



STACK OVERFLOW DEVELOPER SURVEY 2019

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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

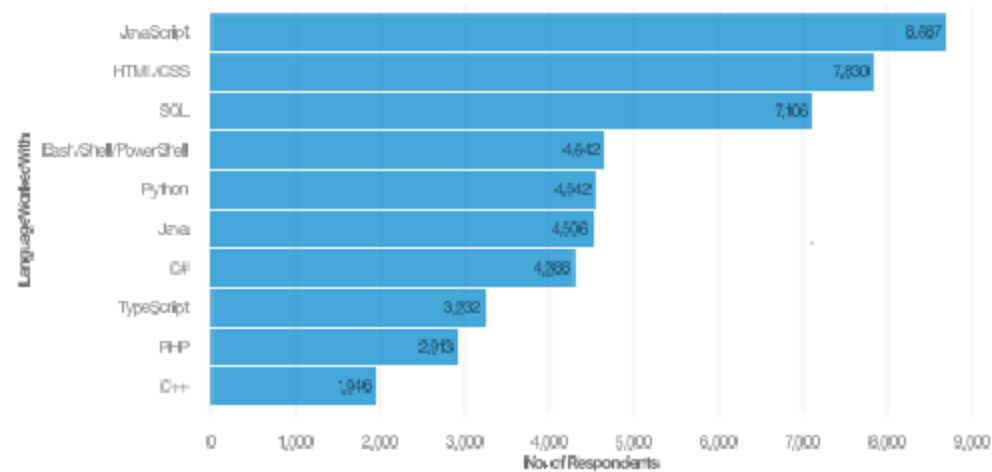
RESULTS



PROGRAMMING LANGUAGE TRENDS

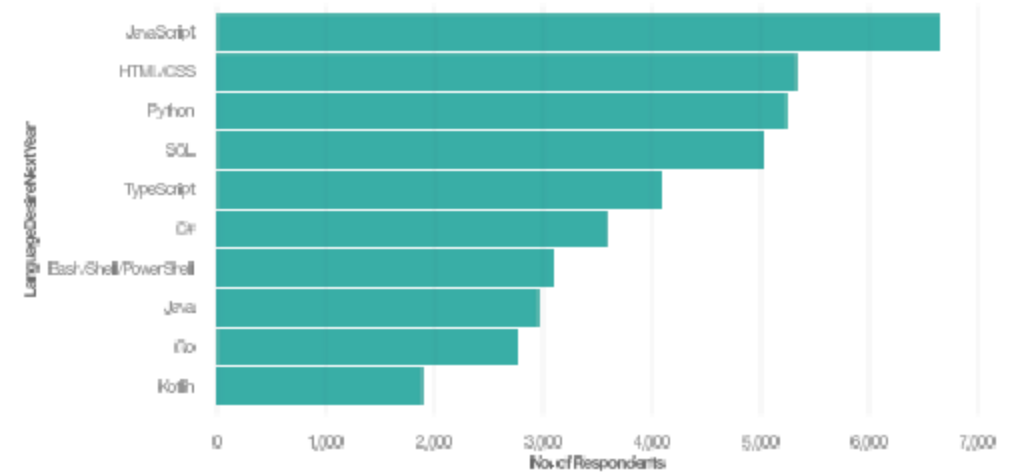
Current Year

Top 10 Language Worked With



Next Year

Top 10 Language Desire Next Year



PROGRAMMING LANGUAGE TRENDS – FINDINGS & IMPLICATIONS

Findings

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

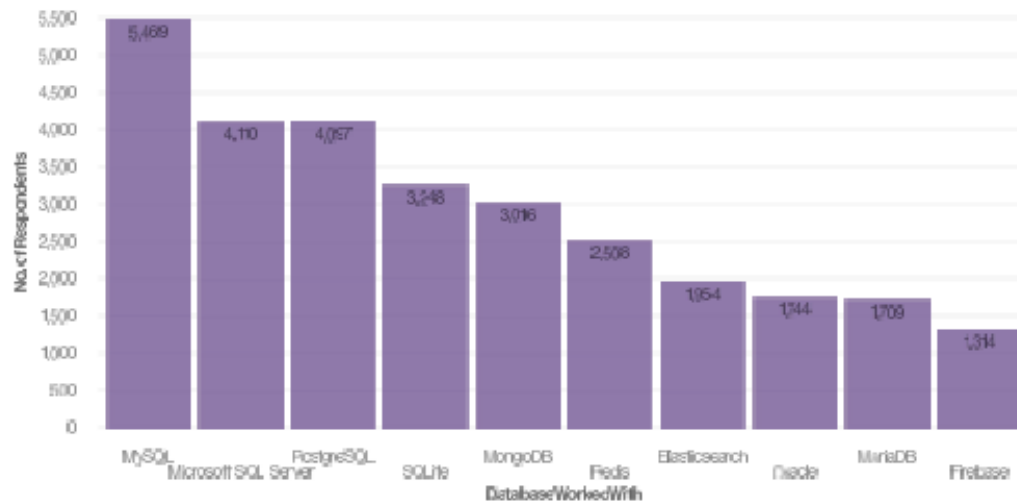
Implications

- Possible developers migration from JavaScript to TypeScript.
- Still growing interest in JavaScript.

DATABASE TRENDS

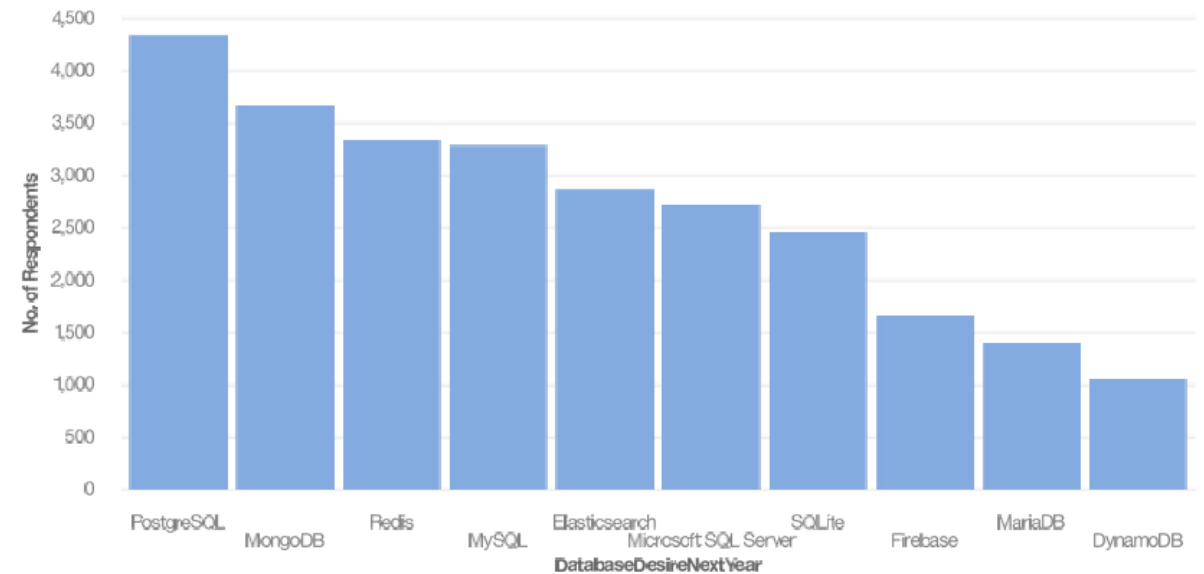
Current Year

Top 10 Database Worked With



Next Year

Top 10 Database Desire Next Year



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

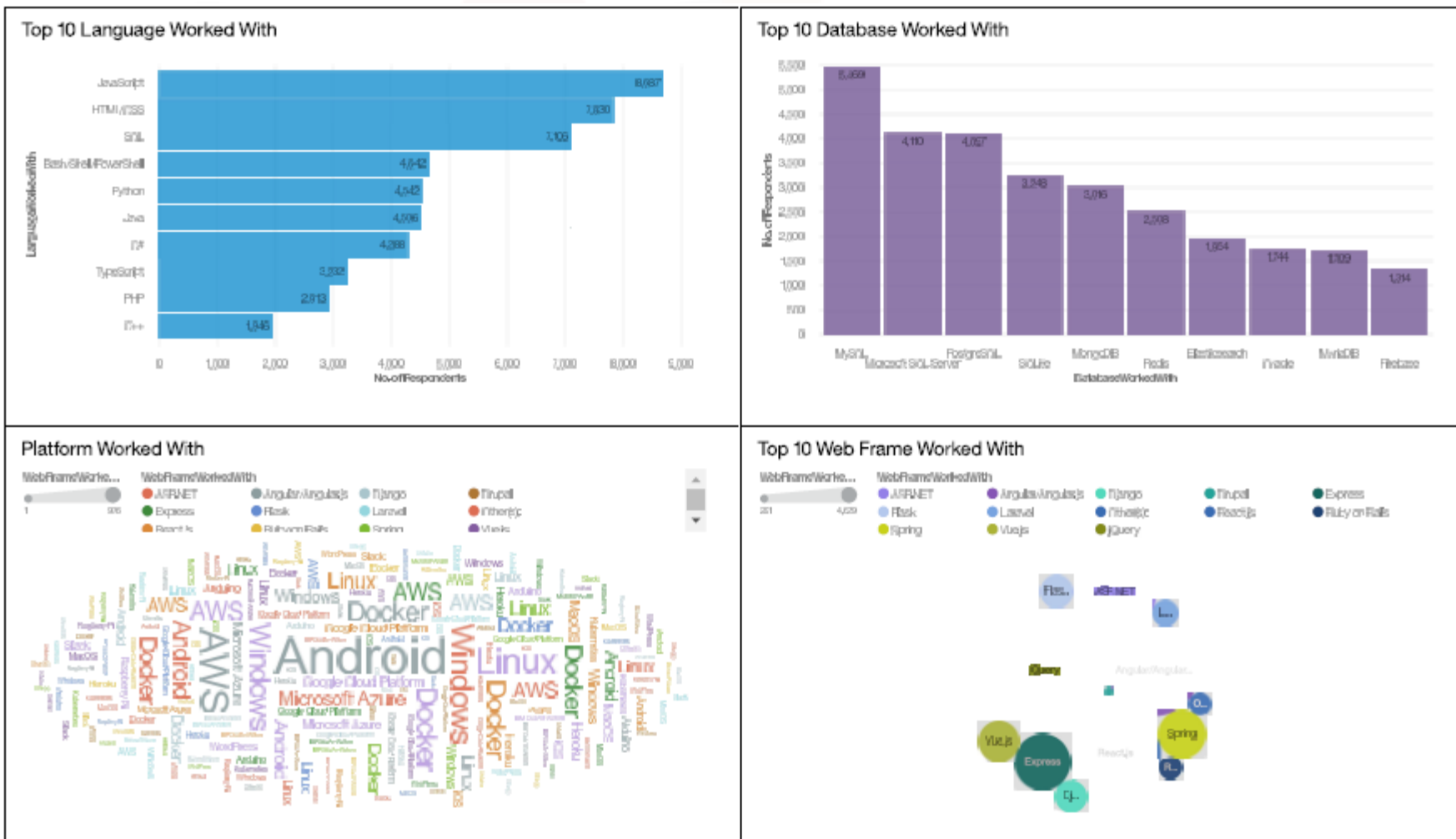
- Microsoft SQL Server and SQLite losing ground in the market.
- PostgreSQL and MongoDB establishment in the market.

DASHBOARD



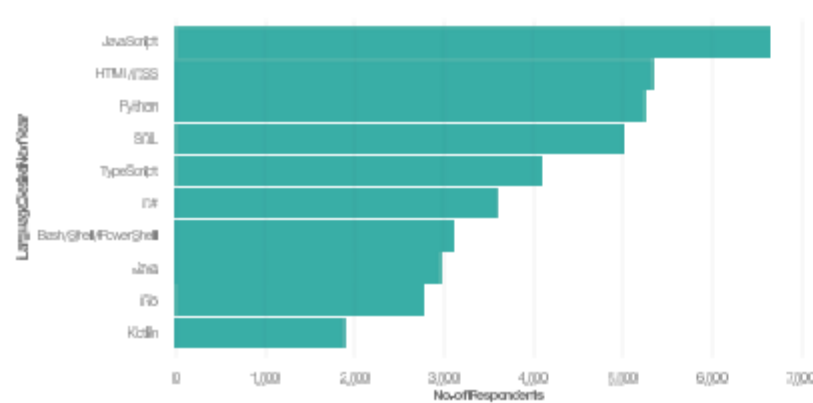
<https://github.com/Aye-Arshad/IBM-Data-Analyst-Capstone-Project>

CURRENT TECHNOLOGY USAGE

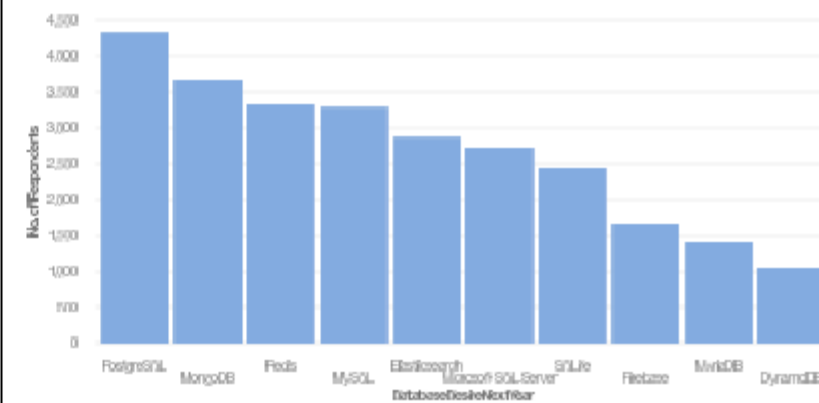


FUTURE TECHNOLOGY TREND

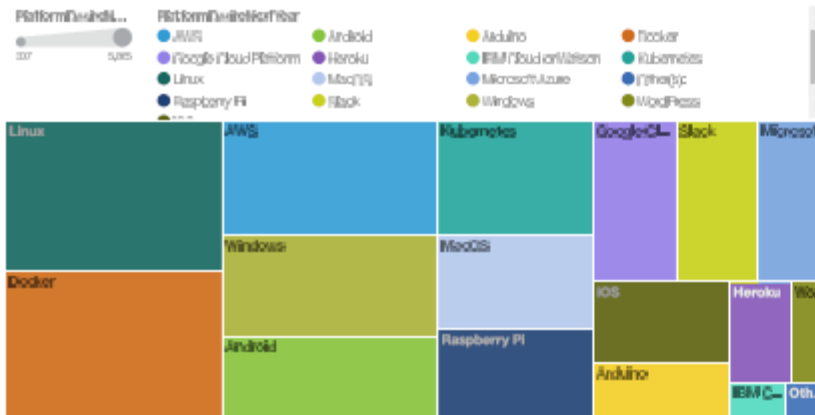
Top 10 Language Desire Next Year



Top 10 Database Desire Next Year



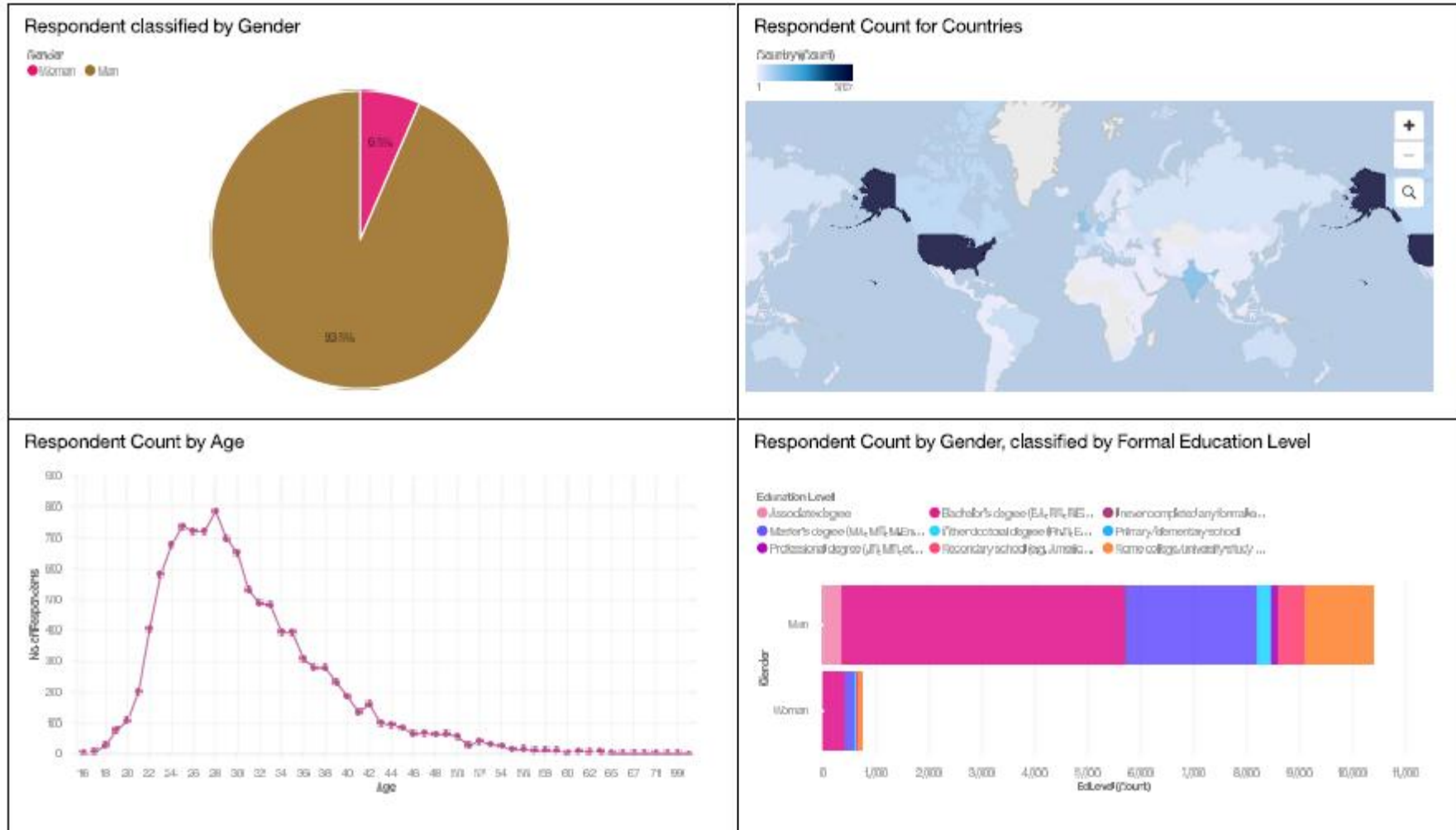
Platform Desire Next Year



Top 10 Web Frame Desire Next Year



DEMOGRAPHICS



DISCUSSION



- Certain languages are getting popular.
- Polarization of genders of developers.
- Developers mostly located in developed countries.

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.

Additional Insights

- **Diversity in Tech Leadership:**

With a demographic skew towards young males, there is an opportunity to actively promote diversity in tech leadership roles.

- **Evolving Skill-sets and Continuous Learning:**

Given the prevalence of JavaScript and TypeScript, developers need to prioritize ongoing learning to stay updated on evolving frameworks and technologies. This highlights the importance of a culture of continuous learning within the tech industry.

Additional Insights

- According to Google these are the top programming languages:

Top programming languages

From sources across the web



JavaScript



Python



Java



Ruby



Swift



Kotlin



Rust



TypeScript



Scala

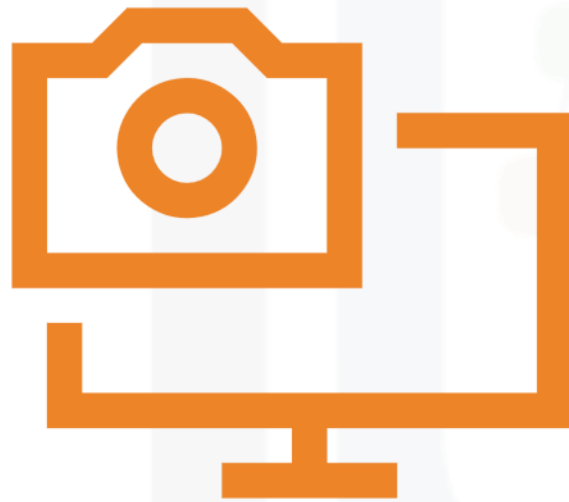


CONCLUSION



- 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.

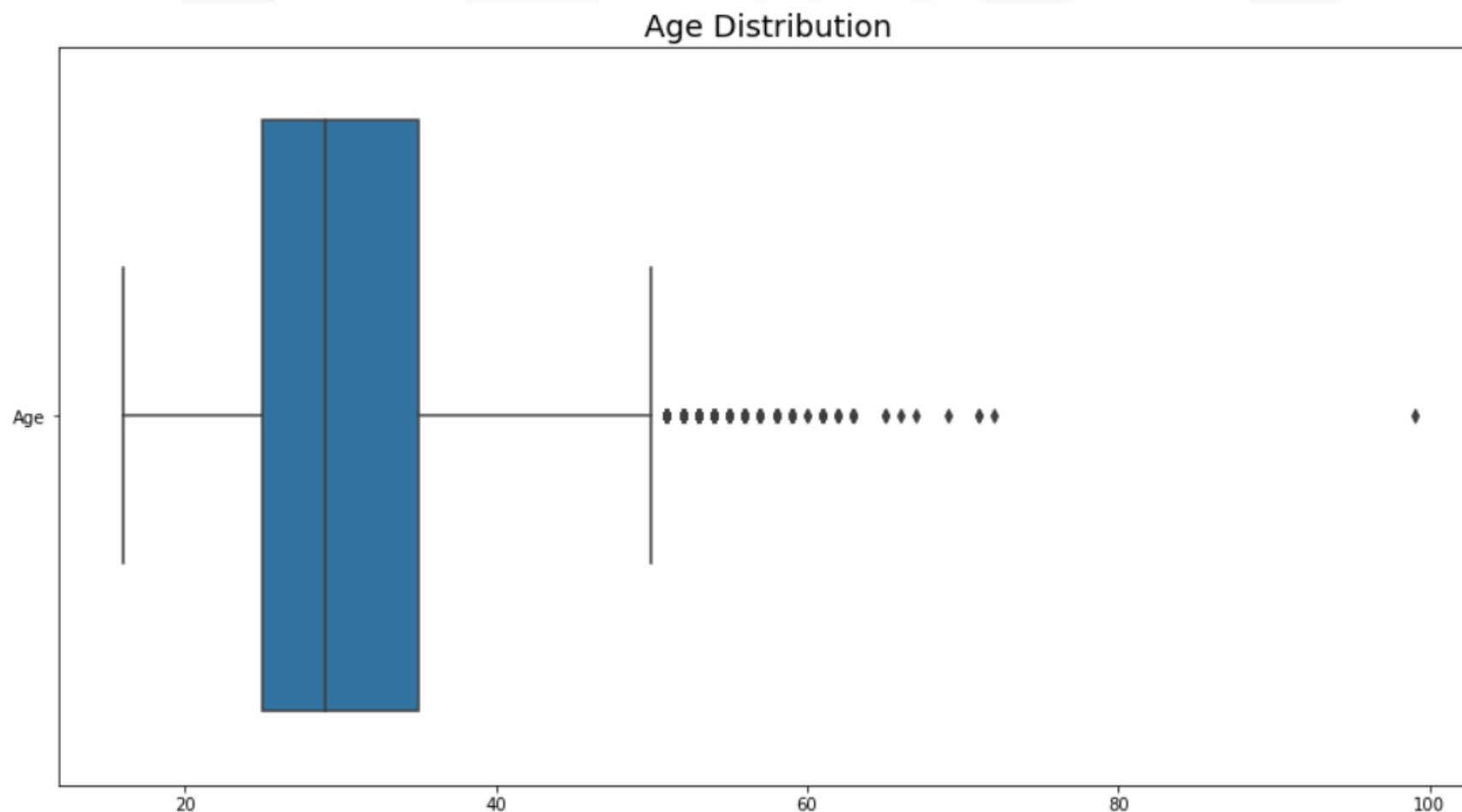
APPENDIX



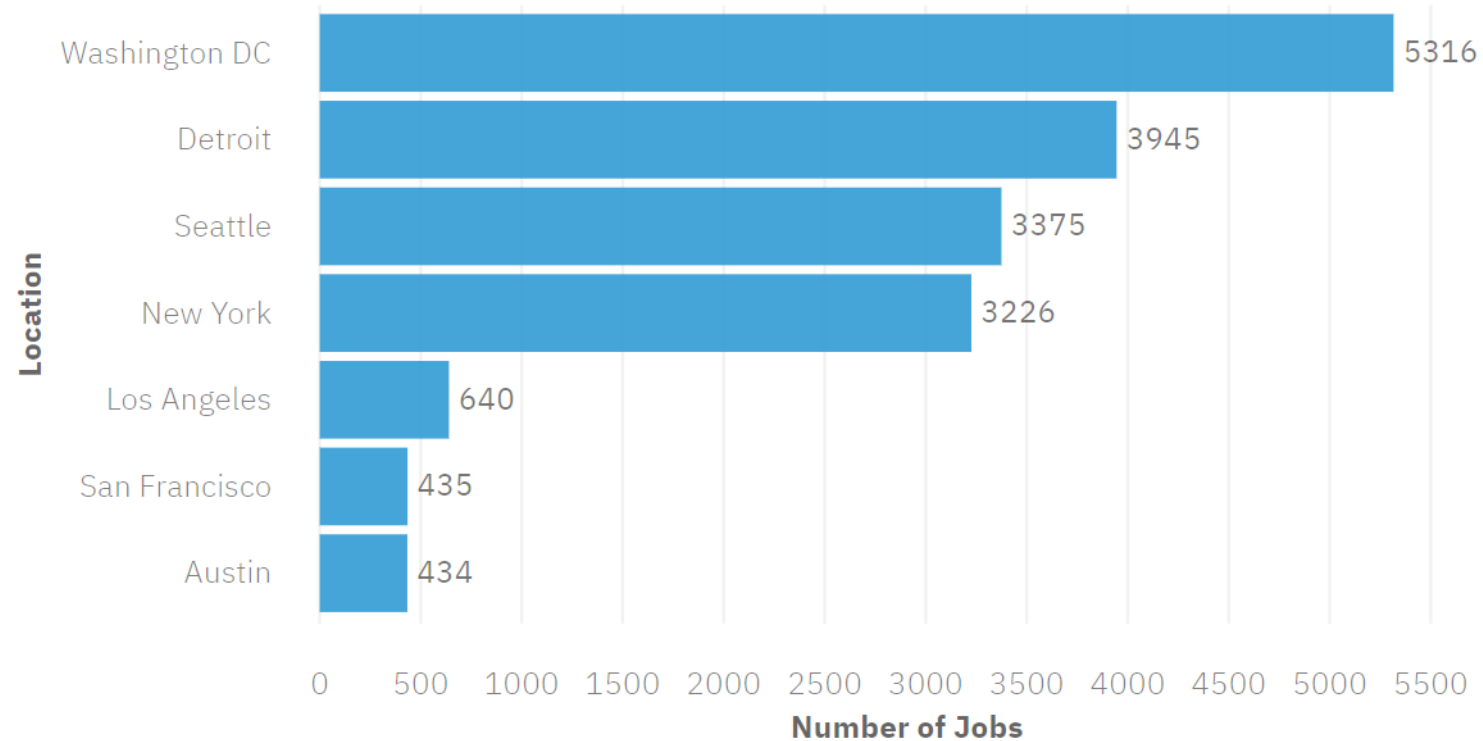
Top Programming Languages According to Google:

https://www.google.com/search?q=technology+trends+programming+language&oq=technology+trends+programming+language&gs_lcrp=EgZjaHJvbWUqBwgBECEYoAEyBggAEEUYOTIHCAEQIRigATIHCAIQIRigATIKCAMQIRgWGB0YHjIKCAQQIRgWGB0YHjIKCAUQIRgWGB0YHjIKCAYQIRgWGB0YHjIKCAcQIRgWGB0YHjIKCAGQIRgWGB0YHjIKCAkQIRgWGB0YHtIBCTEzMTE4ajBqNKgCALACAA&sourceid=chrome&ie=UTF-8

AGE DISTRIBUTION BOXPLOT



JOB POSTINGS



POPULAR LANGUAGES

