



THE 2019 STACK OVERFLOW DEVELOPER SURVEY

Richmond P. Ronquillo

December 8, 2023

OUTLINE



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

EXECUTIVE SUMMARY



- Introduction of Data and the Goals of the Research
- Methodology as a Process
 - Data Collection
 - Data Wrangling
 - Data Visualization
- Presenting Results and Findings with the help of charts and dashboards.
- Discussion of findings that were presented
- Drawing conclusions on the conducted research.

INTRODUCTION



- Stack Overflow Developer Survey is an annual survey conducted at Stack Overflow since 2011.
- This is said to be the most comprehensive and largest survey of people who codes all around the world.
- The survey has an overall of 90,000 respondents each year and is most likely to be growing.
- This survey sheds light on the following:
 - Top Programming Languages in the World
 - Trends within the Coding Landscape

METHODOLOGY



- Data Collection
 - Stack Overflow under ODbL: Open Database License
- Data Wrangling
- Exploratory Data Analysis
 - Demographics
 - Correlations
- Data Visualization
 - Charts, Plots, Maps
 - Dashboards

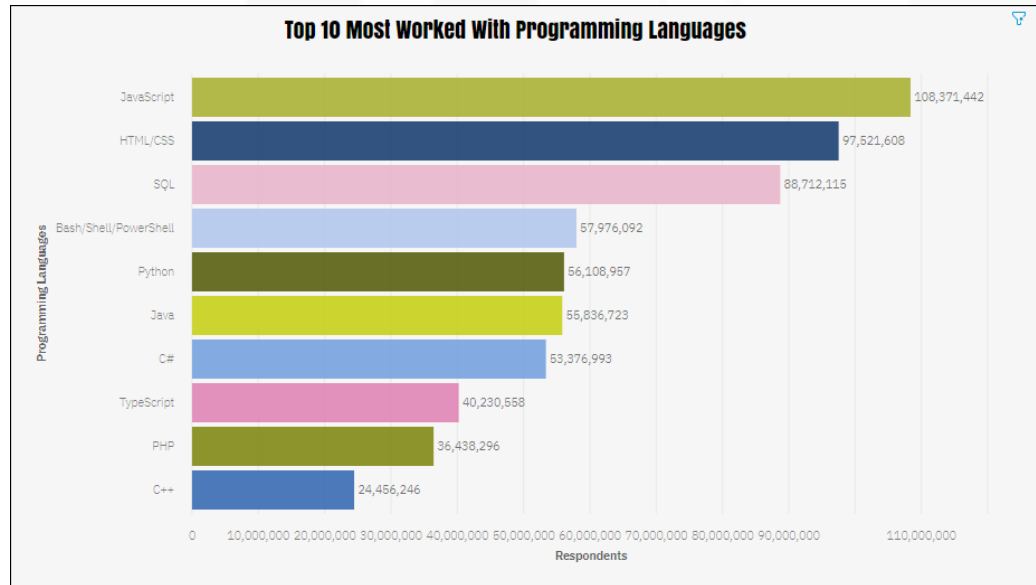
RESULTS



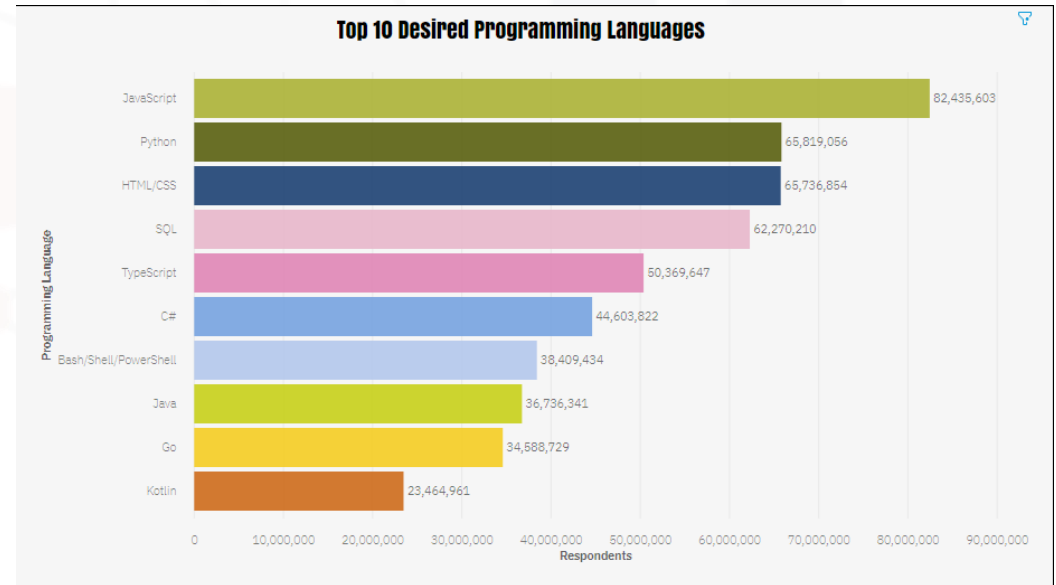
The following are the results and findings of the conducted survey.

PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

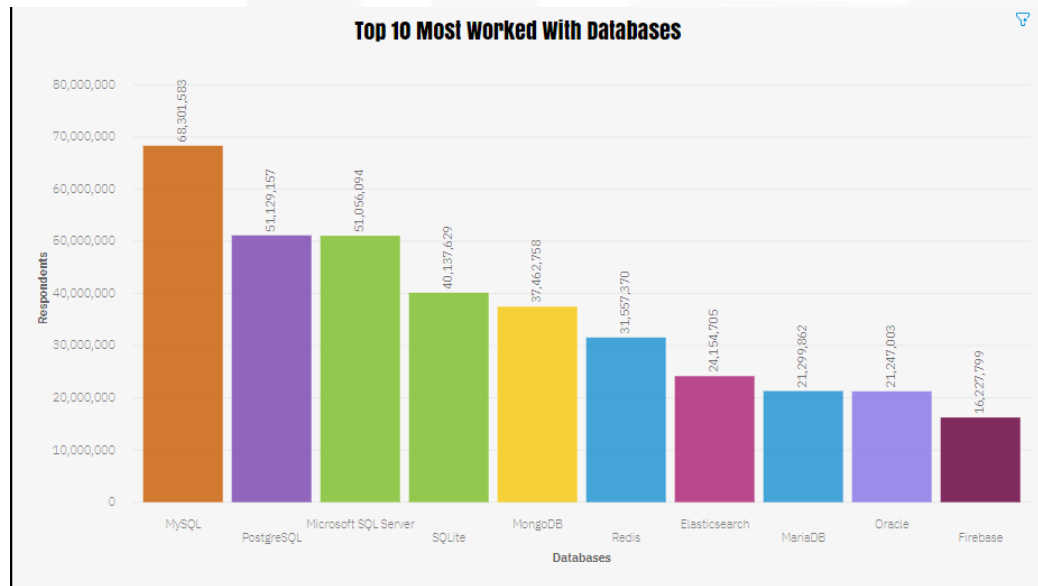
- JavaScript remains the most worked language and the most desired language to learn.
- The interest in Python has grown and outnumbers both CSS and SQL.
- There is a influx of developers interested in learning TypeScript

Implications

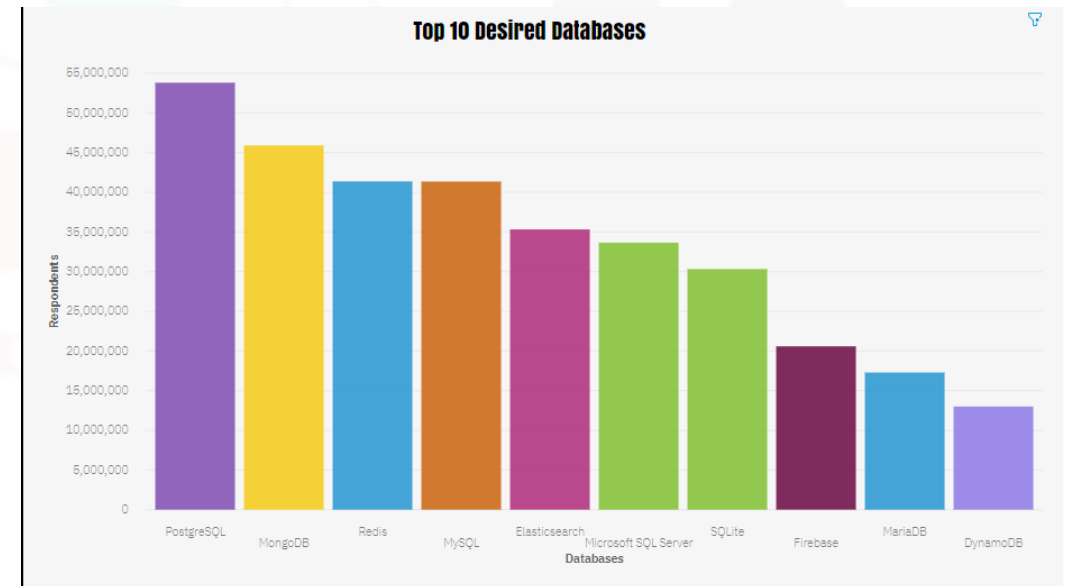
- Jobs that needs an expertise in Python will have an influx of applicants.
- Both C++ and PHP will slightly lose their place in the top languages.

DATABASE TRENDS

Current Year



Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- There are no new database that emerged in the top databases.
- Redis and MongoDB grew in popularity and has developers wanting to learn them.
- MySQL stumbled and has lost its top place and has been replaced by PostgreSQL

Implications

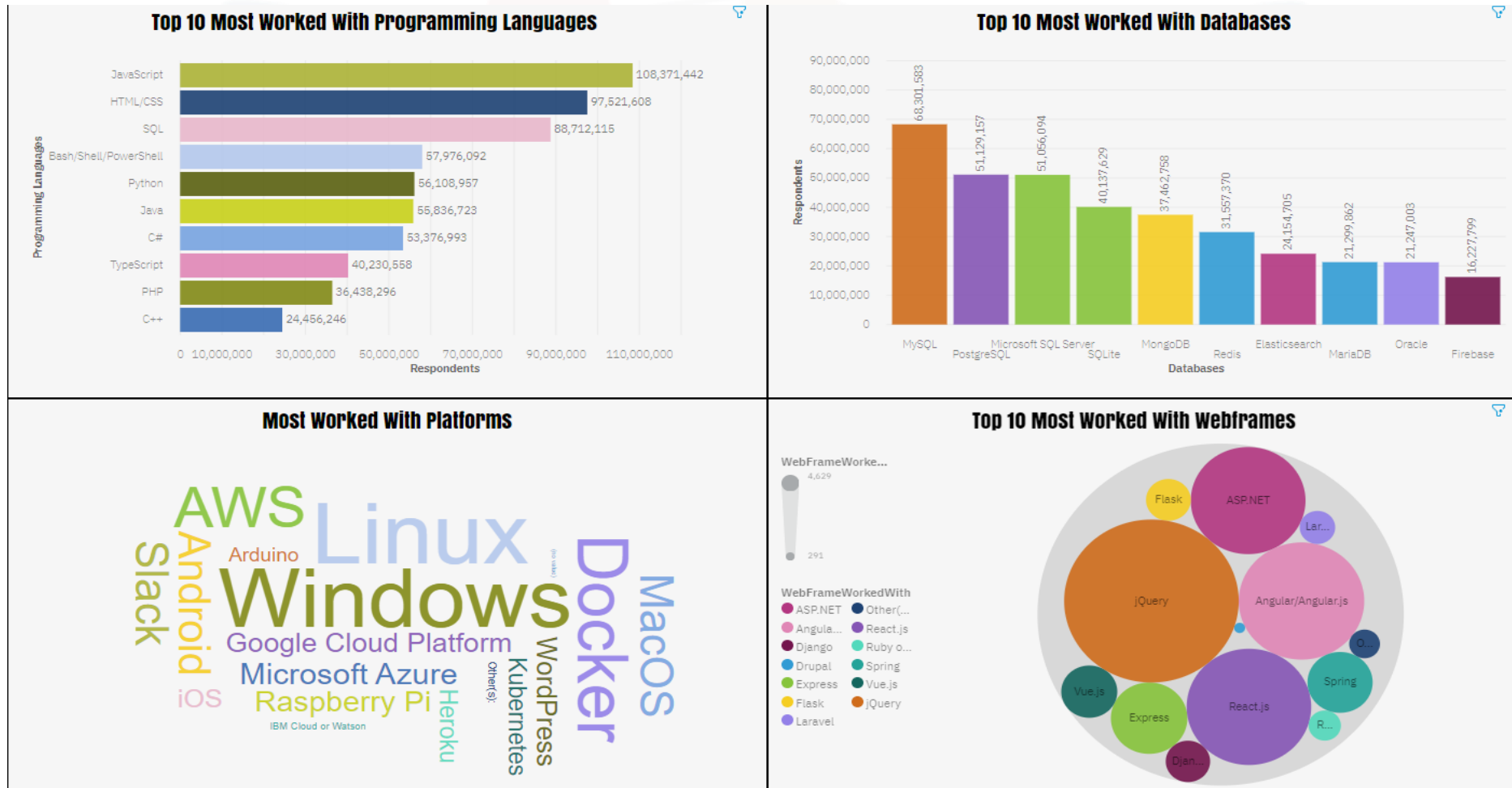
- SQLite and Microsoft SQL Server will slightly lose their ground as other databases have outgrown them in terms of interest.
- PostgreSQL will most likely take the top along with MongoDB and Redis.

DASHBOARD

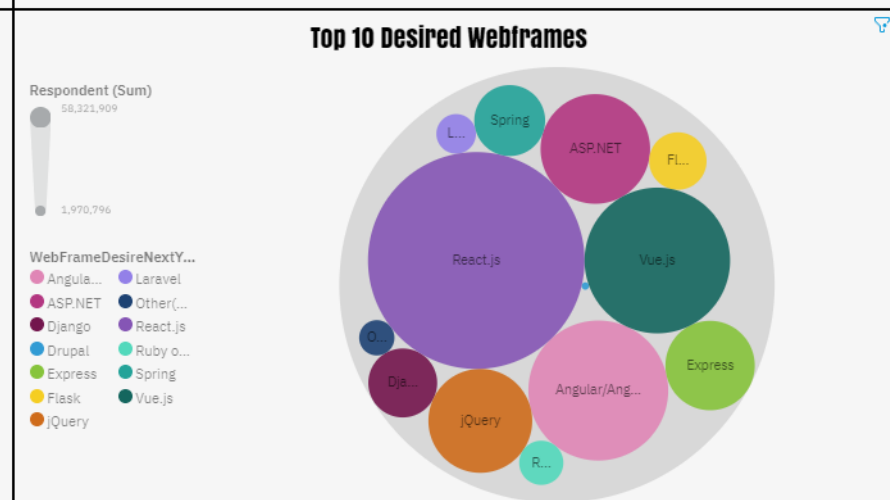
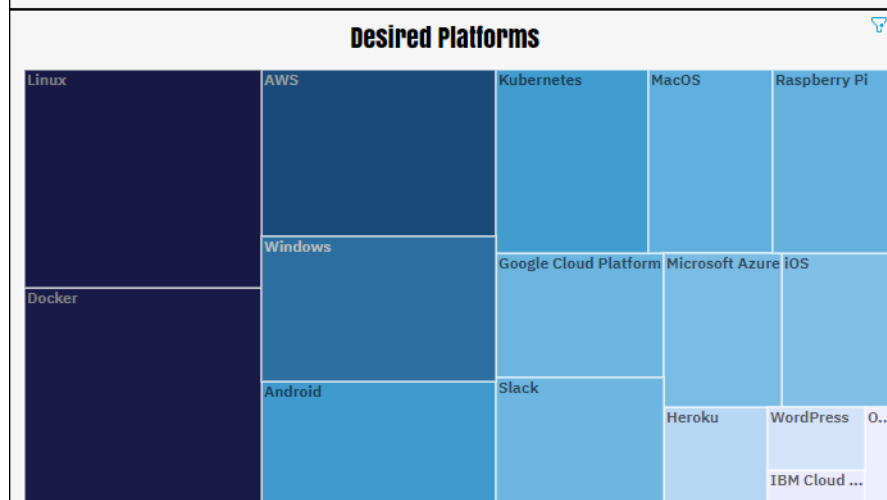
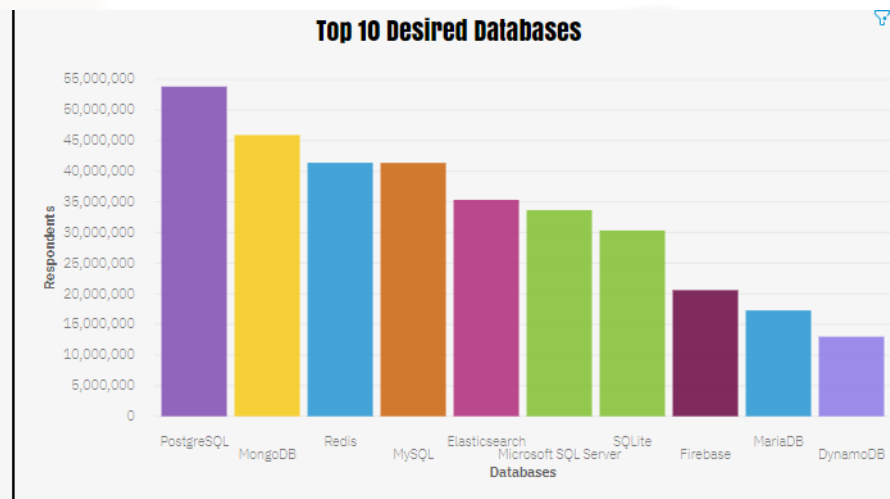
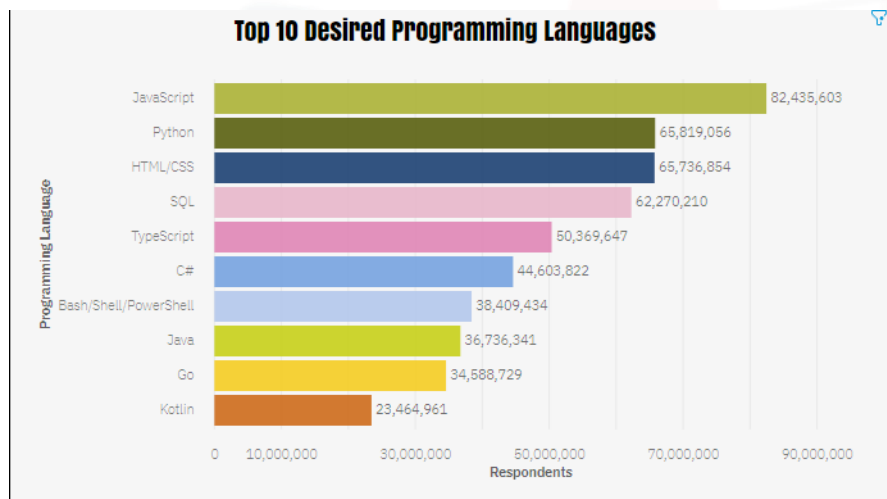


<https://datapatform.cloud.ibm.com/dashboards/fe11d4f7-94ac-4d79-bfd0-59cc8394a805/view/417bf8363eab38e14ee1eee4079f29557f612d08b4bbd603878c7b490e332397a8684594c87a4a58da155362a7b81a5098>

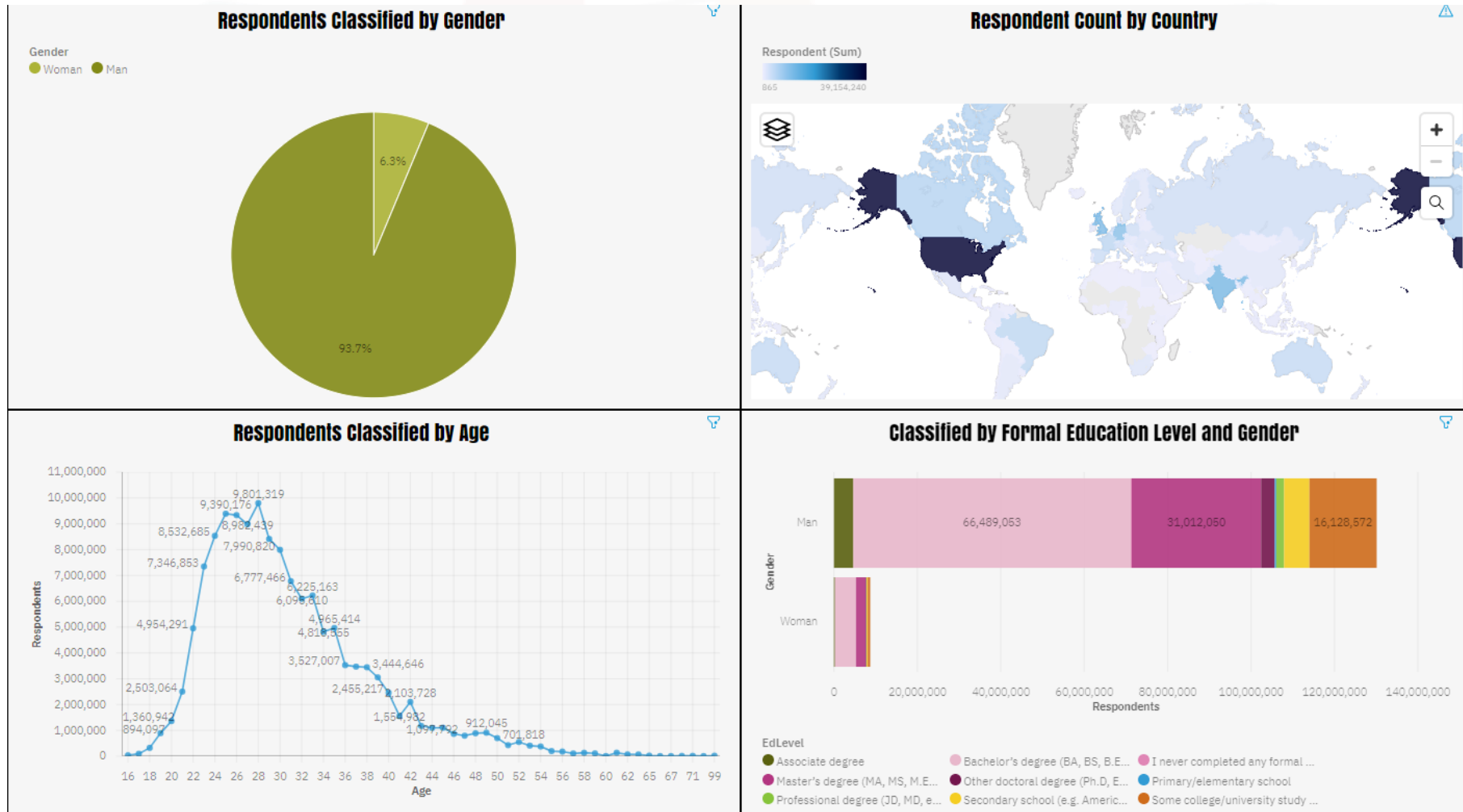
Current Technology Usage



Future Technology Trends



Demographics



DISCUSSION



- The previous screenshots were a representation of the dashboards created using the data in the Developer Survey. These dashboards visualize the top programming languages, databases, webframes and platforms that are currently in trend in the market. It also visualizes the possible trend in the following year.

OVERALL FINDINGS & IMPLICATIONS

Findings

- The survey consists of mostly males and only almost 10% of the respondents are females.
- Most of the respondents are 22 – 30 years old.
- JavaScript remains to be the top programming language and Python is growing rapidly behind it.

Implications

- The coding industry will be dominated by men and women might have a hard time going into it.
- Python-related jobs will grow in popularity in the next year.

CONCLUSION

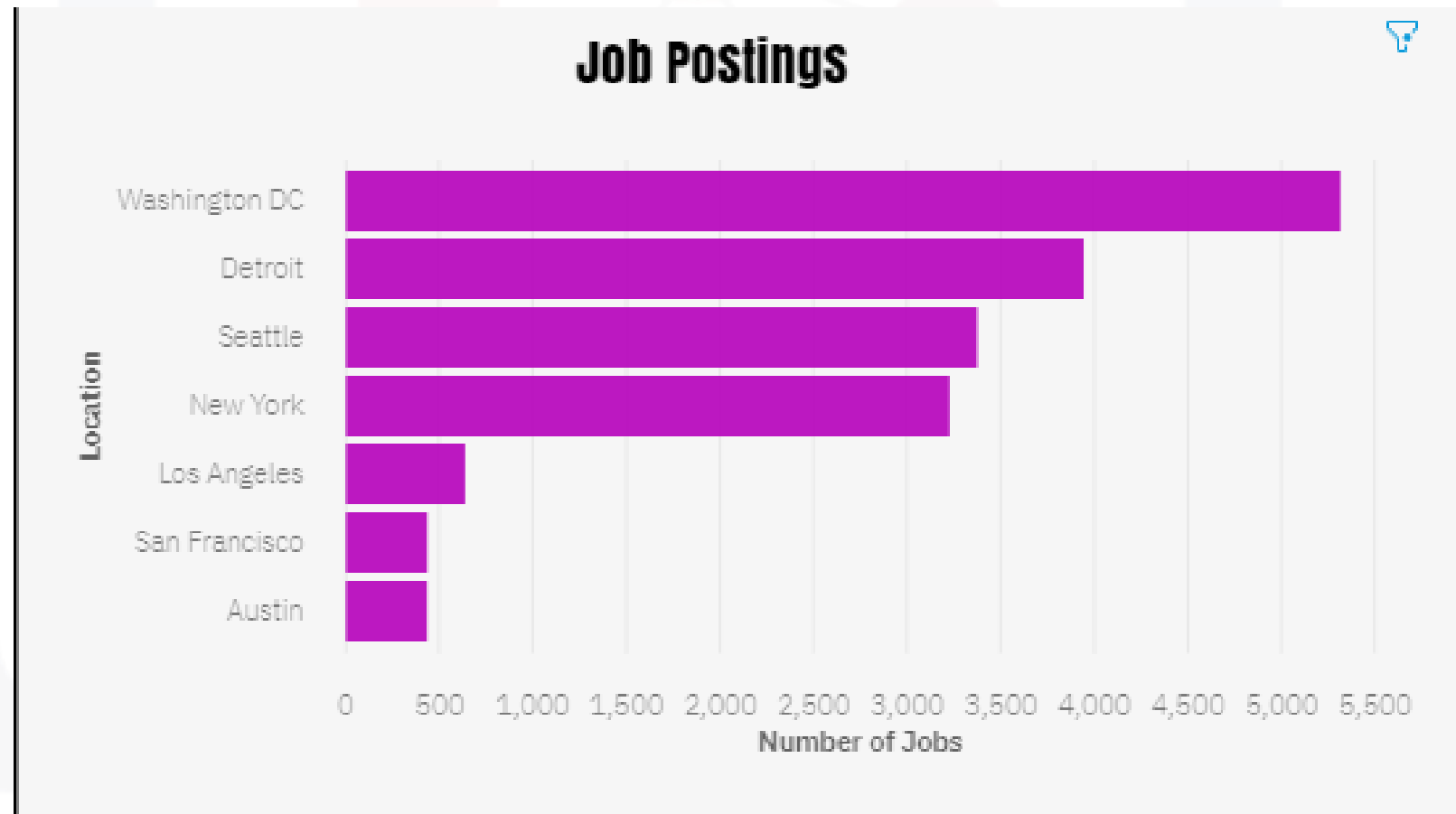


- Through this survey, the researchers came to know what are the trends and patterns that are currently happening in the market or industry.
- JavaScript has shown no signs of stopping in terms of people being interested to it.
- Python has taken the market by storm and has shown immense growth.
- Windows has been dethroned by Linux as the most desired platform to work at.

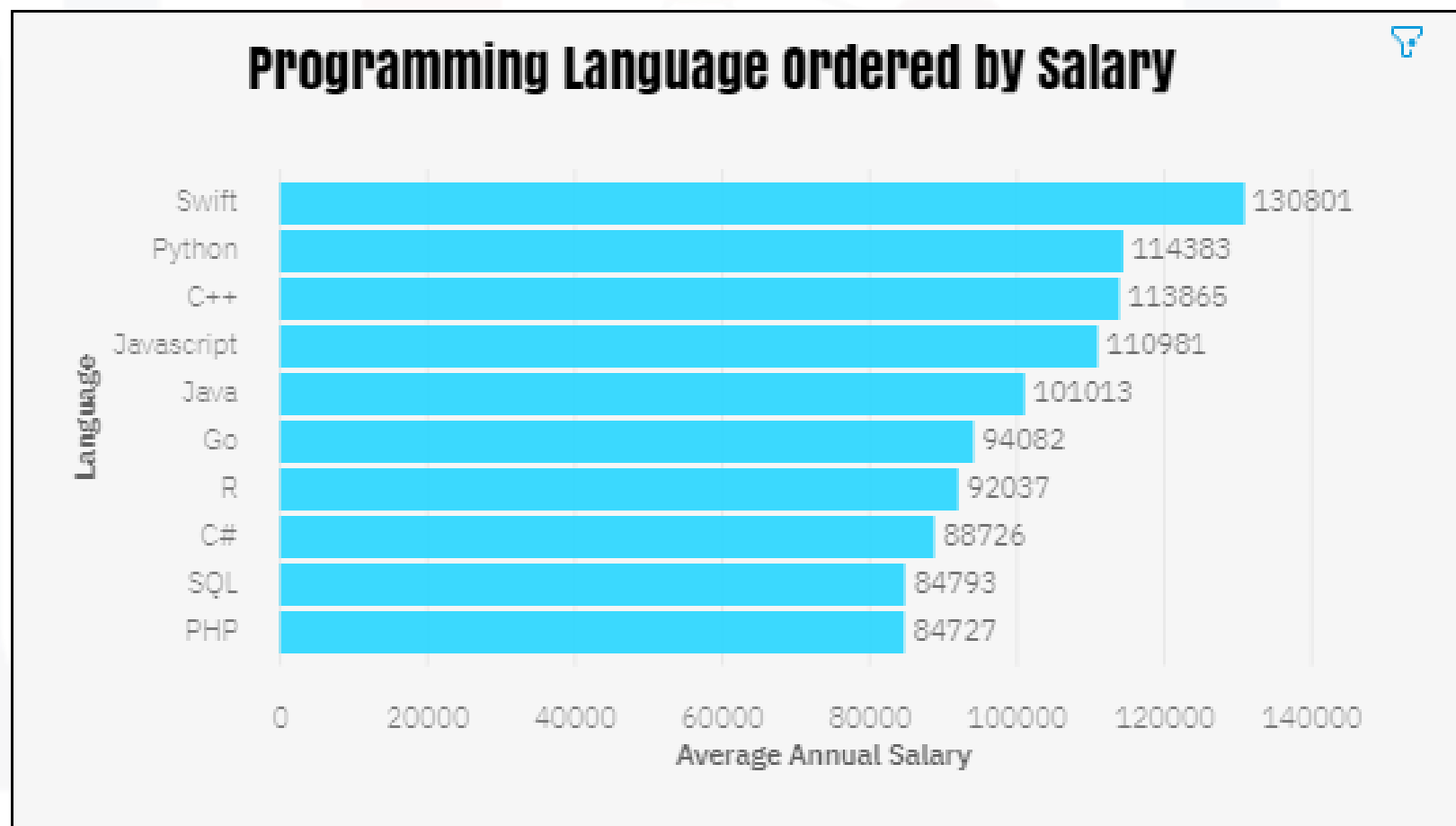
APPENDIX



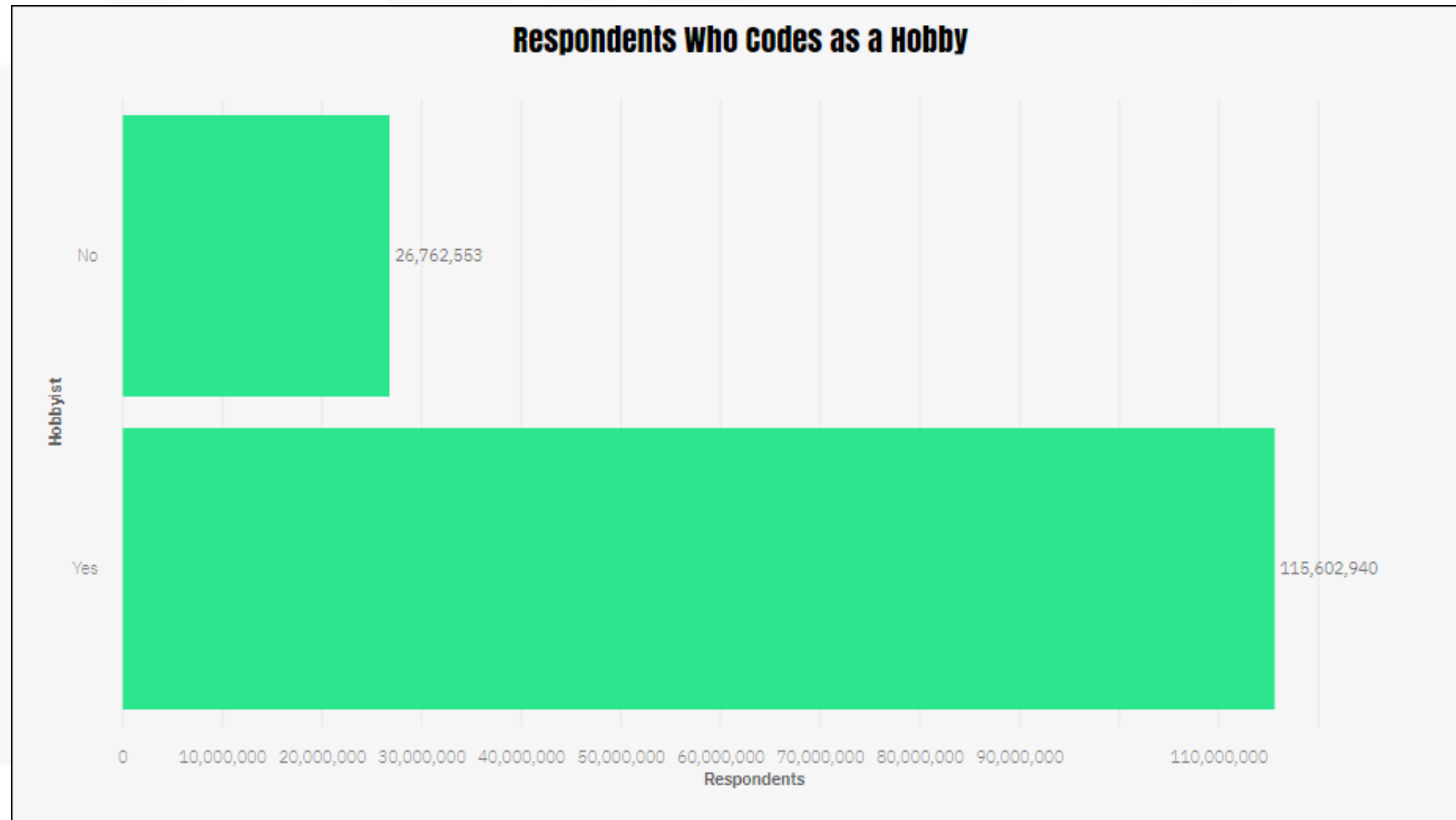
JOB POSTINGS



POPULAR LANGUAGES



HOBBYIST RESPONDENTS



UNDERGRAD MAJOR CLASSIFICATION

