



STACK OVERFLOW DEVELOPER SURVEY 2019

Mohit Jaisinghani

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<https://www.linkedin.com/in/mohitjaisinghani/>

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

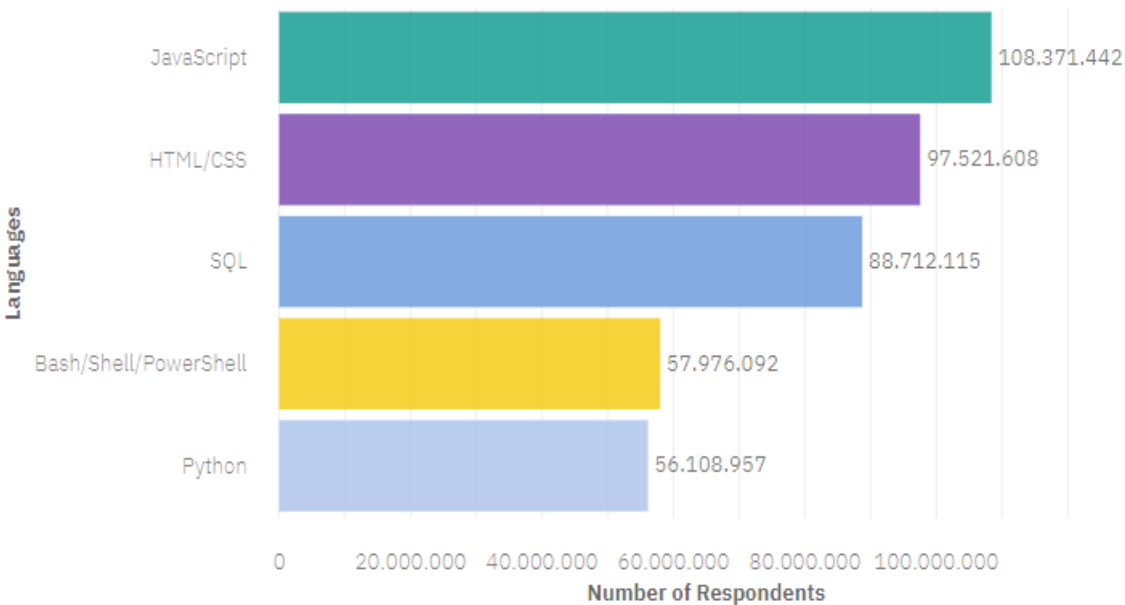


- Collect survey data & explore its content
 - Web Scraping
 - APIs.
 - Request library.
- Data Wrangling
- Exploratory data analysis
 - Analyzing data distribution.
 - Handling outliers.
 - Correlations.
- Data Visualization
 - Highlight distribution of data, relationships, the composition and comparison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

PROGRAMMING LANGUAGE TRENDS

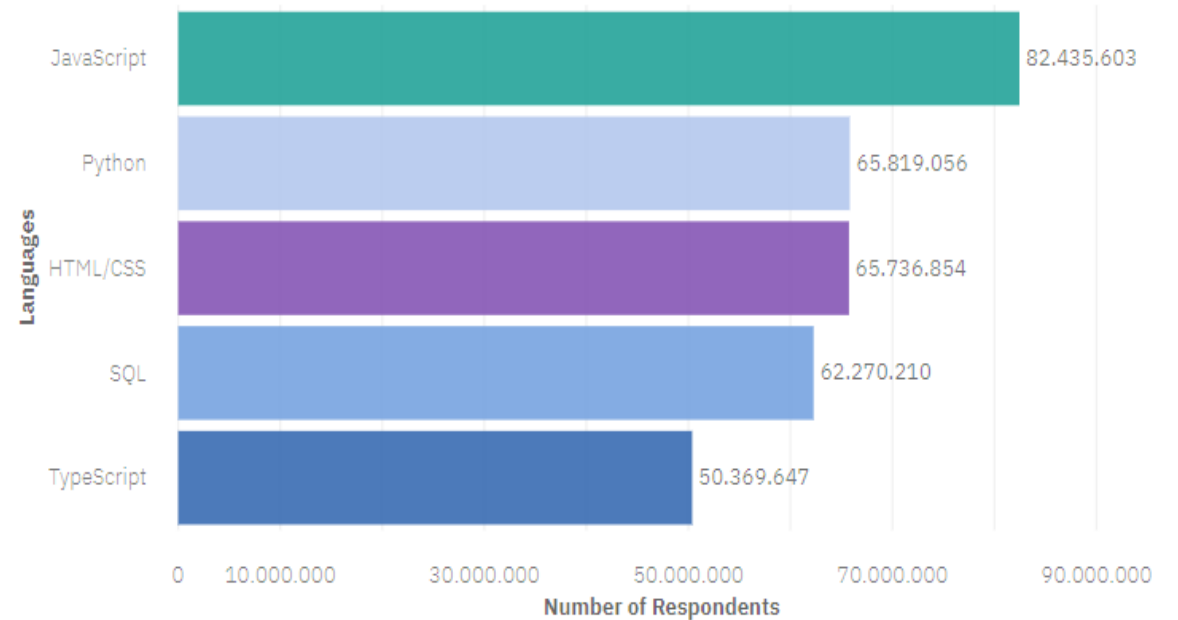
Current Year

Top 5 Programming Language Experience



Next Year

Top 5 Desired Language to Learn



PROGRAMMING LANGUAGE TRENDS – FINDINGS & IMPLICATIONS

Findings

- JavaScript is the most in demand programming language.
- Python, HTML/CSS, and SQL are other in demand programming languages.
- Skills in TypeScript is more desirable than Bash/Shell/PowerShell for next year.

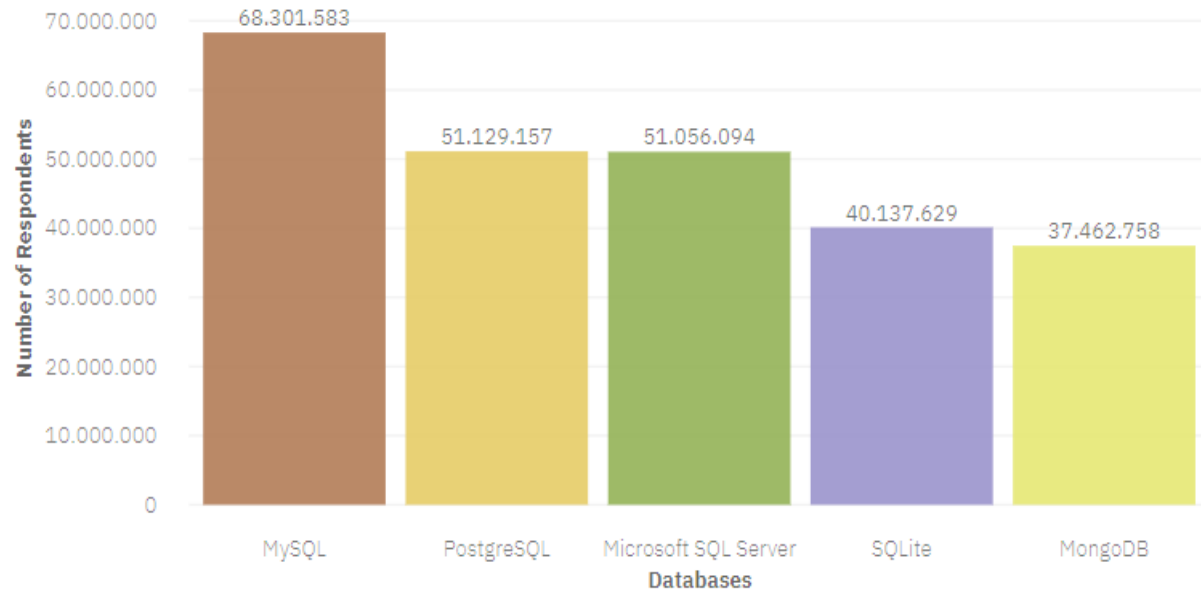
Implications

- Python's increase in demand may overtake JavaScript in the future.
- JavaScript, Python, HTML/CSS, and SQL are consistently in demand.
- Web development remains in high demand.

DATABASE TRENDS

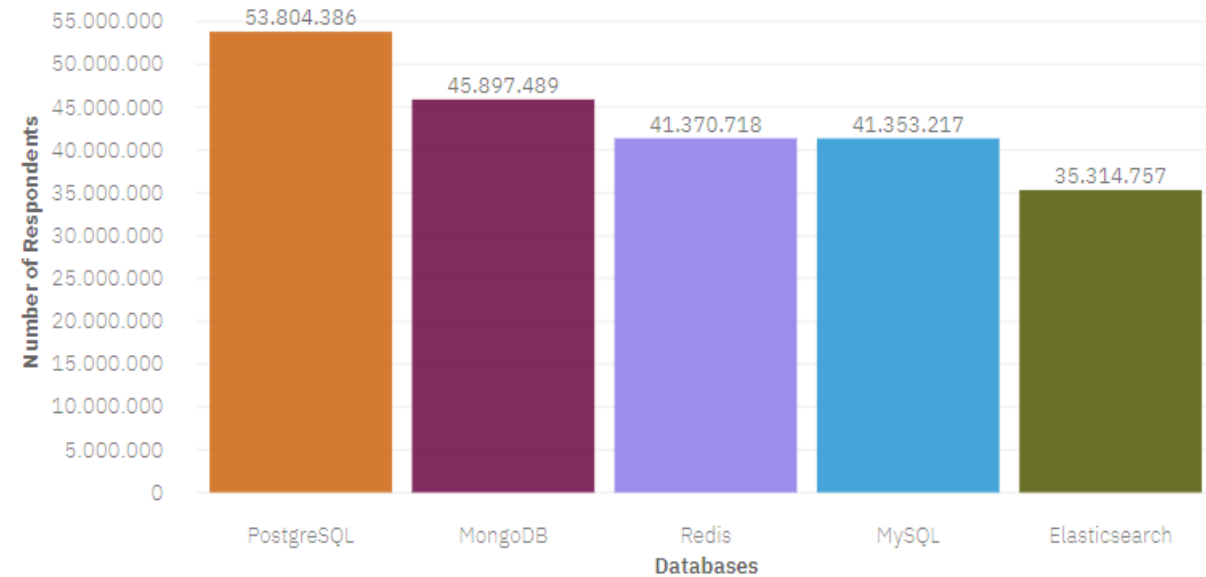
Current Year

Top 5 Databases Worked with



Next Year

Top 5 Desired Database to Learn



DATABASE TRENDS – FINDINGS & IMPLICATIONS

Findings

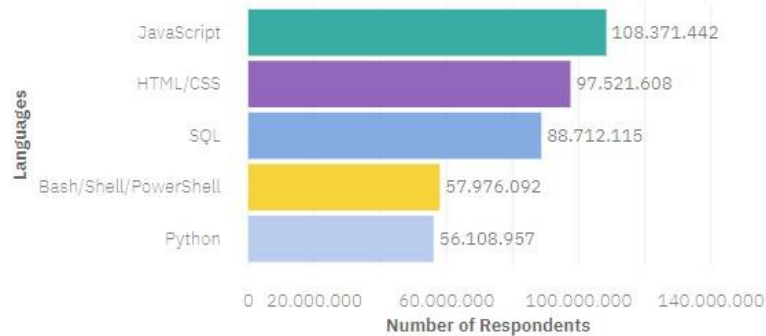
- MySQL as most used database.
- Skills in Redis and ElasticSearch are more desirable than Microsoft SQL Server and SQLite for next year.
- Increasing interest in PostgreSQL and MongoDB.

Implications

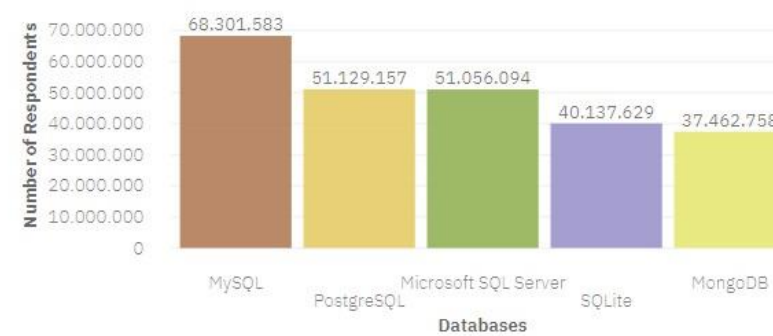
- Microsoft SQL Server and SQLite losing ground in the market.
- PostgreSQL and MongoDB have an establishment in the market.

CURRENT TECHNOLOGY USAGE

Top 5 Programming Language Experience



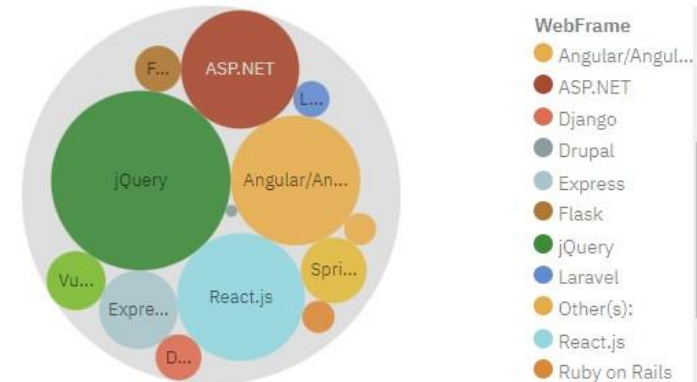
Top 5 Databases Worked with



Platforms Interacted

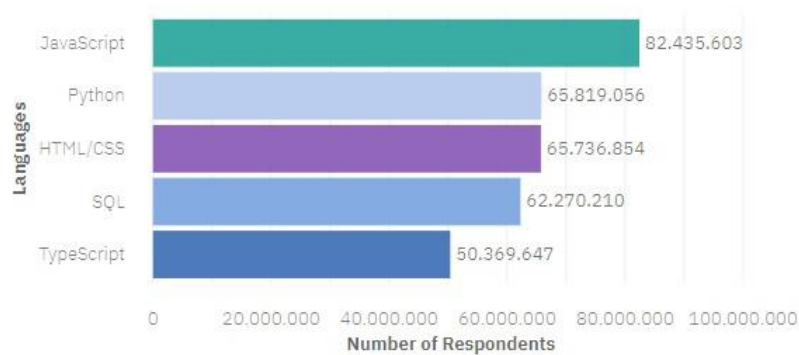


Top 10 WebFrames Used

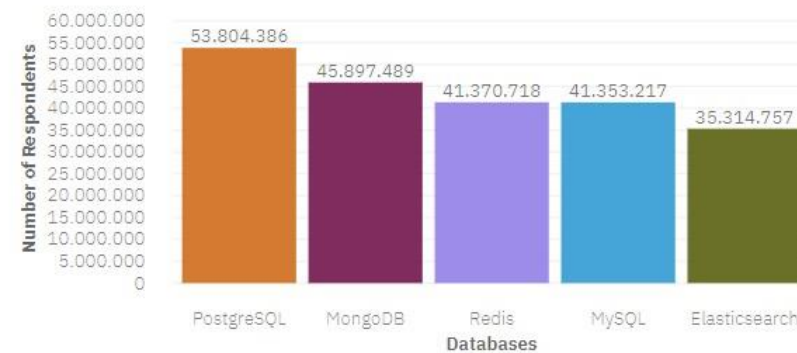


FUTURE TECHNOLOGY TREND

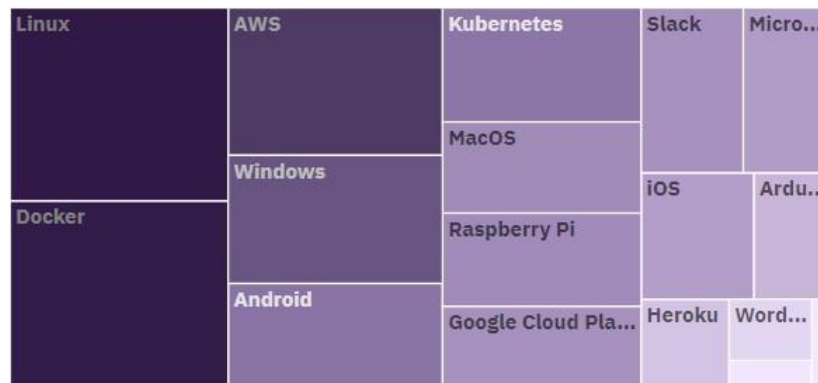
Top 5 Desired Language to Learn



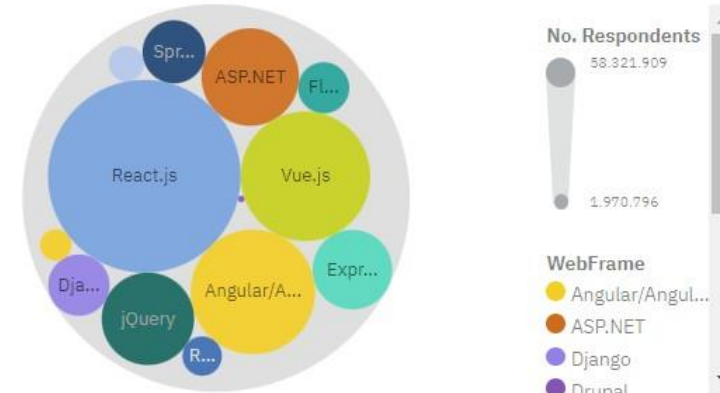
Top 5 Desired Database to Learn



Platform Next Year

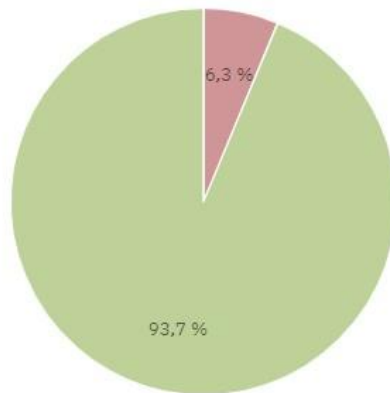


Top 10 WebFrame Next Year



DEMOGRAPHICS

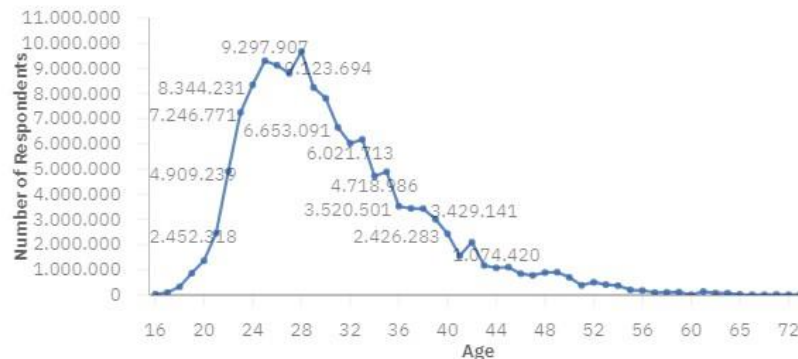
Respondent by Gender



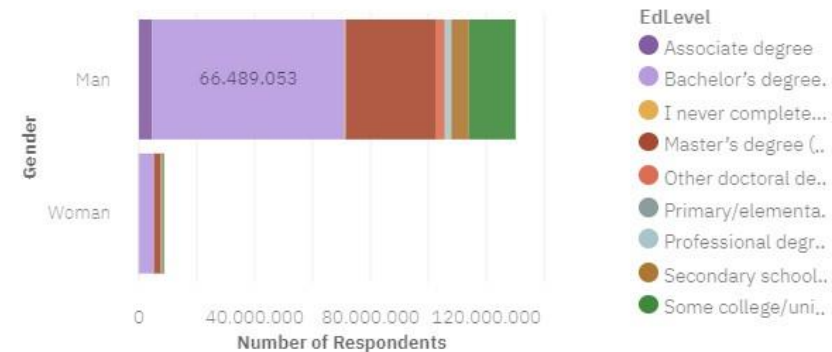
Respondent Locations



Respondent by Age



Formal Education Level / Gender



DISCUSSION



- Technology Trends Now & Future
- Desired Database Management Systems & Programming Languages to Learn
- There is a job to be done to spread accessibility of this labor market to countries in development.

OVERALL FINDINGS & IMPLICATIONS

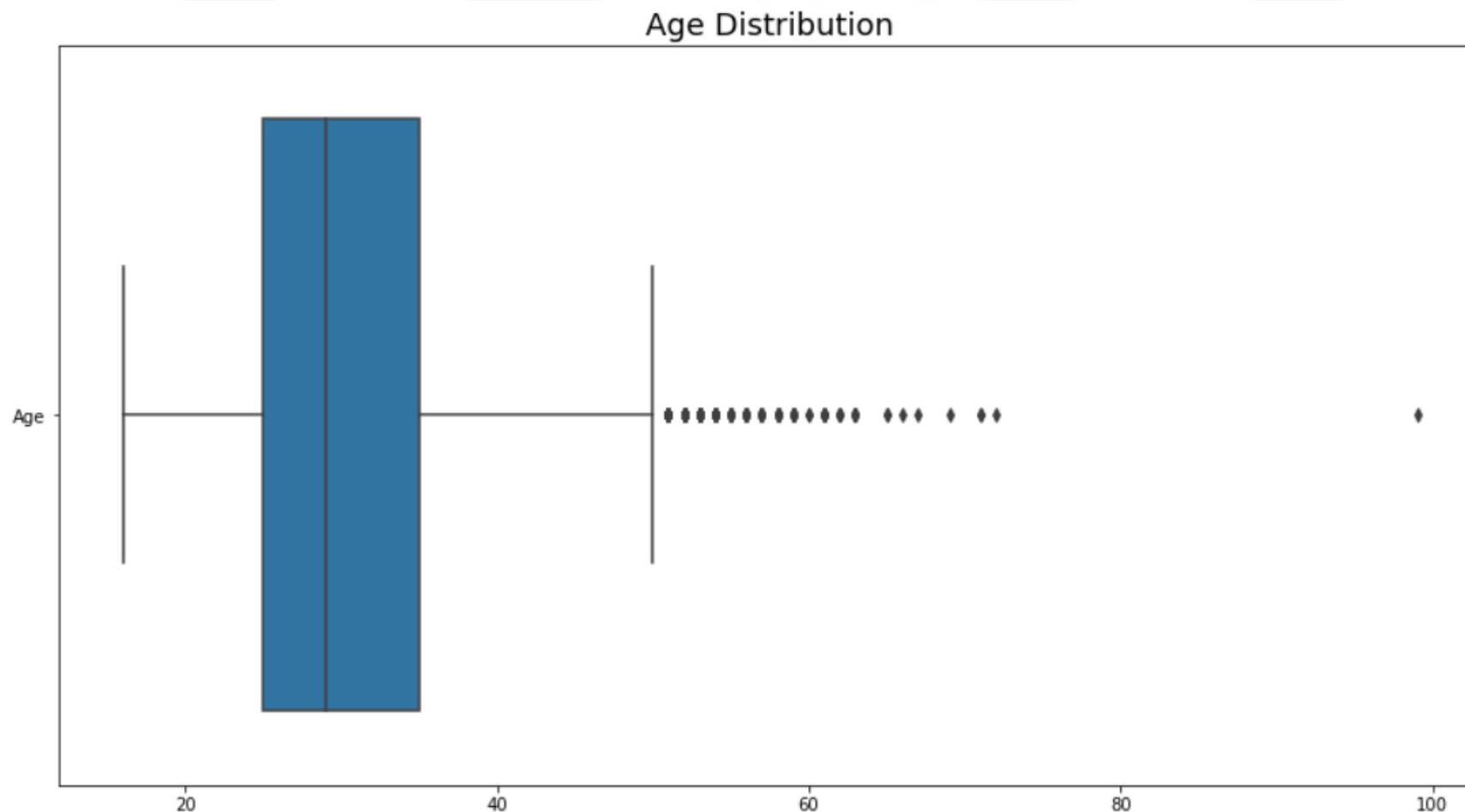
Findings

- JavaScript widely used and TypeScript getting popular.
- Over 90% young male developers.
- Developers mostly located in developed countries.

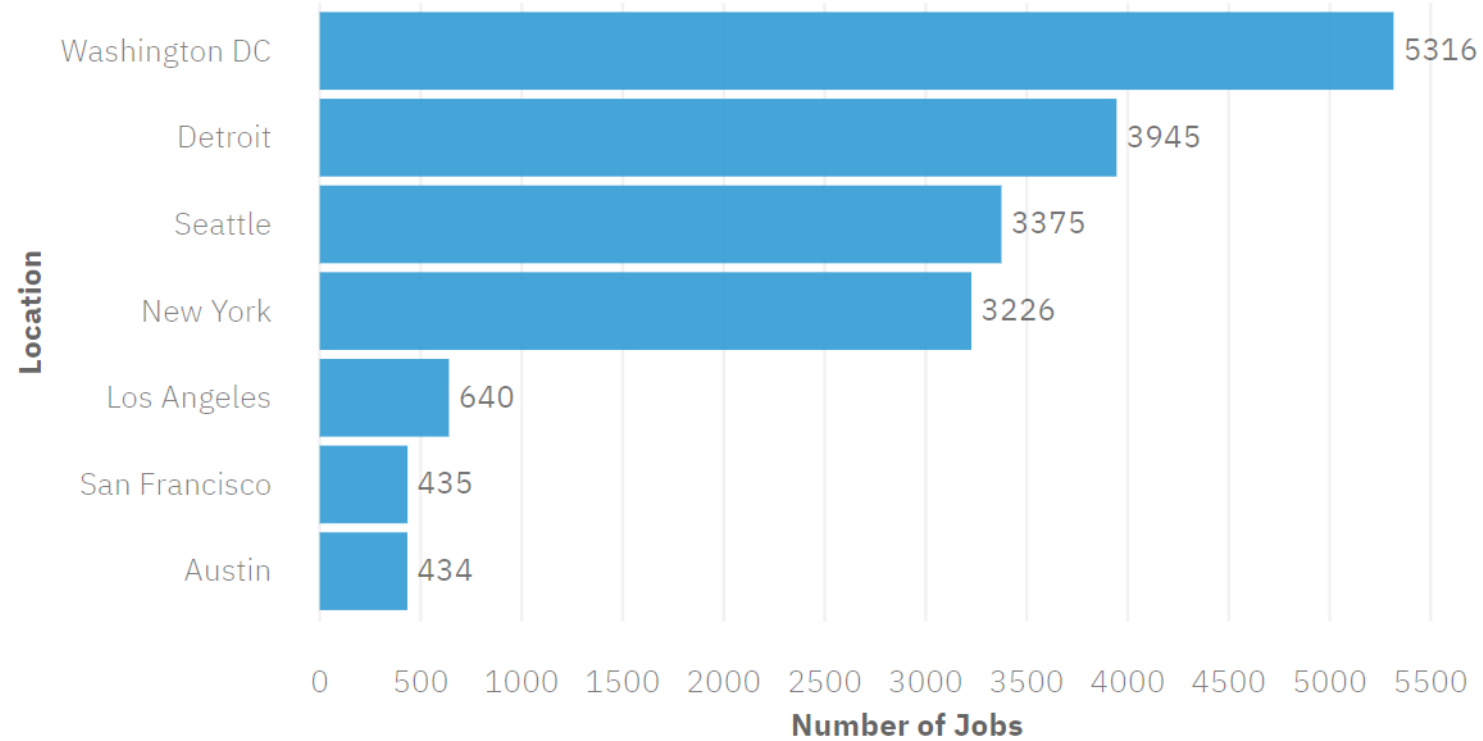
Implications

- JavaScript and TypeScript web frames gaining followers.
- Global polarization of developers location and gender.
- Young developers without postgrad studies on its majority.

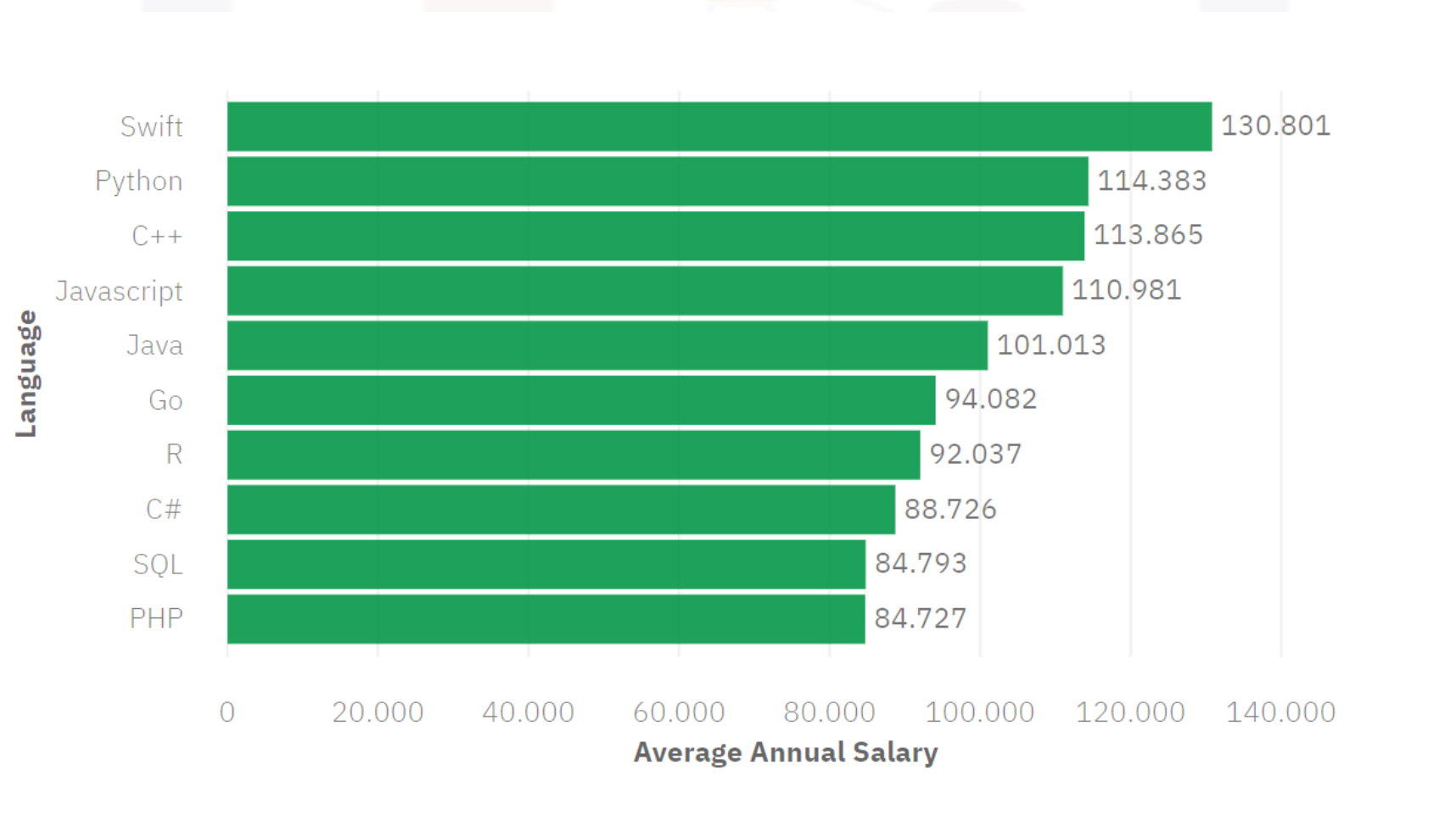
AGE DISTRIBUTION BOXPLOT



JOB POSTINGS



POPULAR LANGUAGES



CONCLUSION



- Developers are people with very marked characteristics.
- Java-script and Python will be among the most popularly used programming languages.
- There is a job to be done to spread accessibility of this labor market to countries in development.
- The IT industry needs to diversify.