



STACK OVERFLOW DEVELOPER SURVEY 2019

Giang Nguyen

10th September 2023

OUTLINE



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

EXECUTIVE SUMMARY



- Data contextualization and analysis goal.
- Methodology explanation
 - Data collecting and data wrangling
 - Data analysis
 - Data visualizations.
- Results presentation supported with graphs and trends
- Discussion of overall findings and implications of relevant previously exposed findings
- 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
- Nearly 90,000 developers participant
- Characteristics of our dataset
 - Survey from developers' preferred technologies to their job preferences.
 - Consider the characteristics of developers globally

METHODOLOGY



- Collecting data using APIs and Webscraping
- Data Wrangling
- Exploratory Data Analysis
 - Analyzing data distribution
 - Finding outliers
 - Finding correlations
- Data Visualization
 - Visualizing distribution, relationships, the composition and comparison of data
 - Create Dashboards

RESULTS

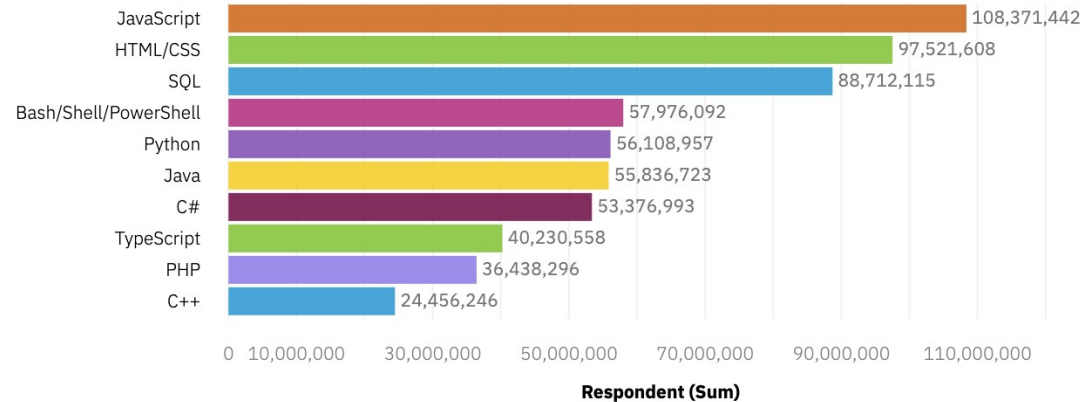


PROGRAMMING LANGUAGE TRENDS

Current Year

Top 10 Language Worked With

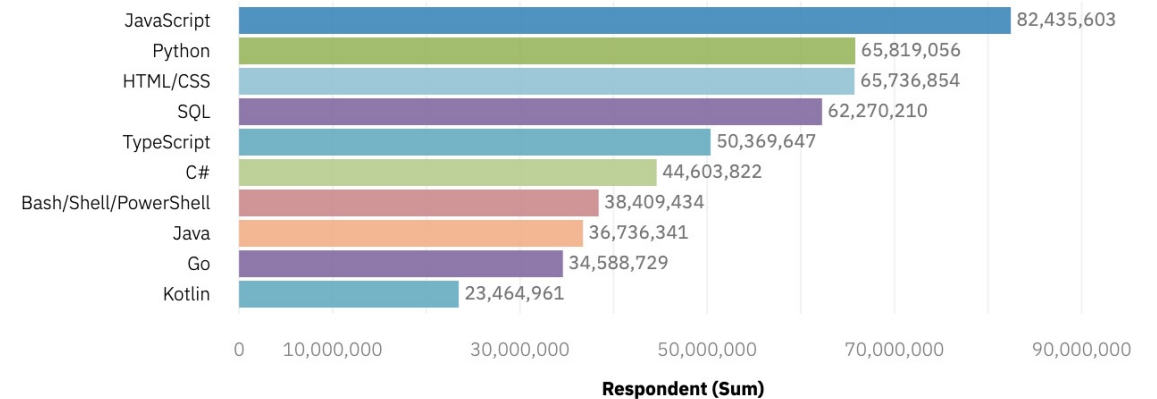
LanguageWorkedWith



Next Year

Top 10 Language Desire Next Year

LanguageDesireNextYear



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

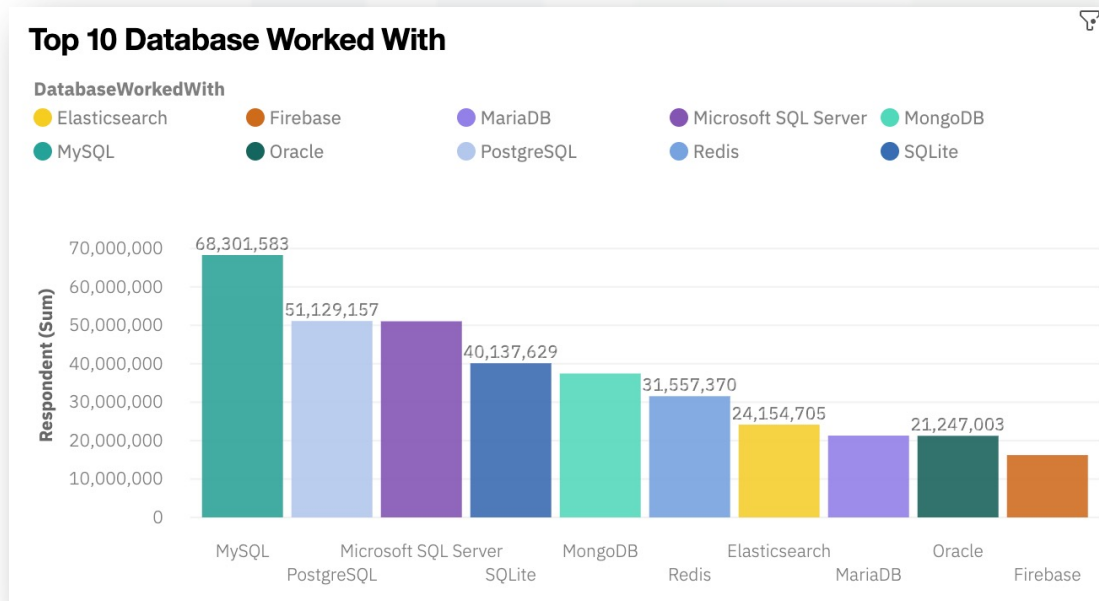
- JavaScript still keep as leading language
- Python fastest-growing major language
- TypeScript is gradually becoming popular

Implications

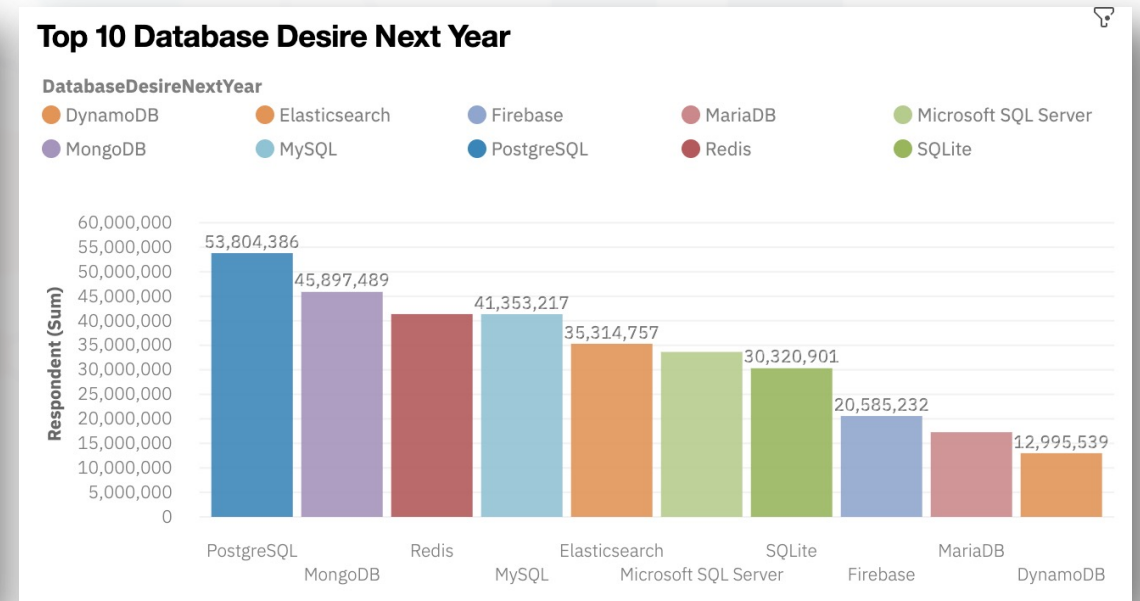
- Python tends to rise to the top
- Developers can transition from JavaScript to TypeScript.

DATABASE TRENDS

Current Year



Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL is the most used database
- Microsoft SQL Server and SQLite are less interested
- Increasing interest in PostgreSQL and MongoDB

Implications

- PostgreSQL and MongoDB are increasingly dominant in the market
- Microsoft SQL Server and SQLite both seem to be losing market share.
- Redis and Elasticsearch emerged gradually and grew enormously.

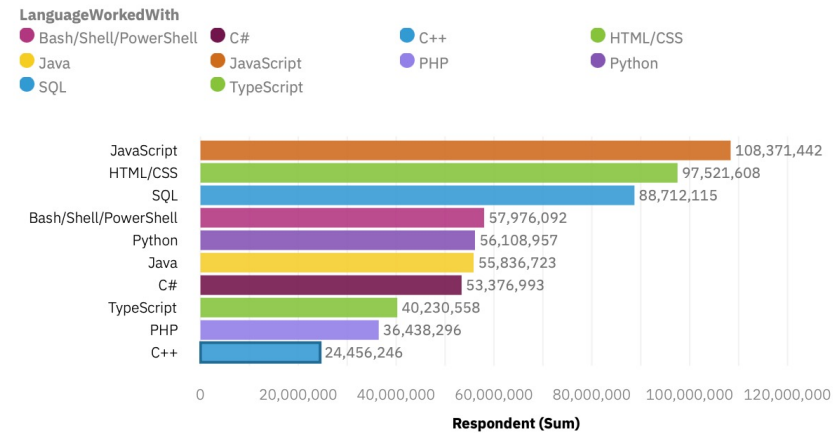
DASHBOARD



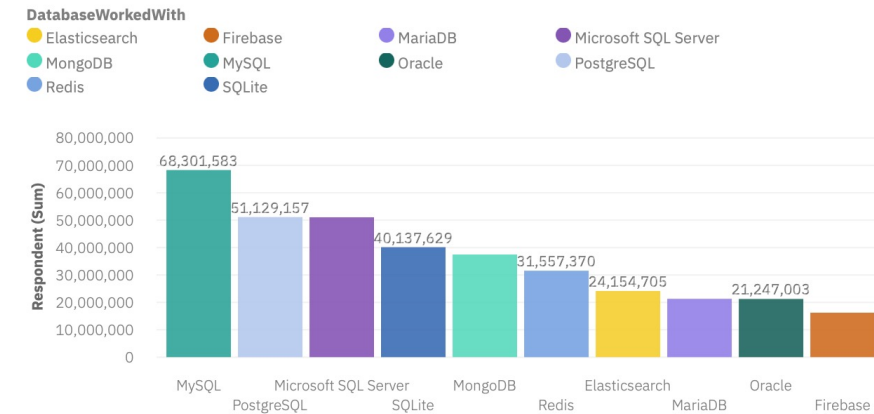
[Cognos dashboard goes here](#)

DASHBOARD TAB 1

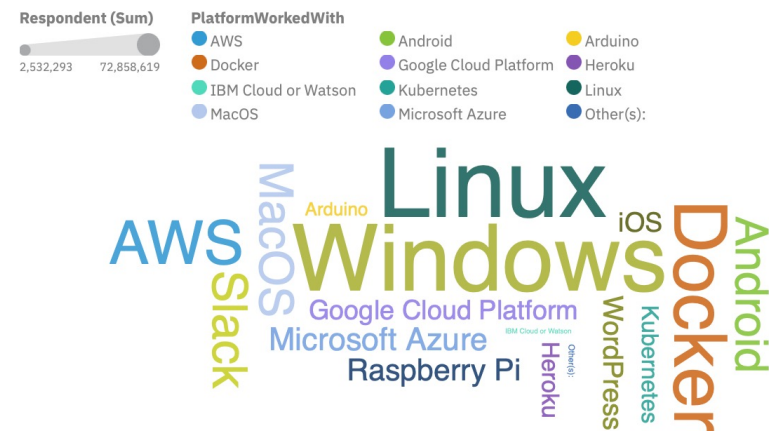
Top 10 Language Worked With



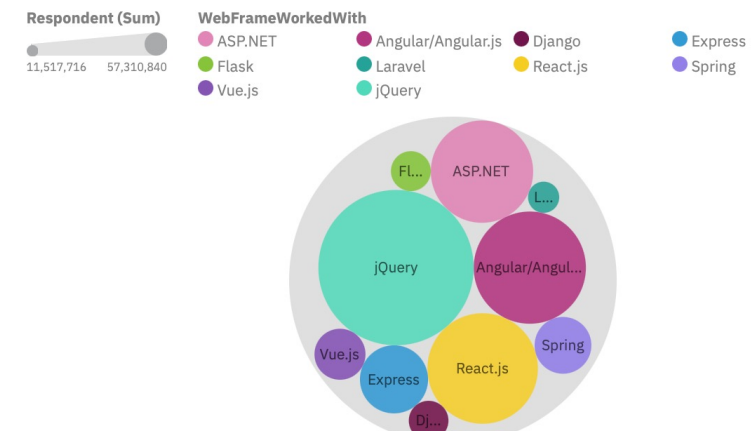
Top 10 Database Worked With



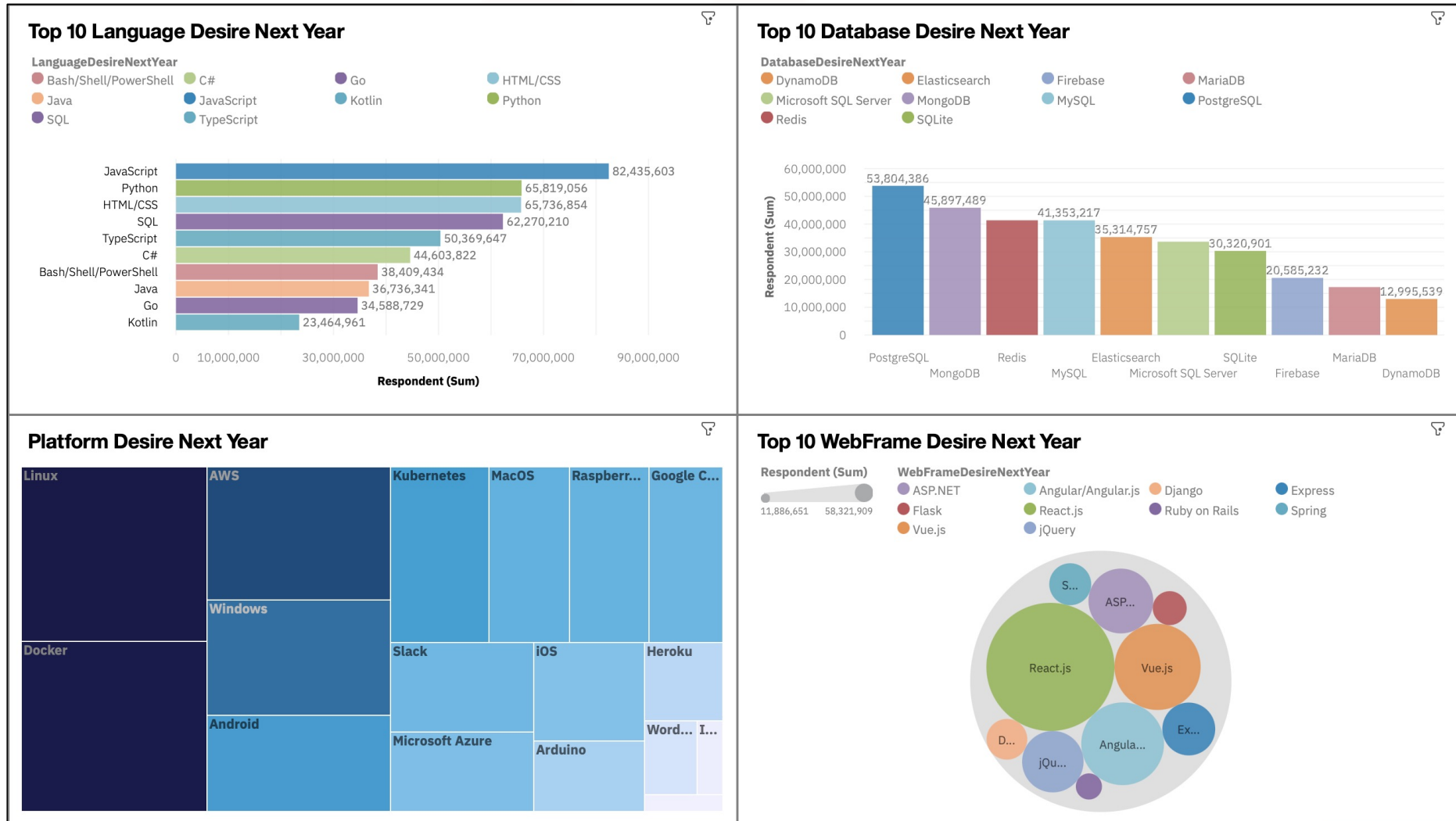
Platform Worked With



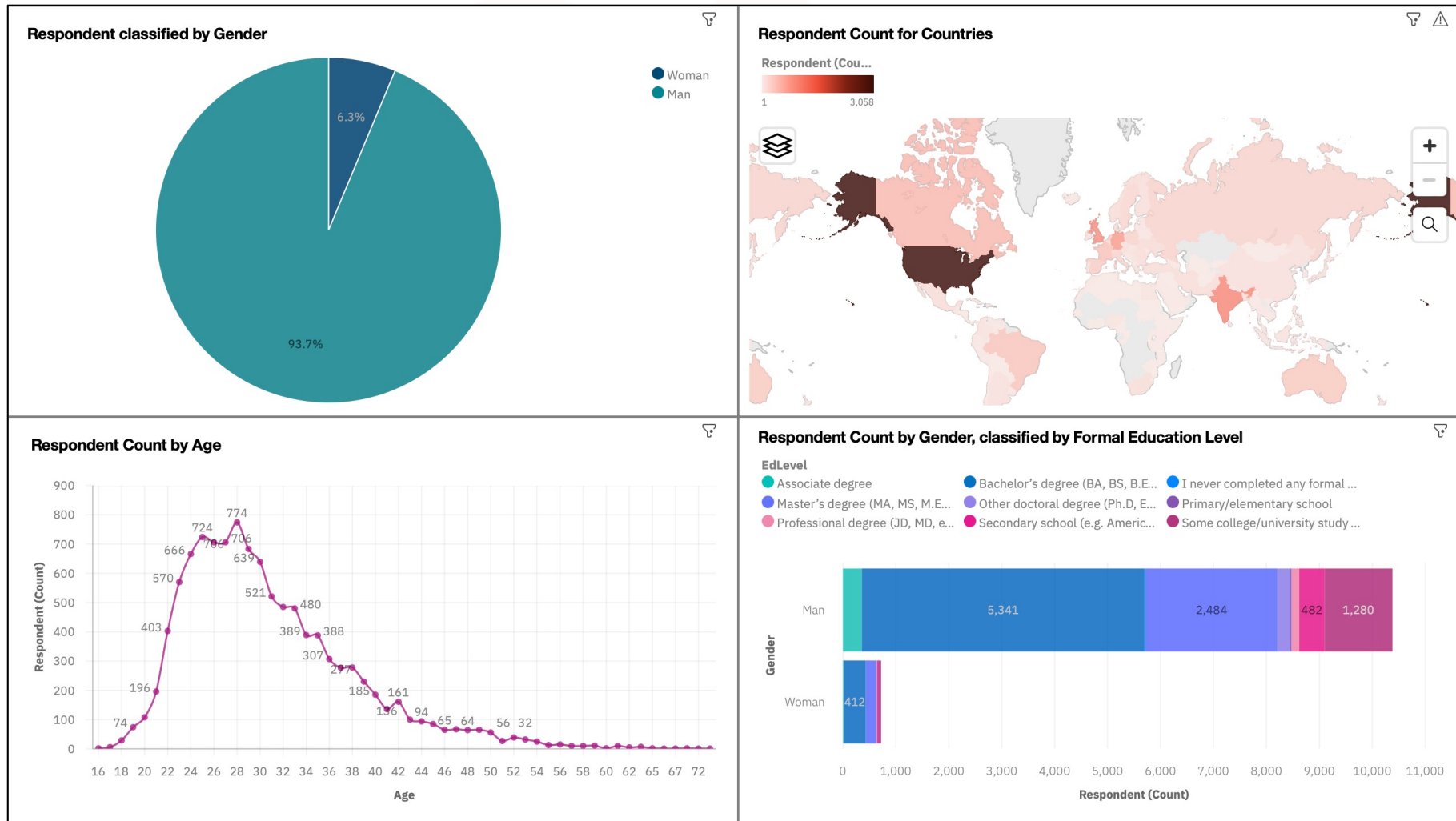
Top 10 WebFrame Worked With



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

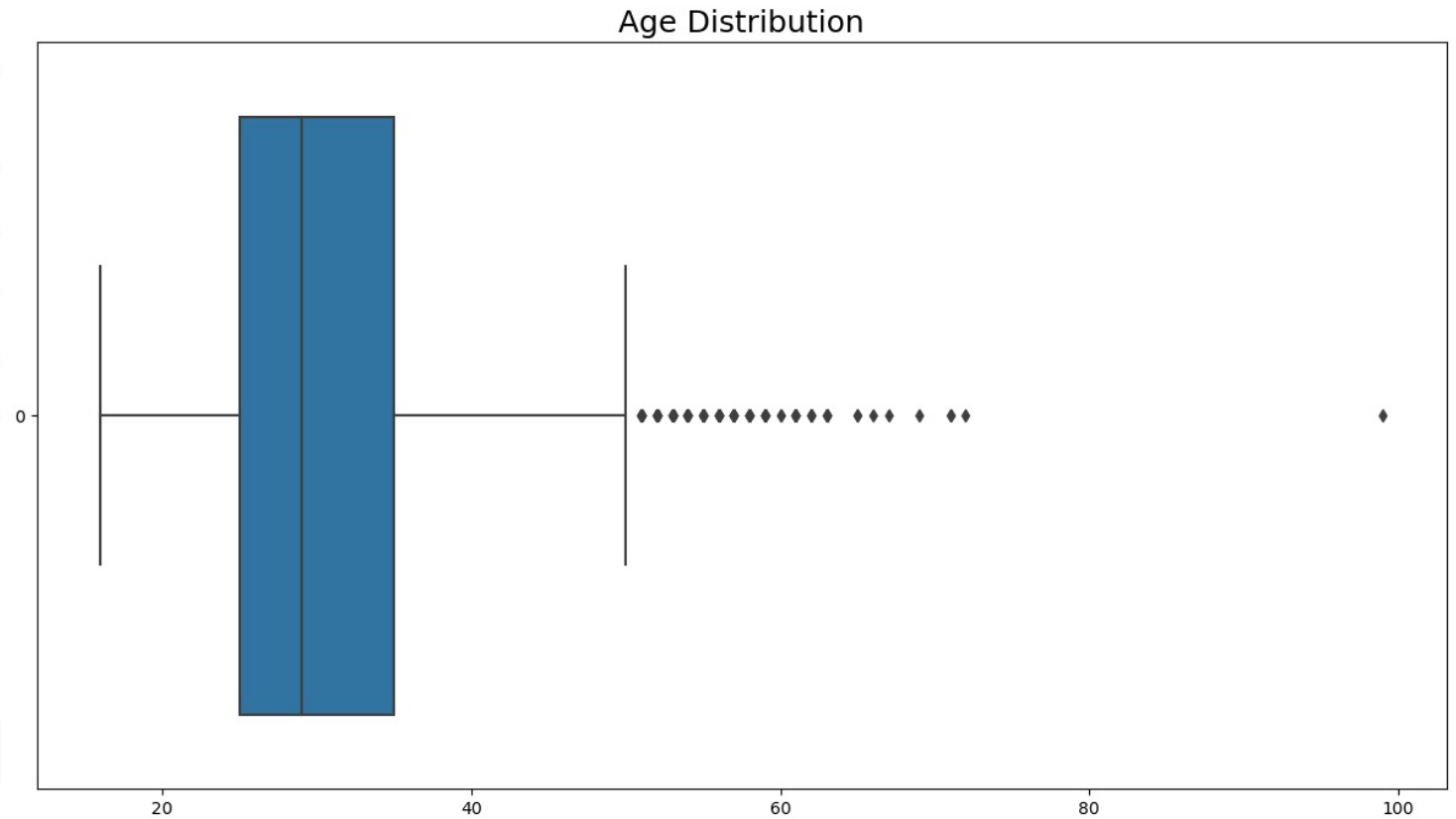
- JavaScript and TypeScript web frames gaining followers
- The massive regional and gender polarization of developers globally
- Majority of developers rarely pursue a postgrad master's degree

CONCLUSION

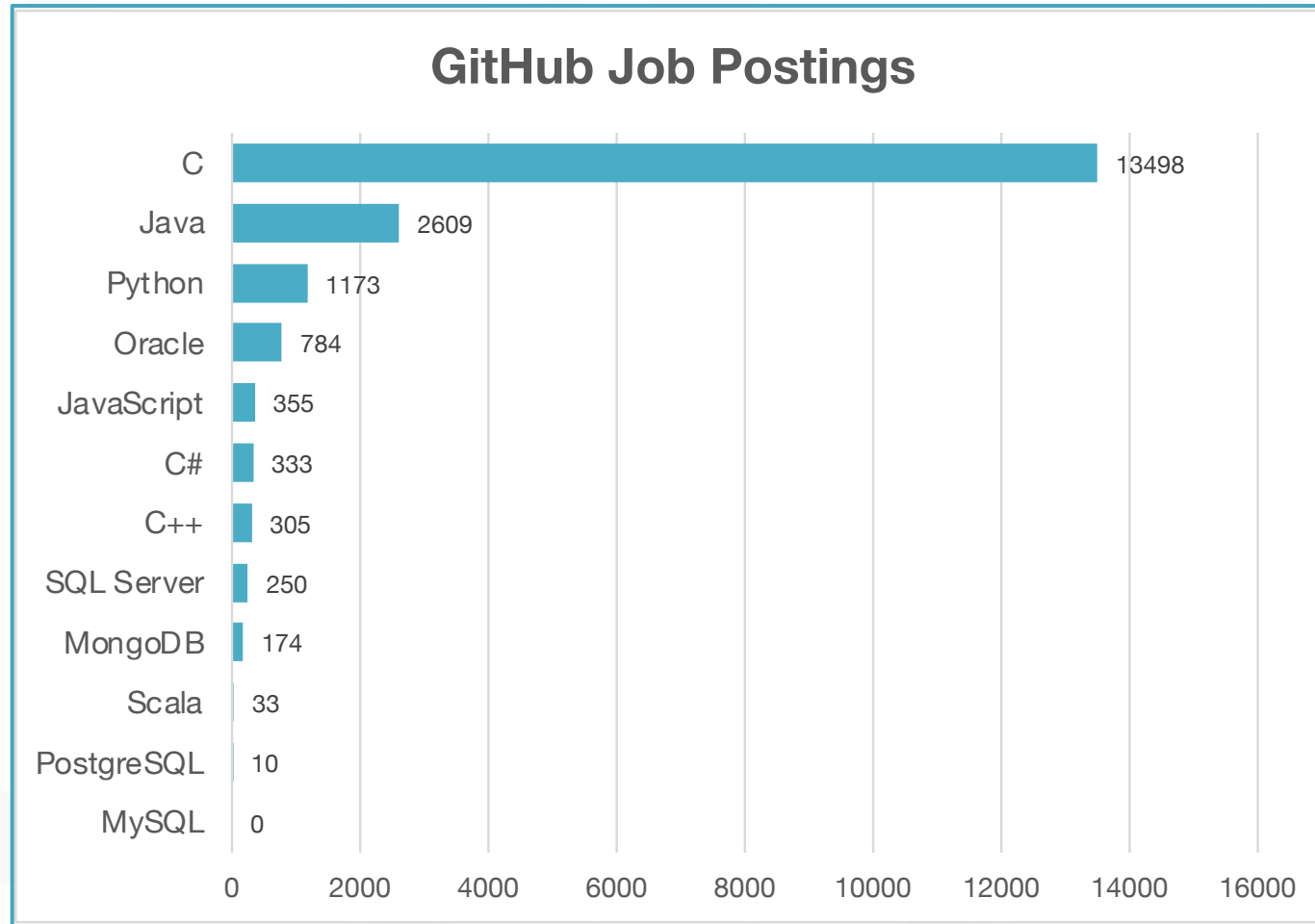


- Developers have different characteristics.
- A good insight into the popularity trends of various tools, platforms, and languages can be put on.
- There is more work to be done to make this labor market accessible to developing countries.

APPENDIX



JOB POSTINGS



POPULAR LANGUAGES

