



STACK OVERFLOW DEVELOPER SURVEY 2019

Huu Trung Nguyen

April 03, 2023

OUTLINE



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

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.
- Nearly 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

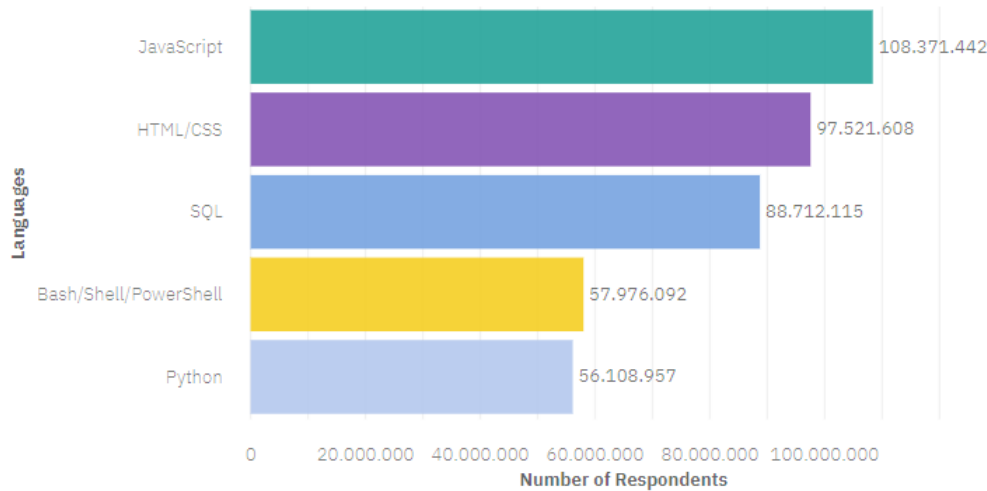
RESULTS



PROGRAMMING LANGUAGE TRENDS

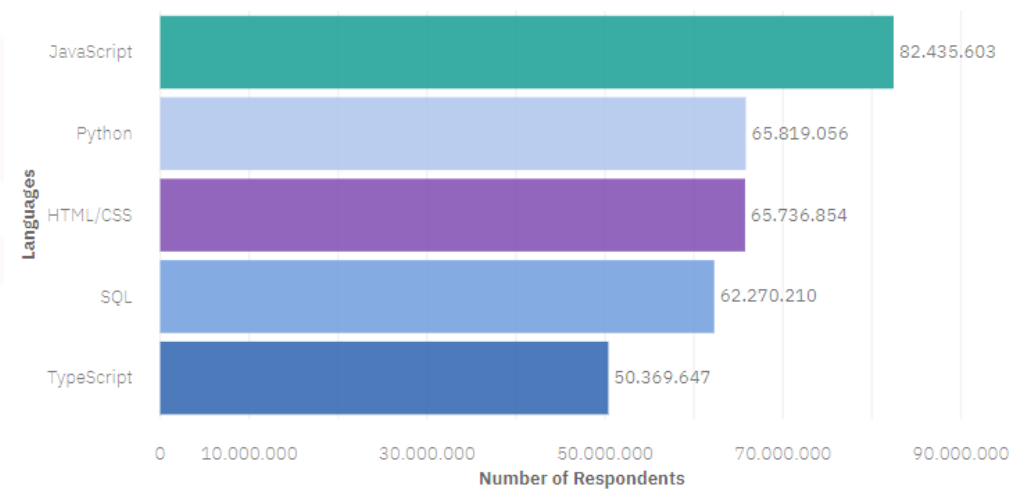
Current Year

Top 5 Programming Language Experience



Next Year

Top 5 Desired Language to Learn



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript seems to keep as leading language.
- Python fastest growing.
- Great interest in TypeScript

Implications

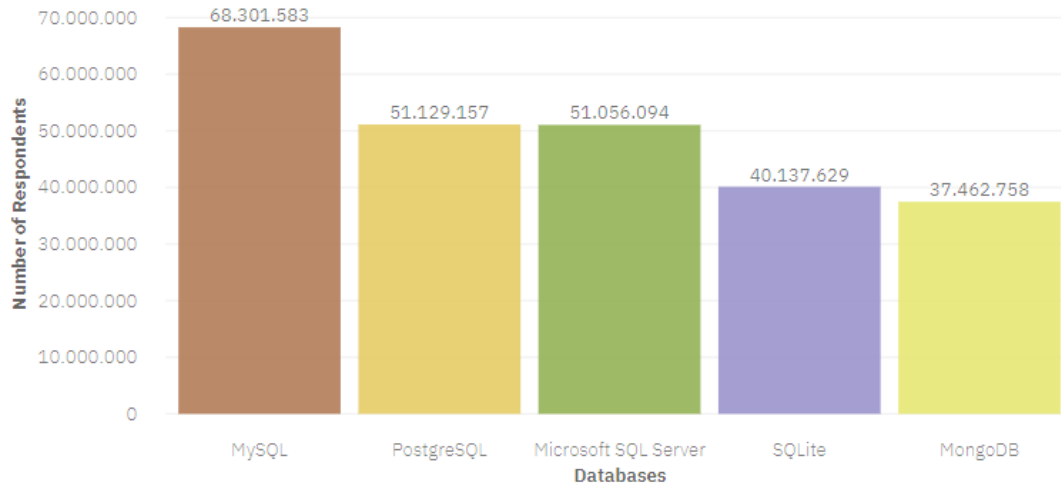
- Possible developers migration from JavaScript to TypeScript.

DATABASE TRENDS

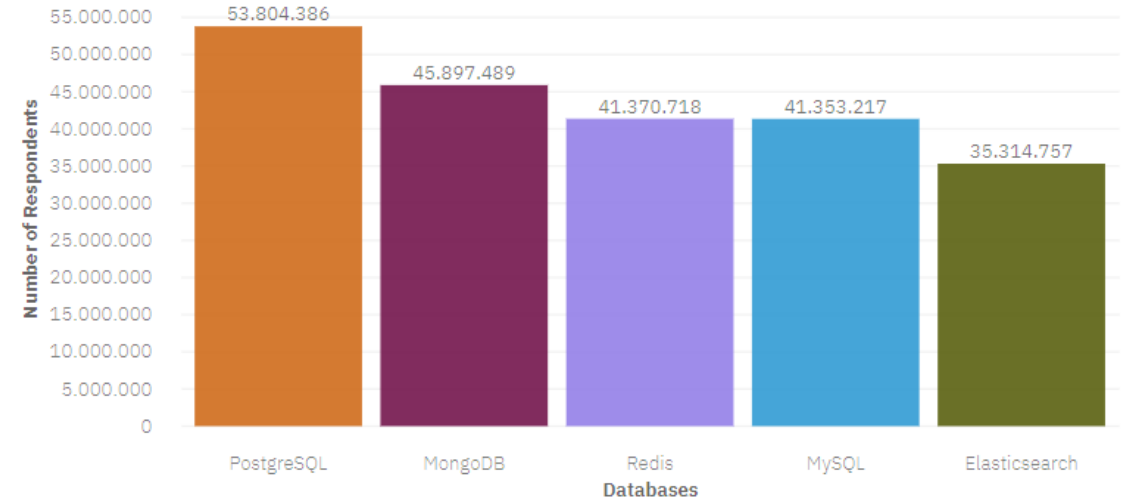
Current Year

Next Year

Top 5 Databases Worked with



Top 5 Desired Database to Learn



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL as most used database.
- Lack of interest in Microsoft SQL Server and SQLite.
- Increasing interest in PostgreSQL and MongoDB.

Implications

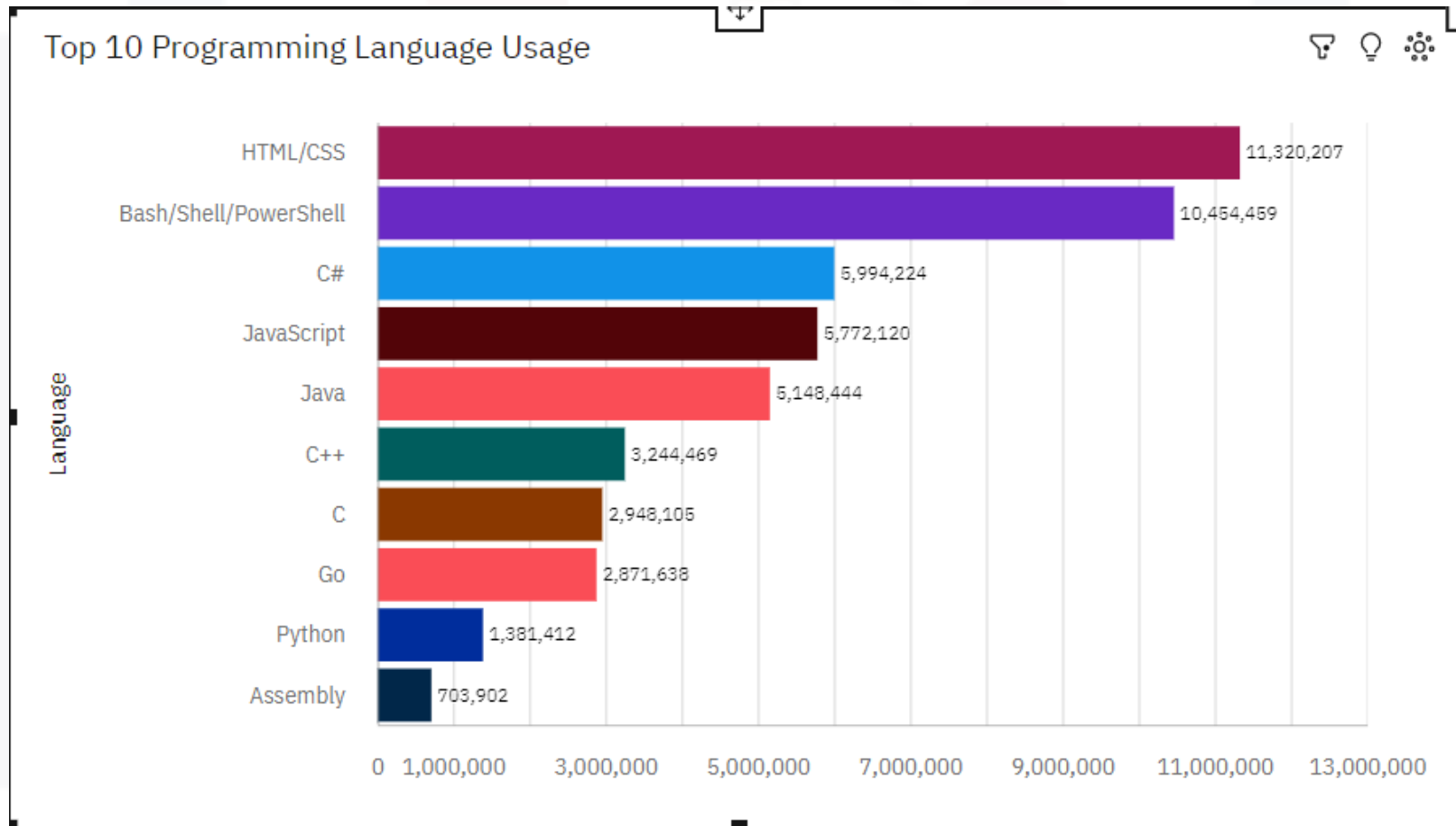
- Microsoft SQL Server and SQLite losing ground in the market.
- PostgreSQL and MongoDB establishment in the market.

DASHBOARD

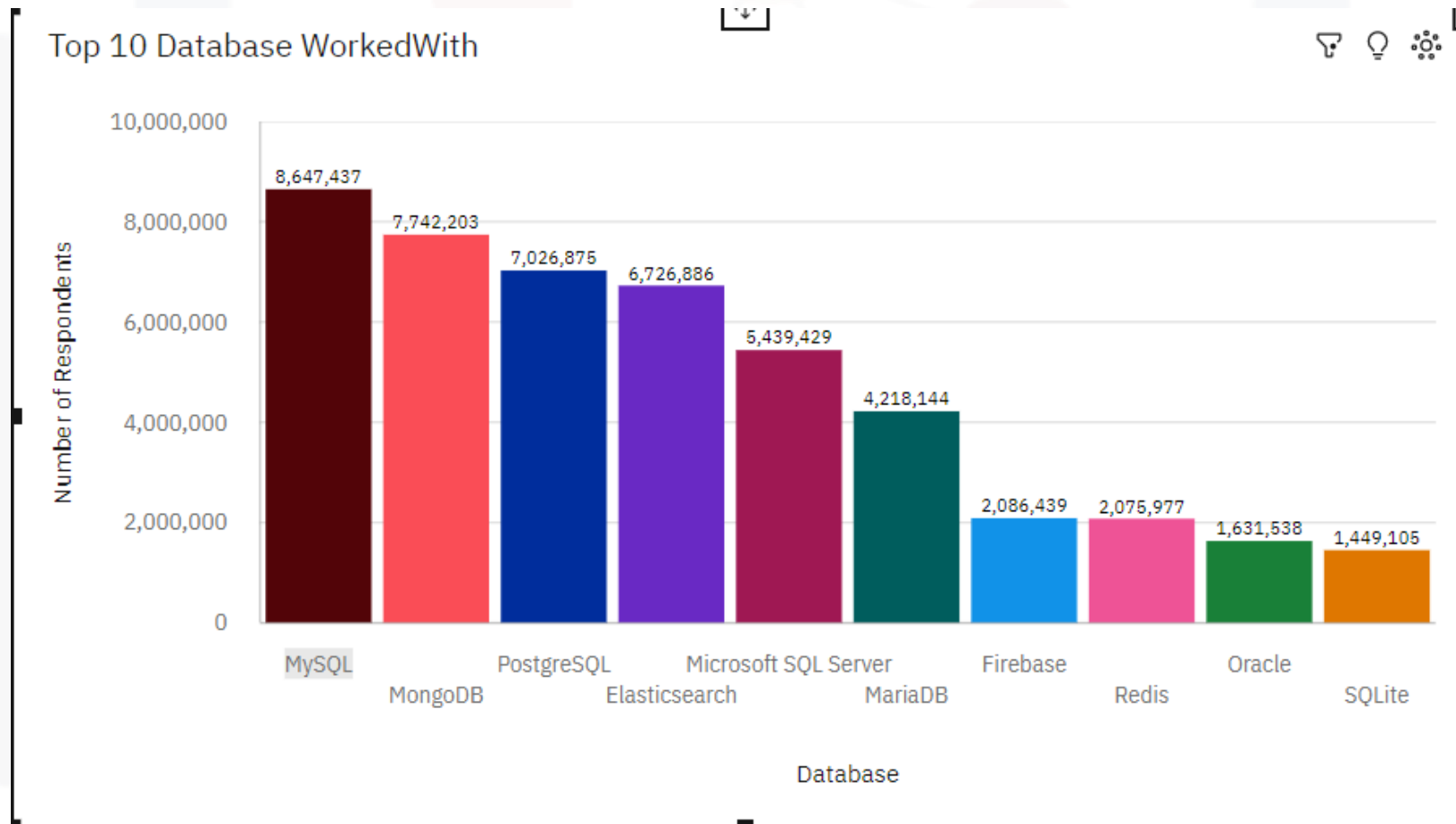


https://us3.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my_folders%2FBuilding%2BA%2BDashboard%2BWith%2BCognos%2BDashboard%2BEmbedded&action=view&mode=dashboard&subView=model0000018743fc6294_0000002

CURRENT TECHNOLOGY USAGE



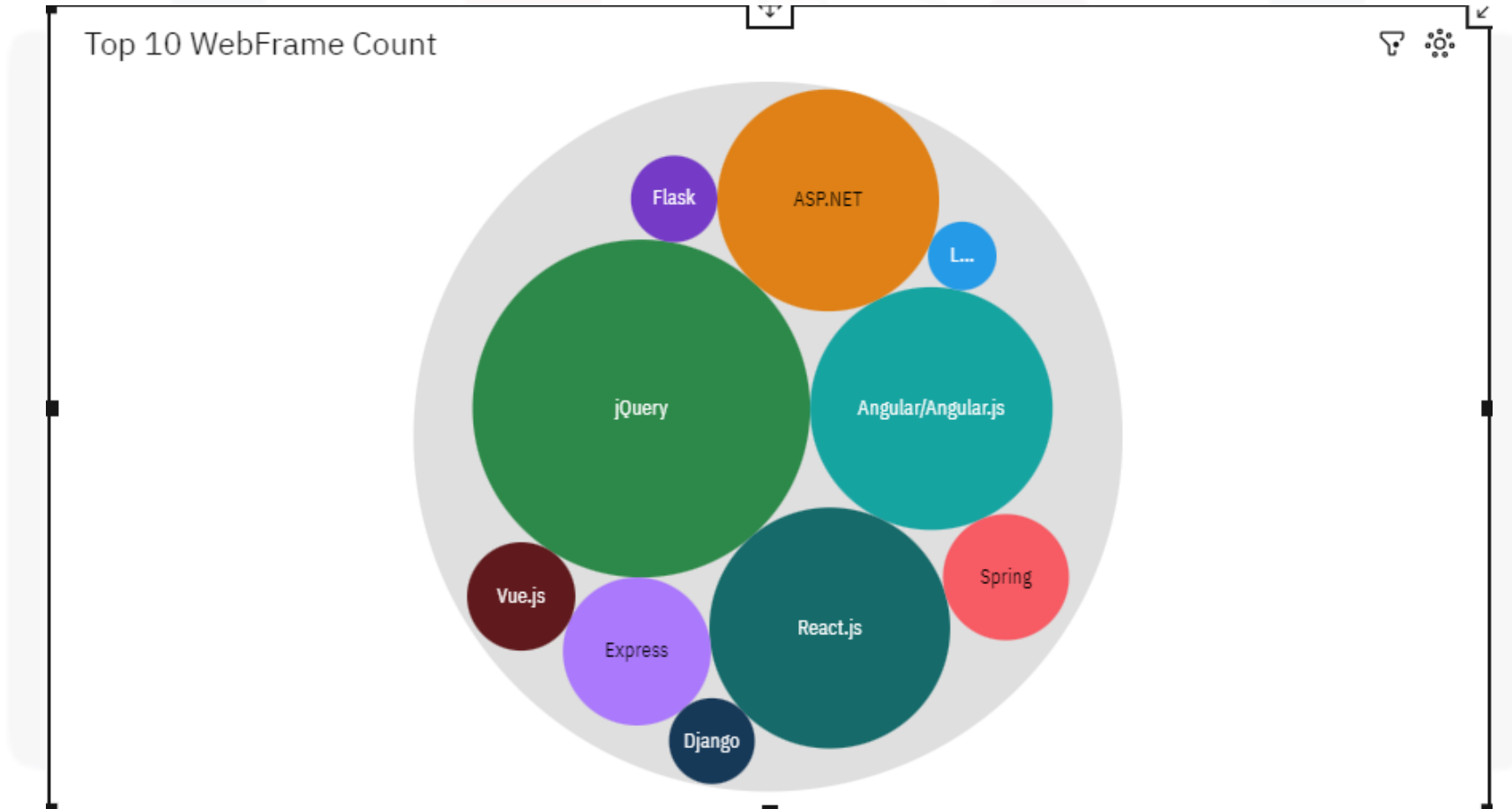
CURRENT TECHNOLOGY USAGE



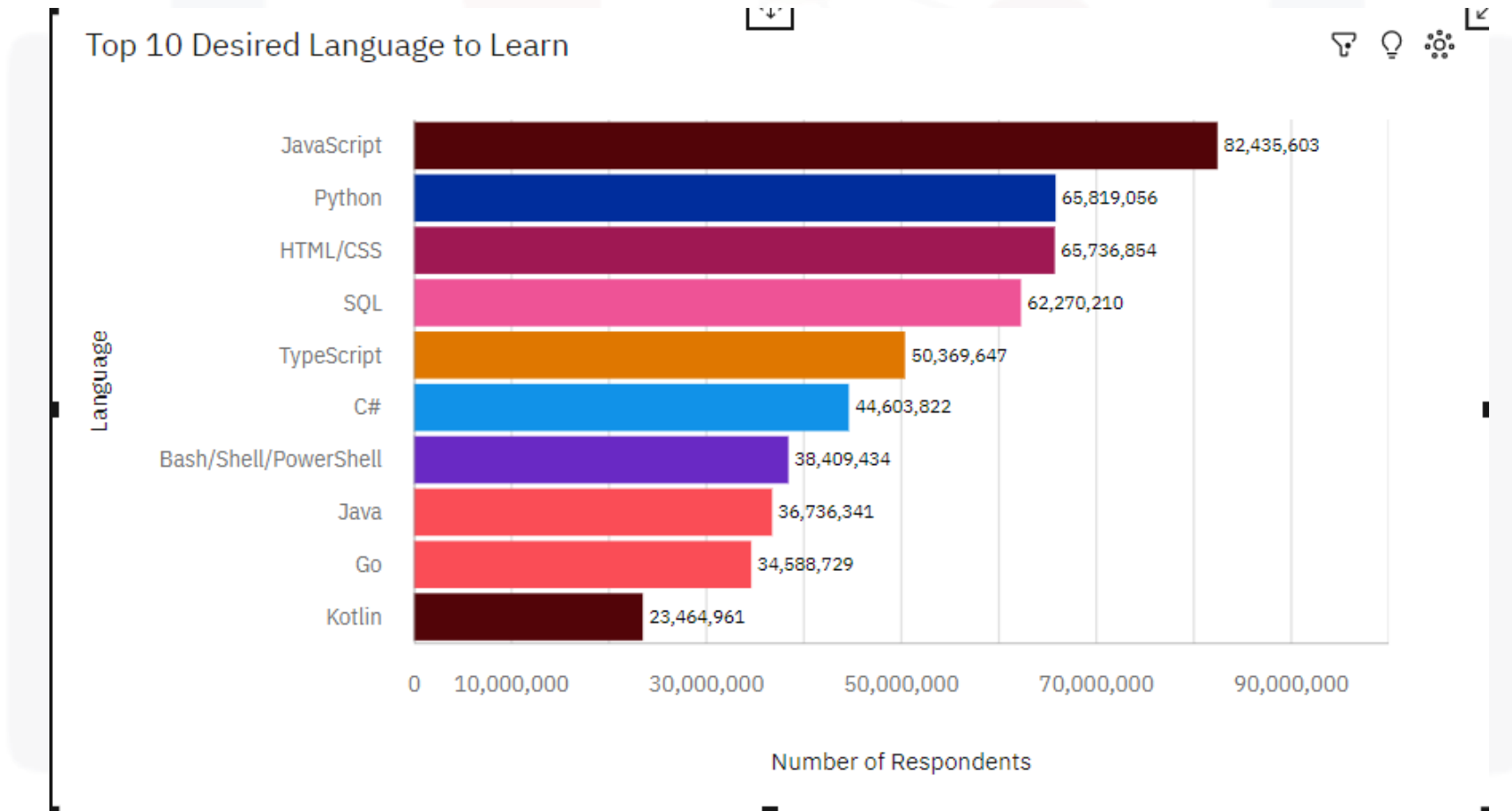
CURRENT TECHNOLOGY USAGE



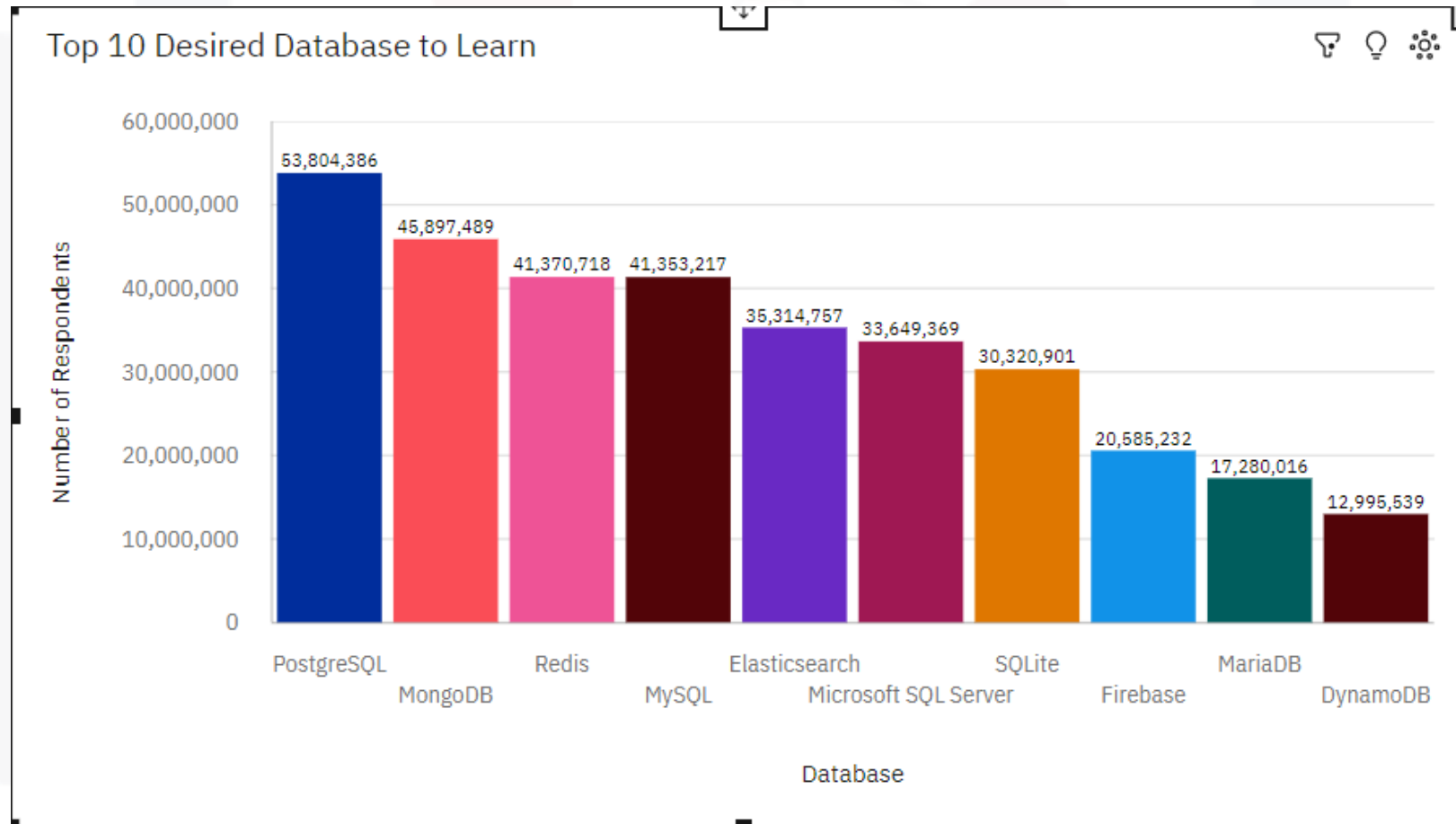
CURRENT TECHNOLOGY USAGE



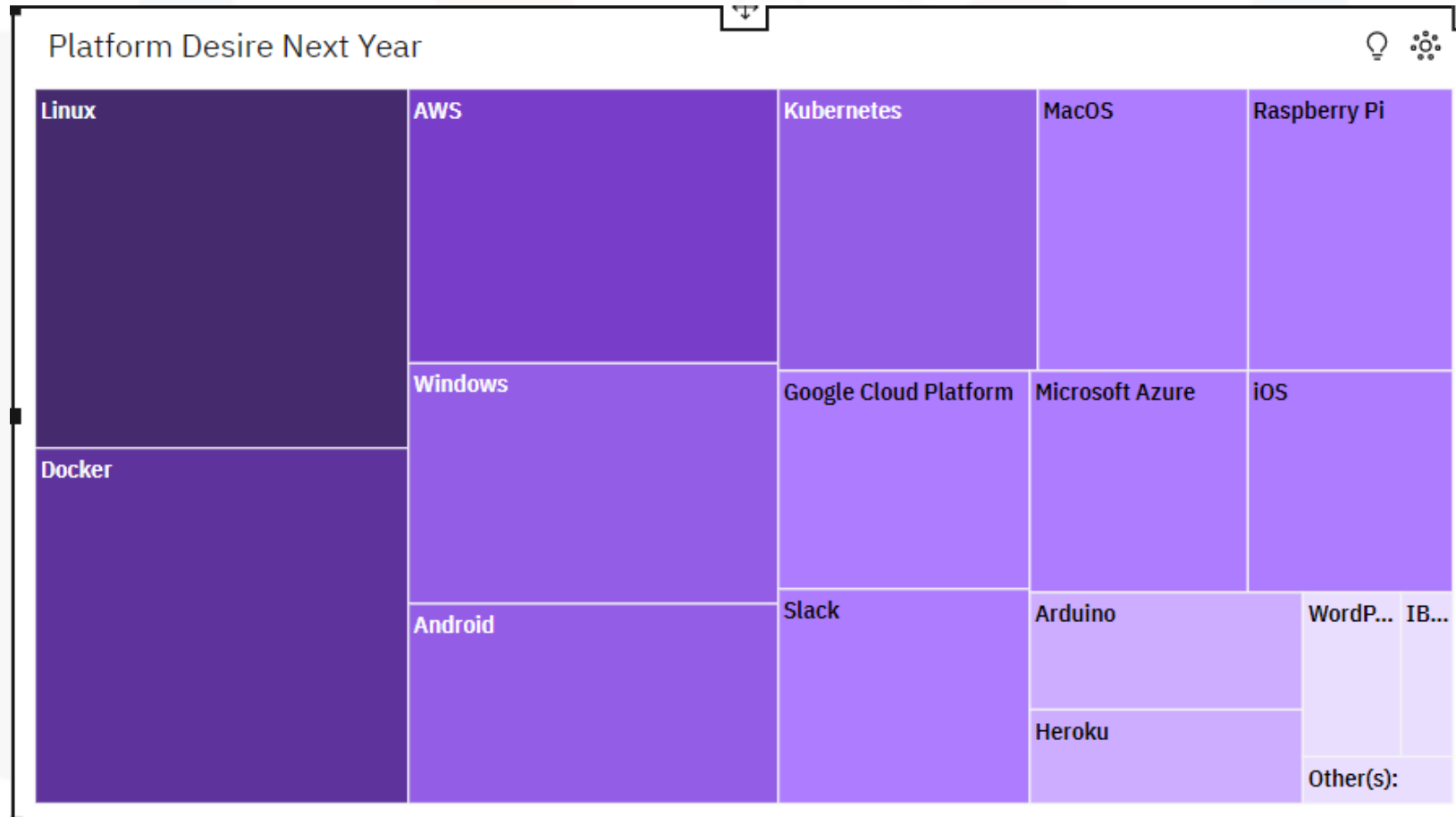
FUTURE TECHNOLOGY TREND



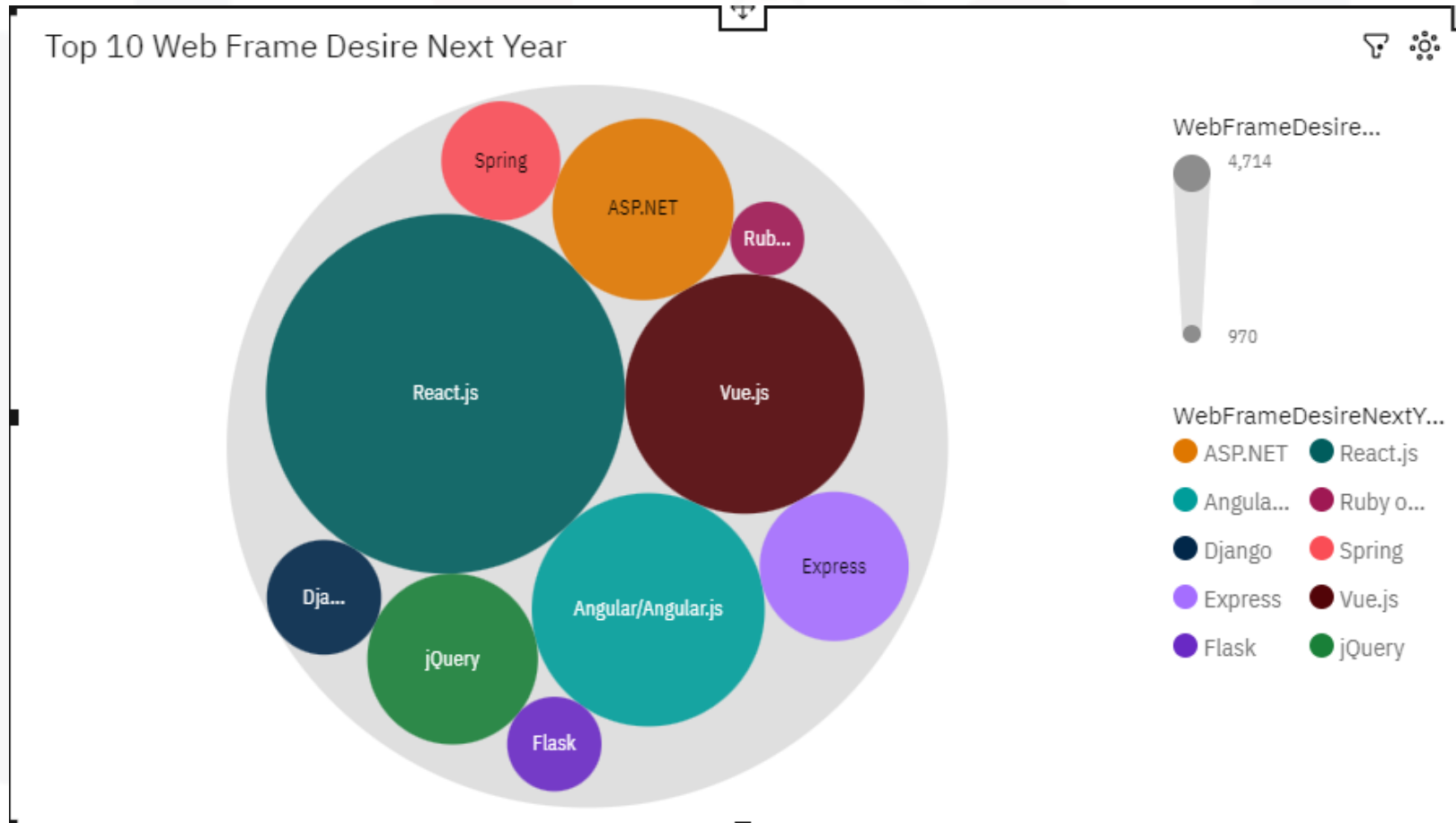
FUTURE TECHNOLOGY TREND



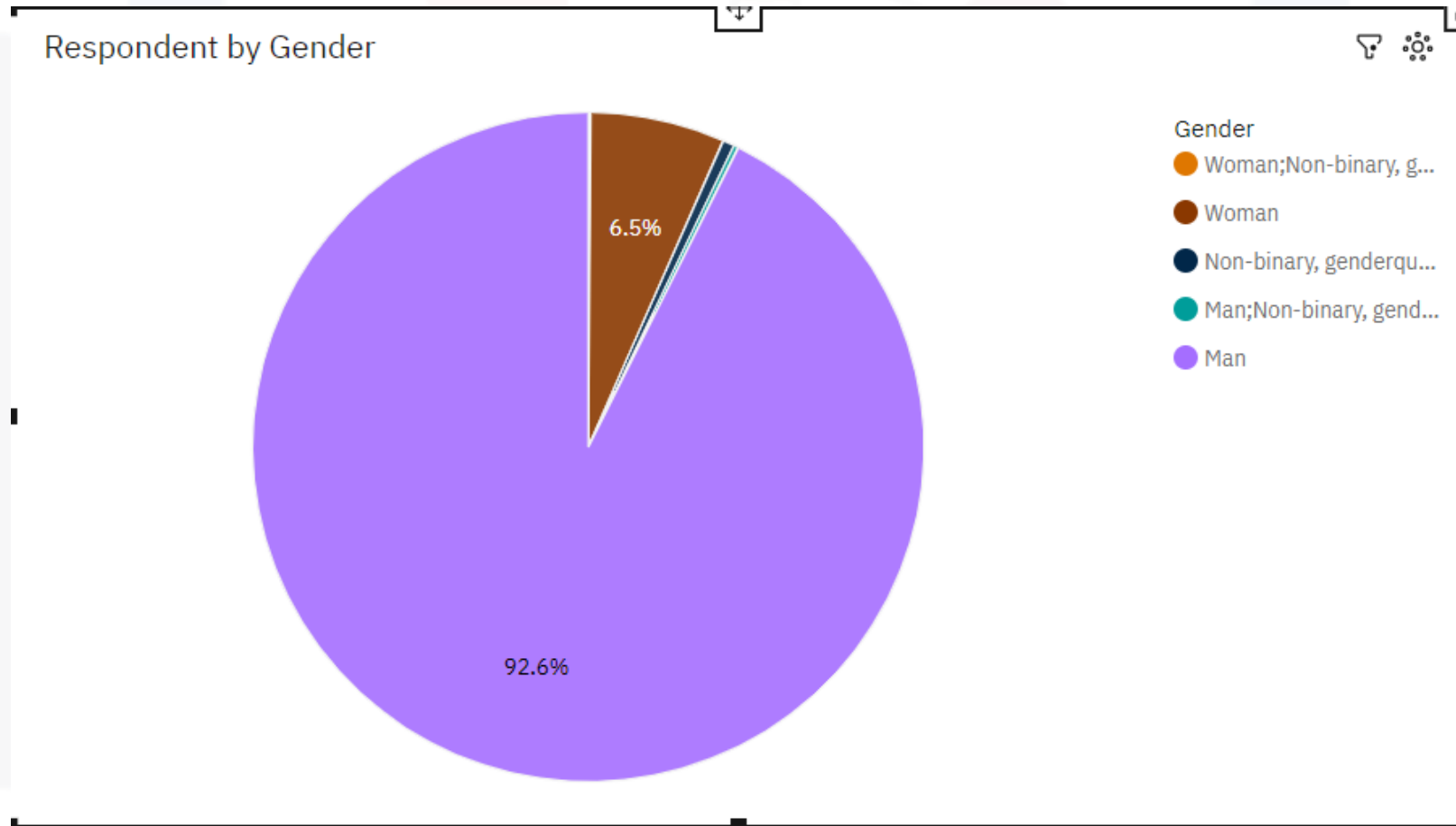
FUTURE TECHNOLOGY TREND



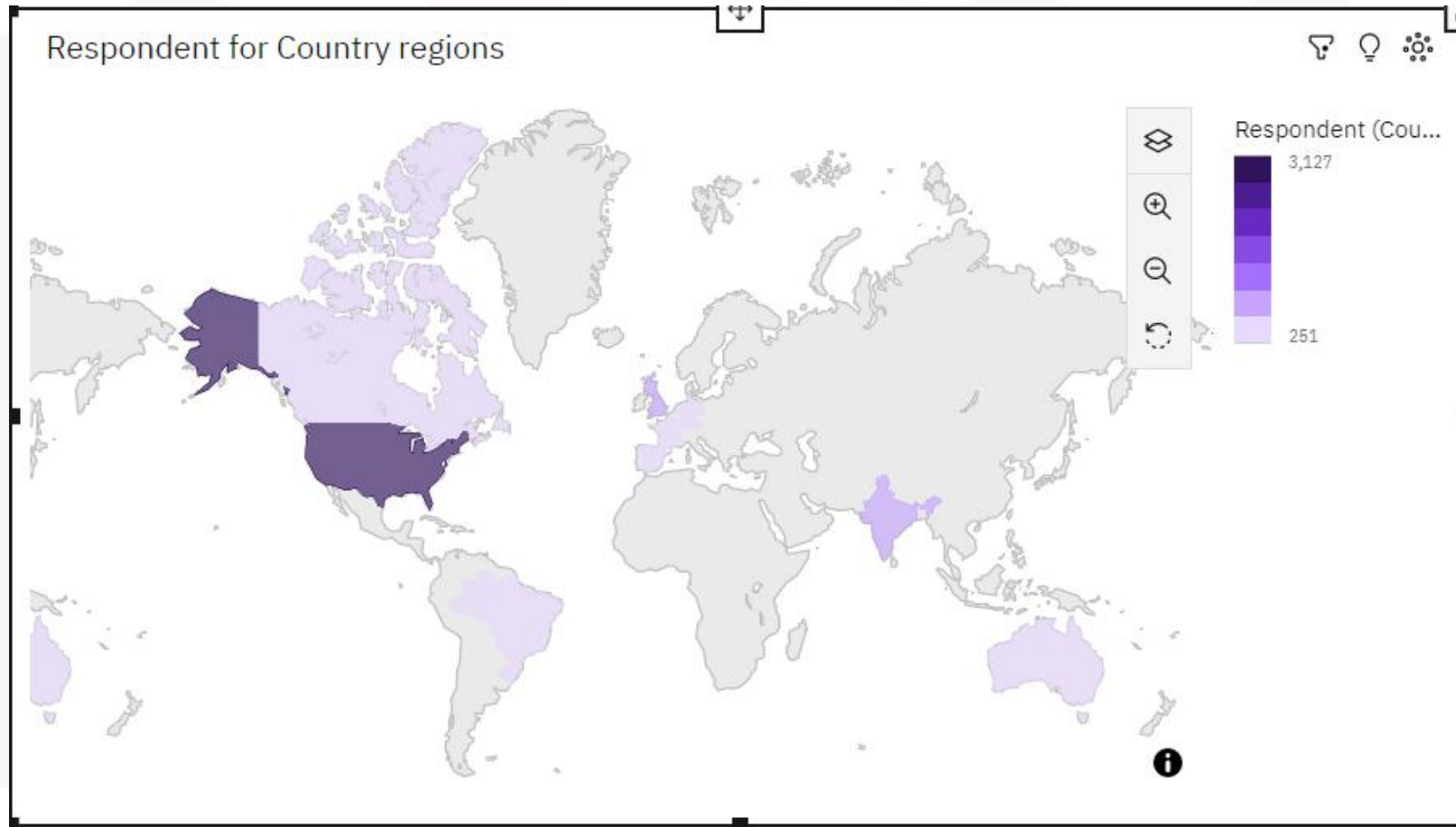
FUTURE TECHNOLOGY TREND



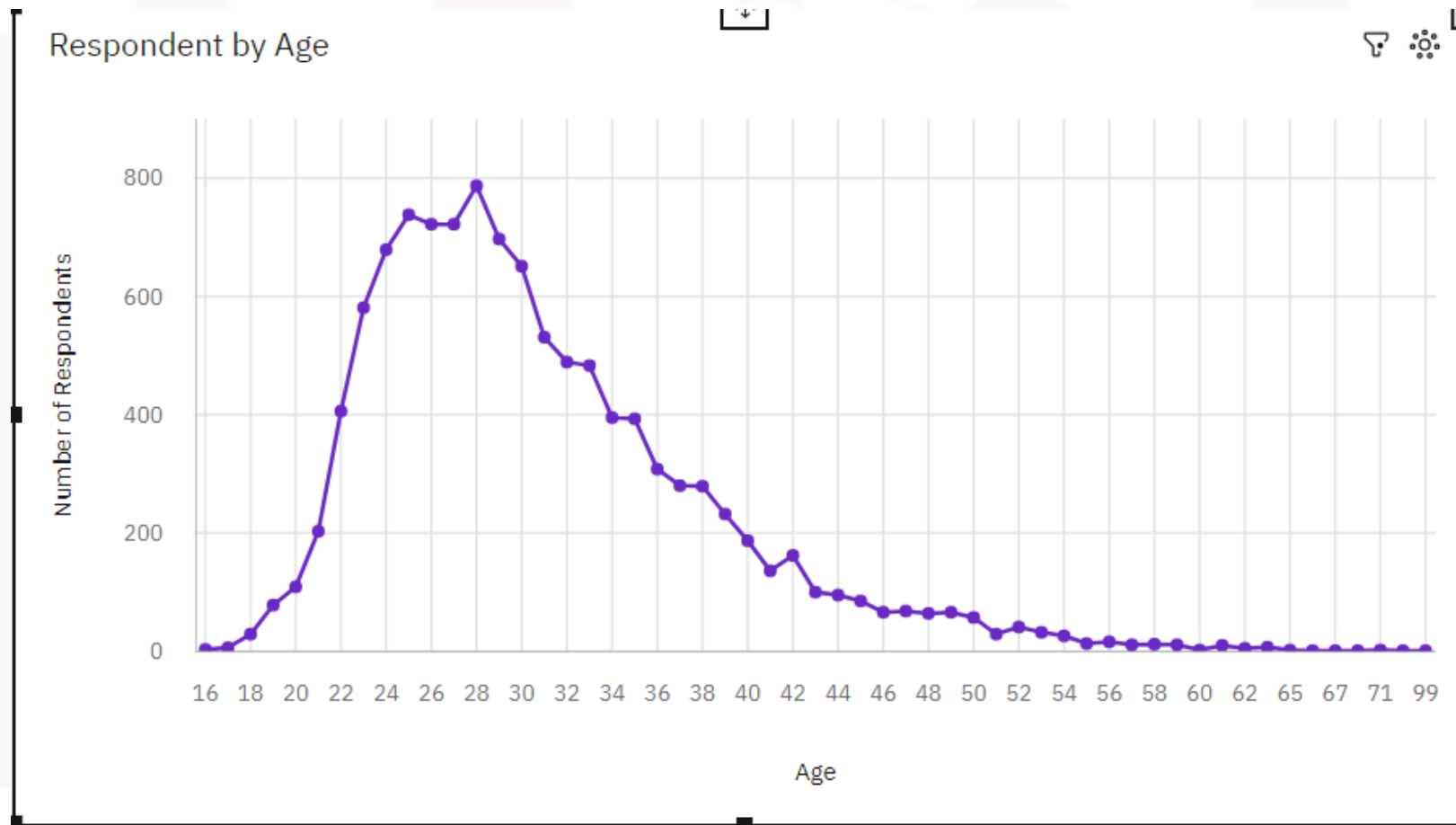
DEMOGRAPHICS



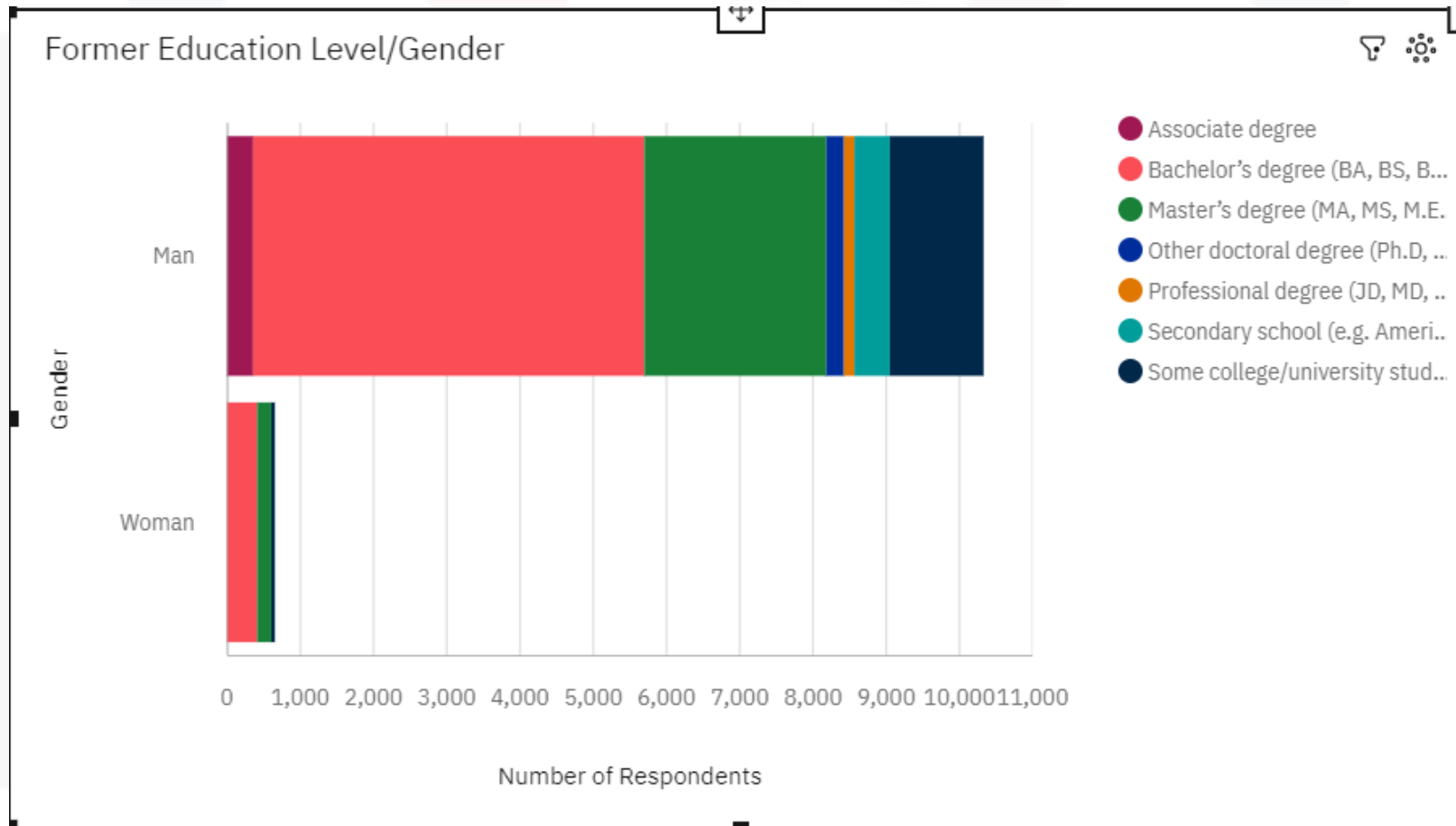
DEMOGRAPHICS



DEMOGRAPHICS



DEMOGRAPHICS



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.

CONCLUSION



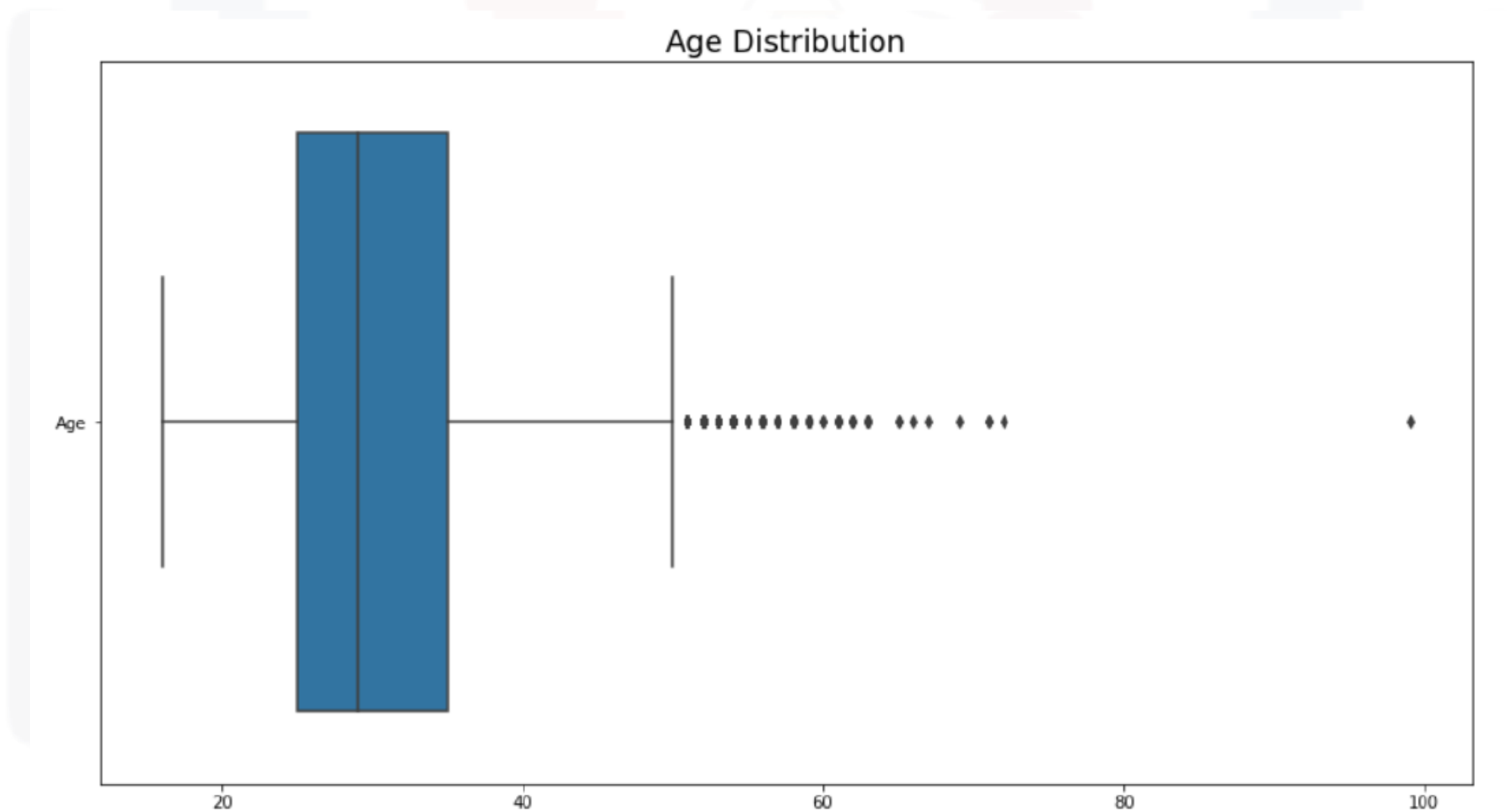
- Developers are people with very marked characteristics.
- A good idea of popularity trends of different tools, platforms and languages can be obtained.
- There is a job to be done to spread accessibility of this labor market to countries in development.

APPENDIX

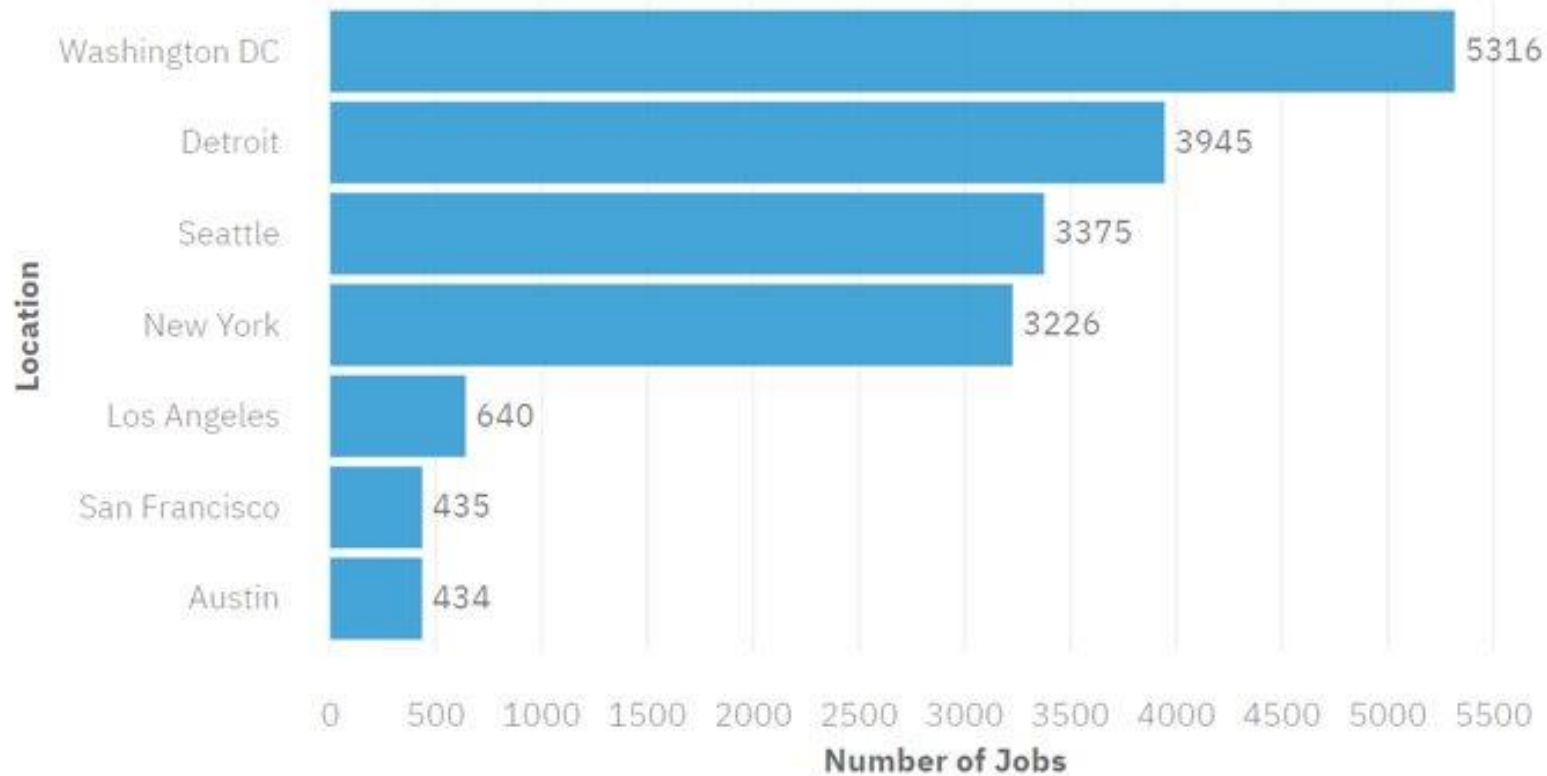


- Include any relevant additional charts, or tables that you may have created during the analysis phase.

AGE DISTRIBUTION BOXPLOT



JOB POSTINGS



POPULAR LANGUAGES

