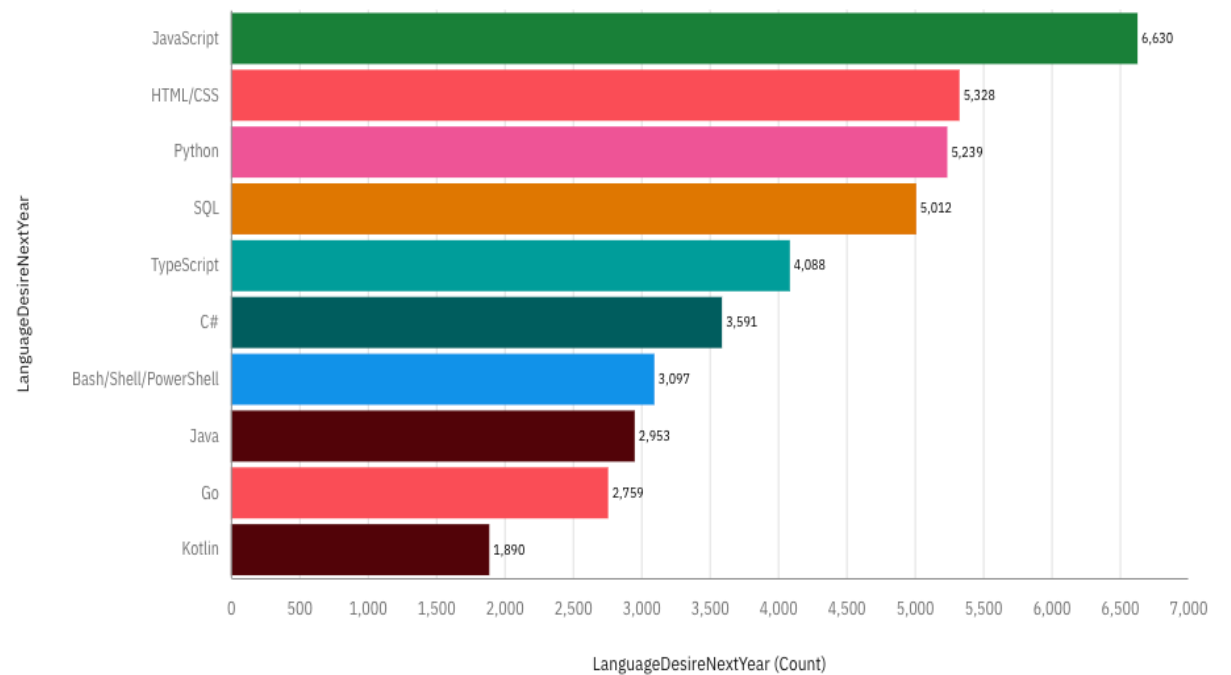# RESULTS

PROGRAMMING LANGUAGE TRENDS

Current Year

Next Year

PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

- **Findings**

1. **JavaScript Dominance**: Most worked with and desired language.
   1. *Current Year*: 8,687 counts.
   2. *Next Year*: 6,630 counts.

2. **HTML/CSS and Python Popularity**: Highly used and desired.
   1. *HTML/CSS*:
      1. *Current Year*: 7,830 counts.
      2. *Next Year*: 5,328 counts.
   2. *Python*:
      1. *Current Year*: 4,542 counts.
      2. *Next Year*: 5,239 counts.

3. **SQL Consistency**: Strong use and future interest.
   1. *Current Year*: 7,106 counts.
   2. *Next Year*: 5,012 counts.

- **Implications**

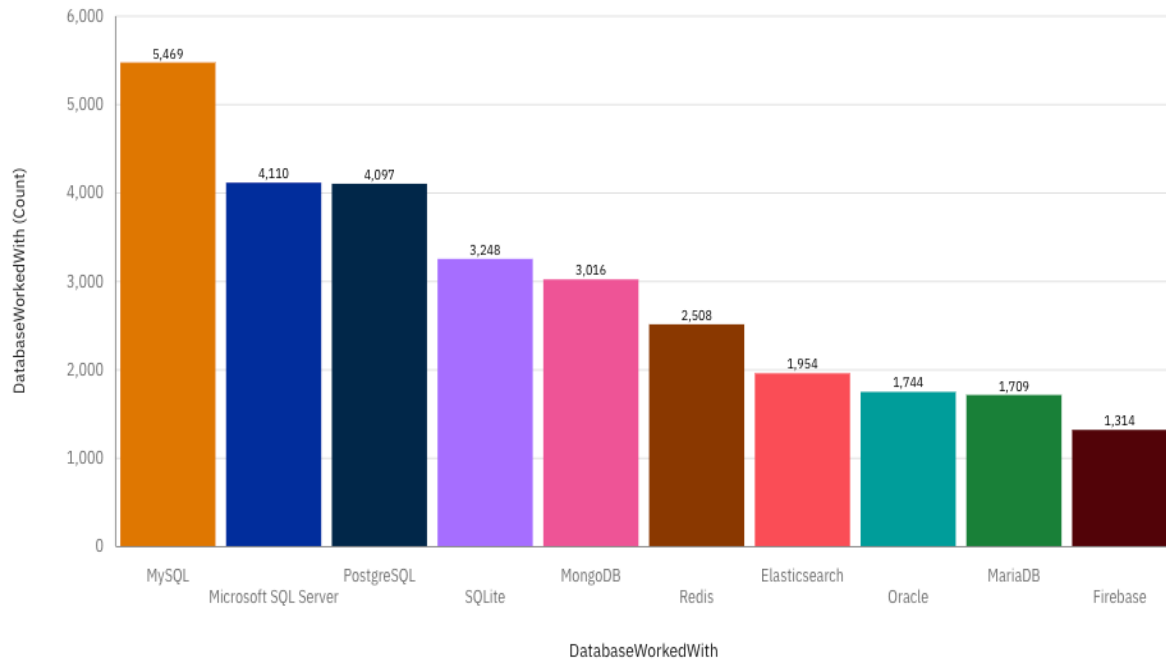1. **Prioritize JavaScript Skills**: High demand for JavaScript expertise.

2. **Focus on Web Development**: Emphasize HTML/CSS and Python proficiency.

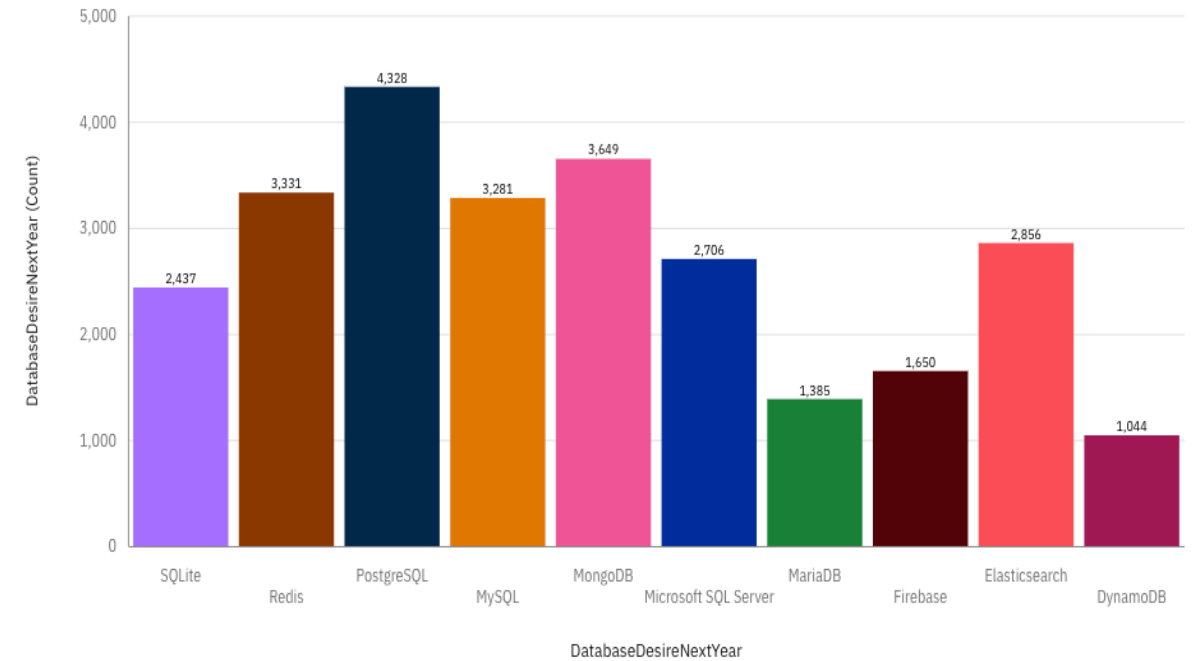3. **Invest in Data Management**: Ensure strong SQL capabilities.

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DATABASE TRENDS

Current Year

Next Year

Top 10 DatabaseWorkedWith

Database	Count
MySQL	5,469
Microsoft SQL Server	4,110
PostgreSQL	4,097
SQLite	3,248
MongoDB	3,016
Redis	2,508
Elasticsearch	1,954
Oracle	1,744
MariaDB	1,709
Firebase	1,314

Top 10 DatabaseDesireNextYear

Database	Count
SQLite	2,437
Redis	3,331
PostgreSQL	4,328
MySQL	3,281
MongoDB	3,649
Microsoft SQL Server	2,706
MariaDB	1,385
Firebase	1,650
Elasticsearch	2,856
DynamoDB	1,044

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DATABASE TRENDS - FINDINGS & IMPLICATIONS

- **Findings:**

1. **Current Usage**:
   1. **MySQL** is the most used database, followed by **Microsoft SQL Server** and **PostgreSQL**.
   2. **Firebase** is the least used among the top 10 databases.

2. **Future Preferences**:
   1. **PostgreSQL** is the most desired database for the next year.
   2. **SQLite** is the least desired database among the top 10 for next year.

3. **Emerging Interest**:
   1. **Redis** shows a significant increase in future interest.
   2. **DynamoDB** appears as a desired database for next year, indicating emerging interest.

- **Implications:**

1. **Skills Development**:
   1. Enhance skills in **PostgreSQL** and **Redis** due to growing demand.

2. **Resource Allocation**:
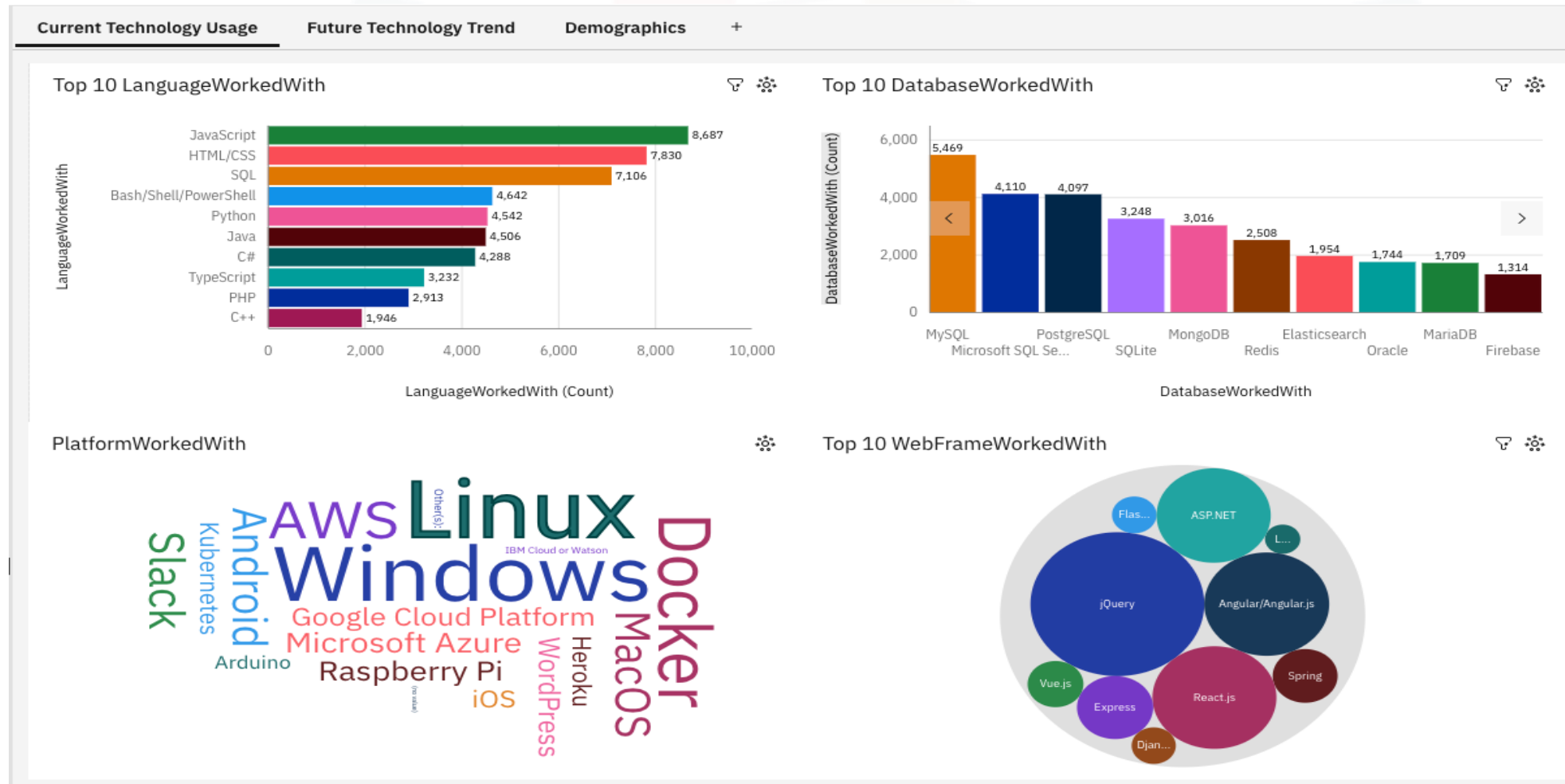   1. Allocate more resources to support **PostgreSQL** and **Redis**.

3. **Market Dynamics**:
   1. Expect a decline in **SQLite** usage and an increase in **PostgreSQL** and **Redis** adoption.
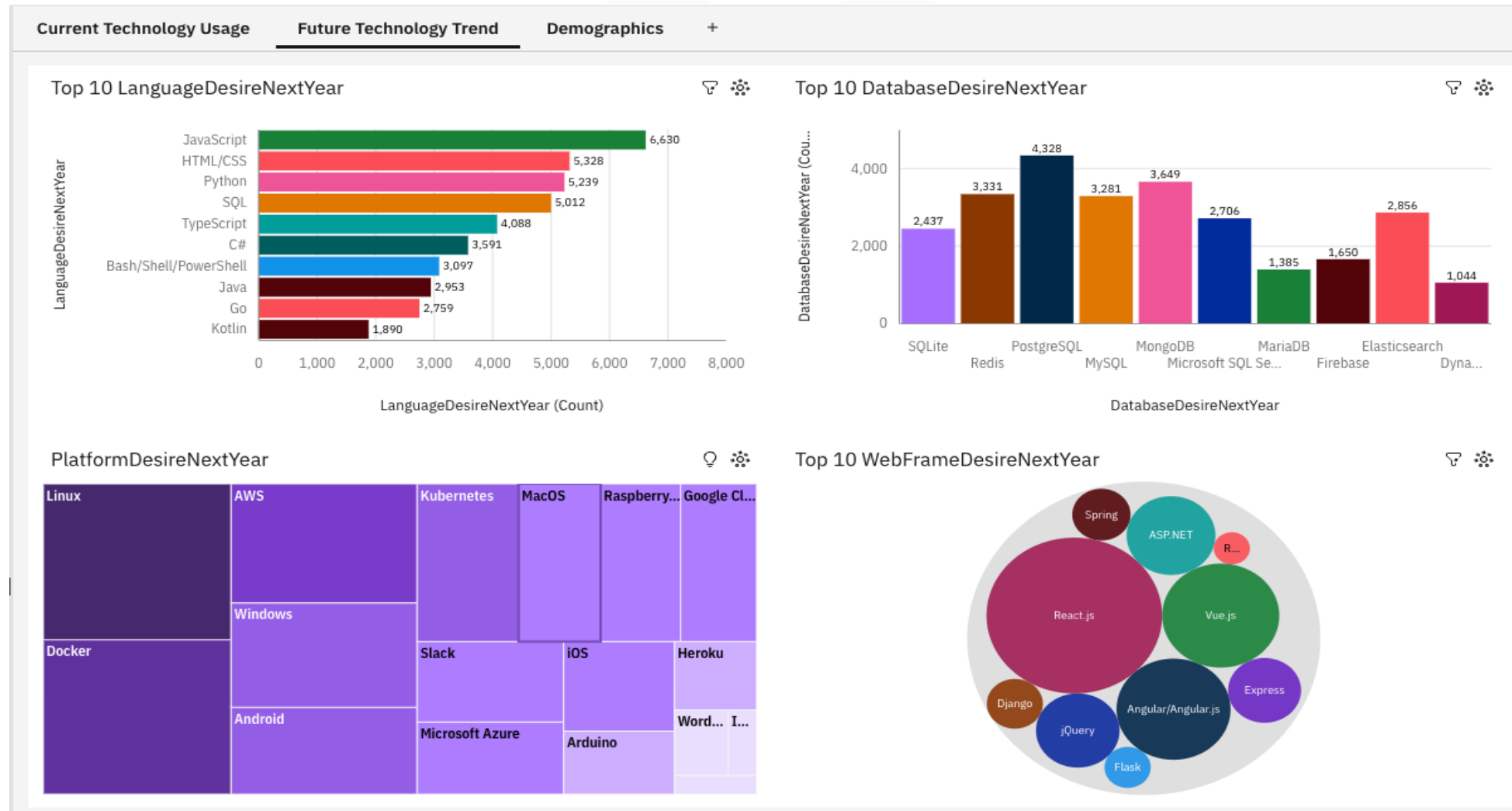
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DASHBOARD

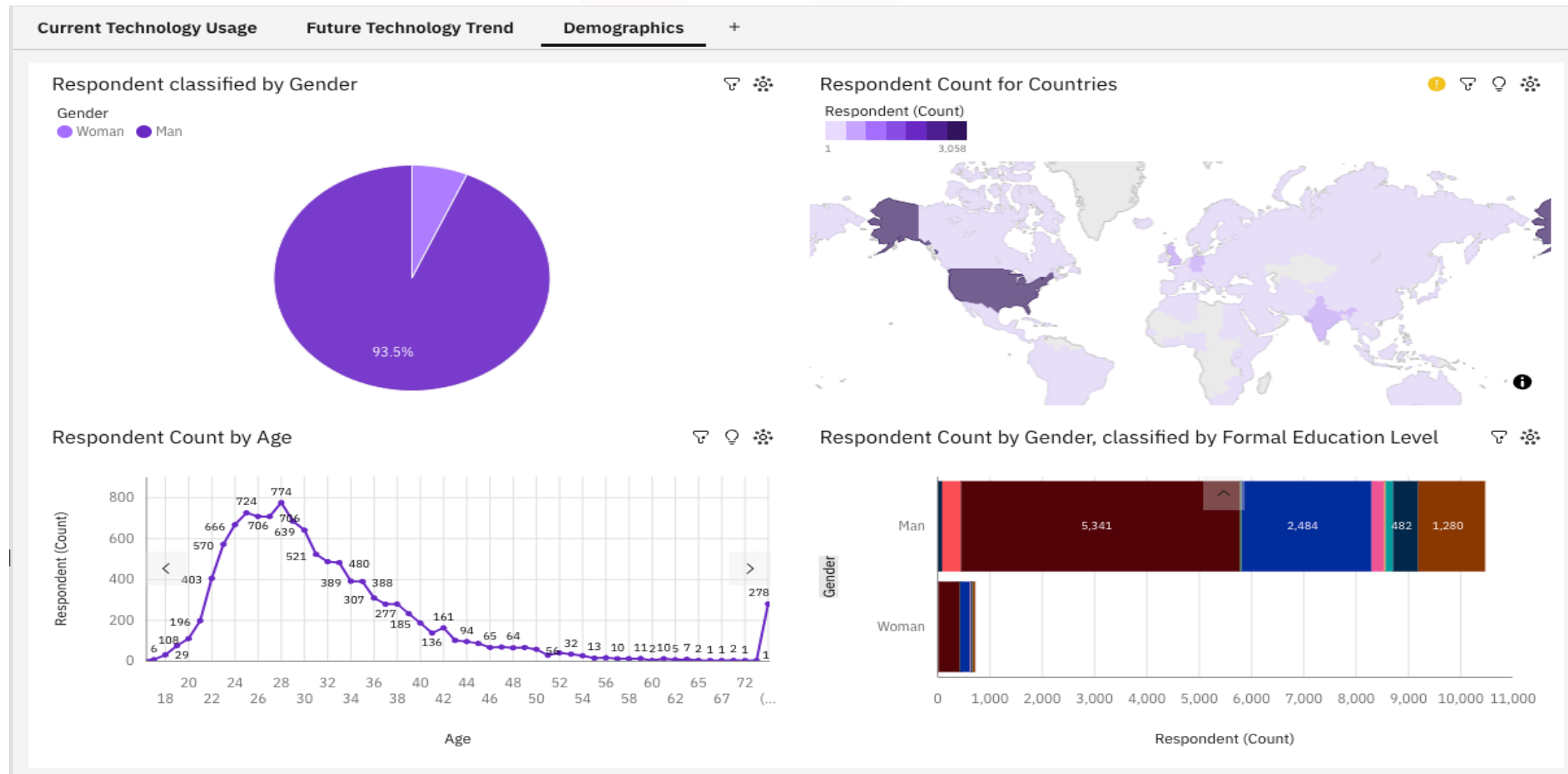https://github.com/ByteShubham/Portfolio_Projects/blob/main/Capstone_Dashboard.pdf

DASHBOARD TAB 1

DASHBOARD TAB 2

DASHBOARD TAB 3

DISCUSSION

OVERALL FINDINGS & IMPLICATIONS

Findings

- JavaScript widely used and TypeScript getting popular.

- Over 90% young male developers.

- Developers mostly located in developed countries.

Implications

- JavaScript and TypeScript web frames gaining followers.

- Global polarization of developers location and gender.

- Young developers without postgrad studies on its majority.
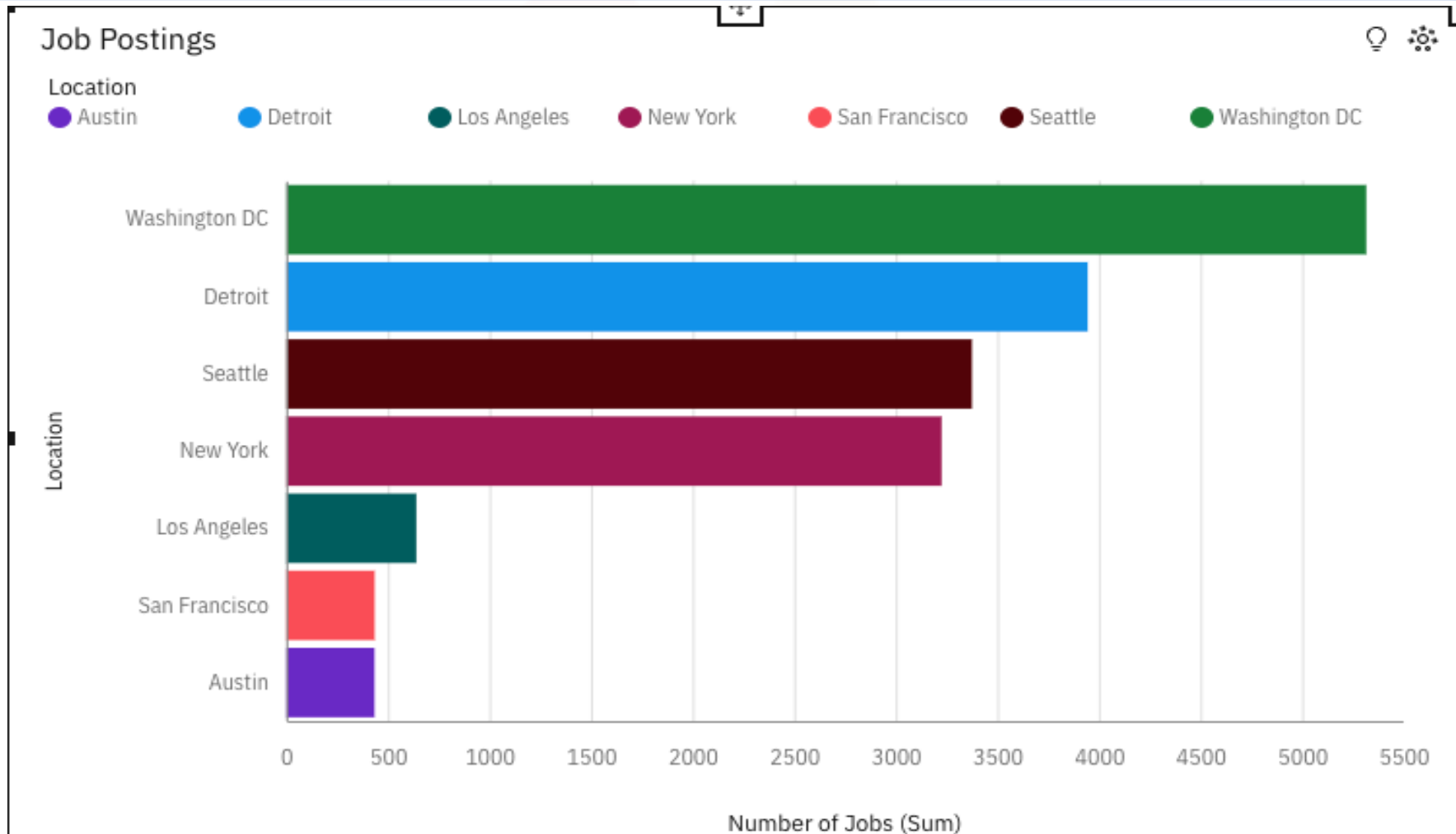
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CONCLUSION

- Developers are people with very marked characteristics.

- A good idea of popularity trends of different tools, platforms and languages can be obtained.

- There is a job to be done to spread accessibility of this labor market to countries in development.

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APPENDIX

JOB POSTINGS

POPULAR LANGUAGES