



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

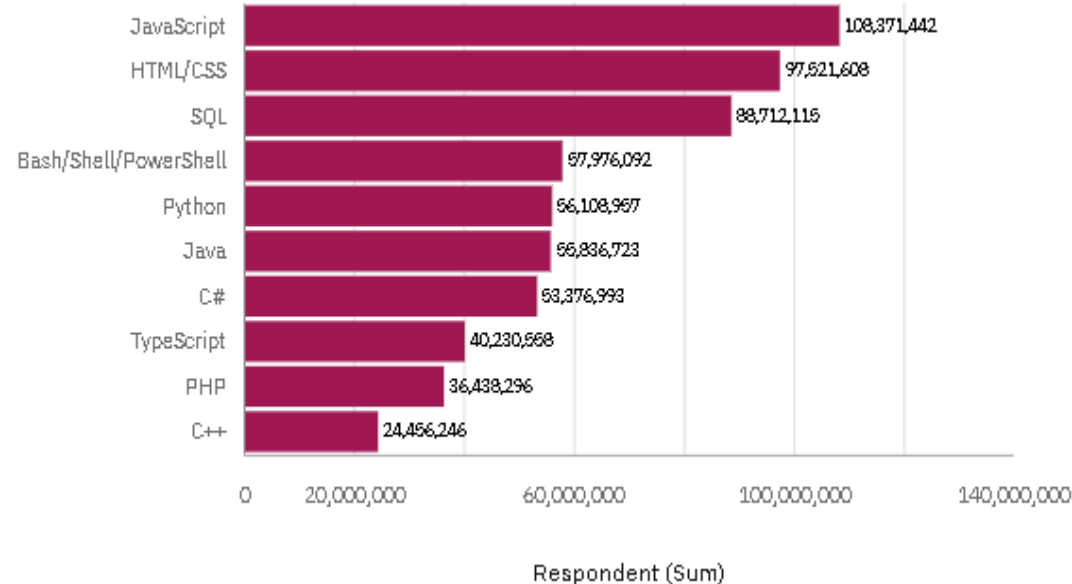


PROGRAMMING LANGUAGE TRENDS

Current Year

Top 10 programming languages

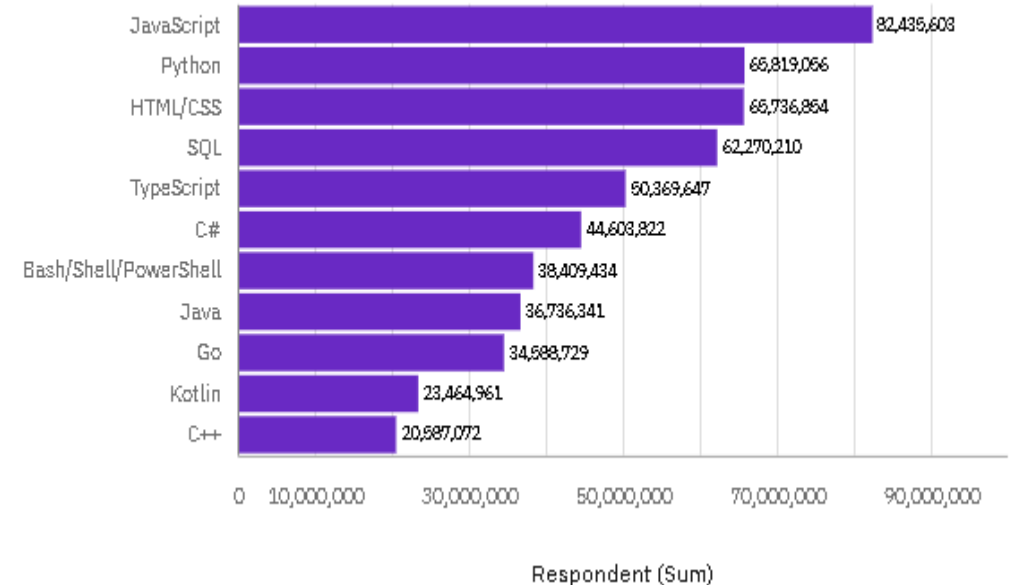
LanguageWorkedWith



Next Year

Top 10 LanguageDesireNextYear

LanguageDesireNextYear



PROGRAMMING LANGUAGE TRENDS – FINDINGS & IMPLICATIONS

Findings

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

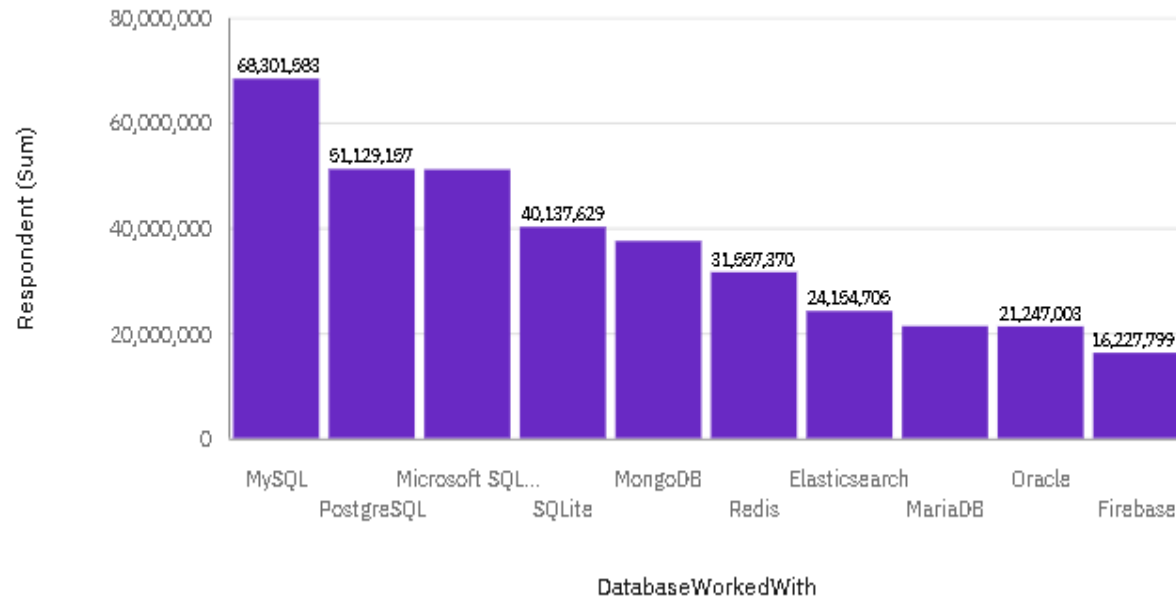
Implications

- Possible developers migration from JavaScript to TypeScript.
- Python language make a big impact in the field of programming language.

DATABASE TRENDS

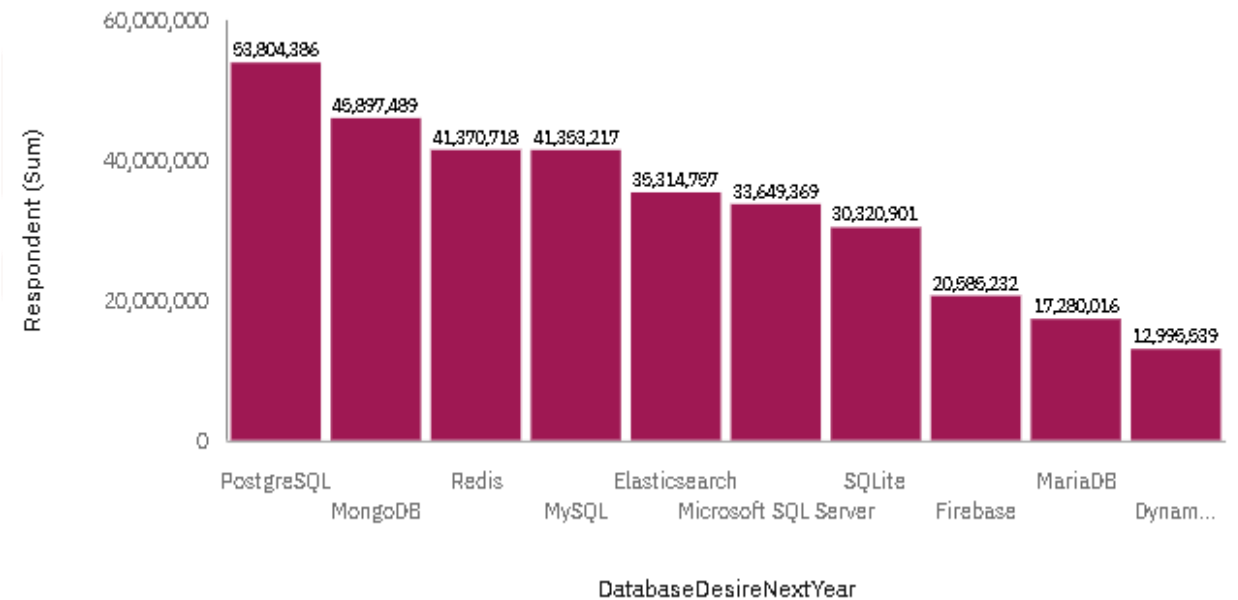
Current Year

Top 10 DatabaseWorkedWith



Next Year

Top 10 DatabaseDesireNextYear



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.

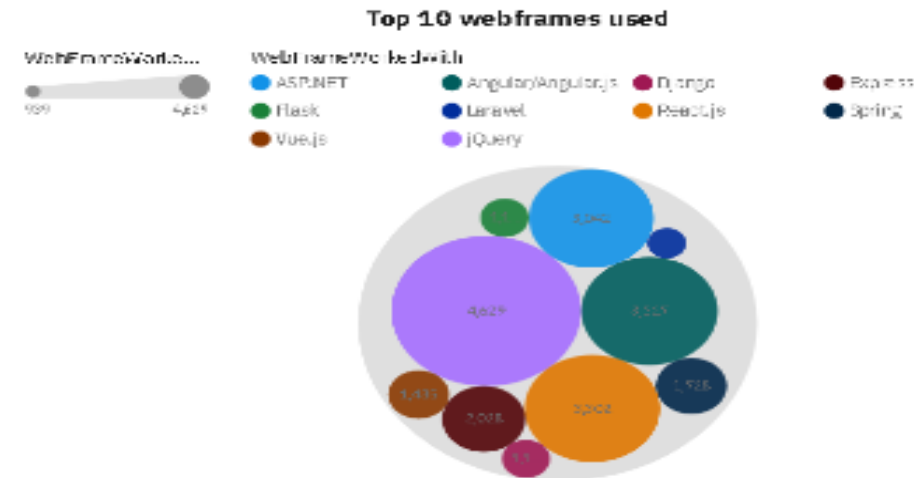
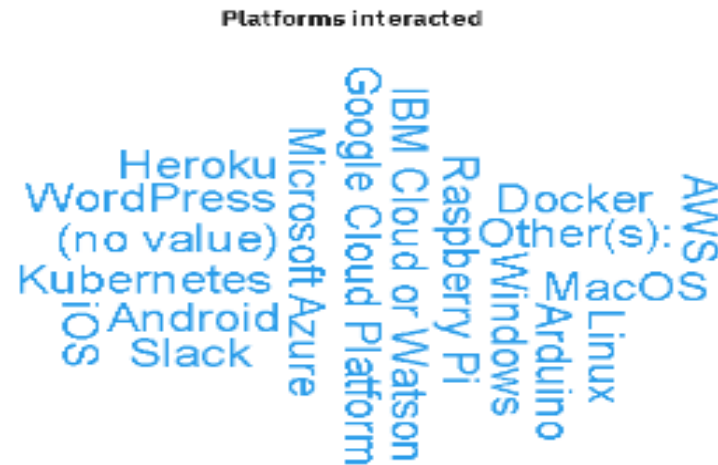
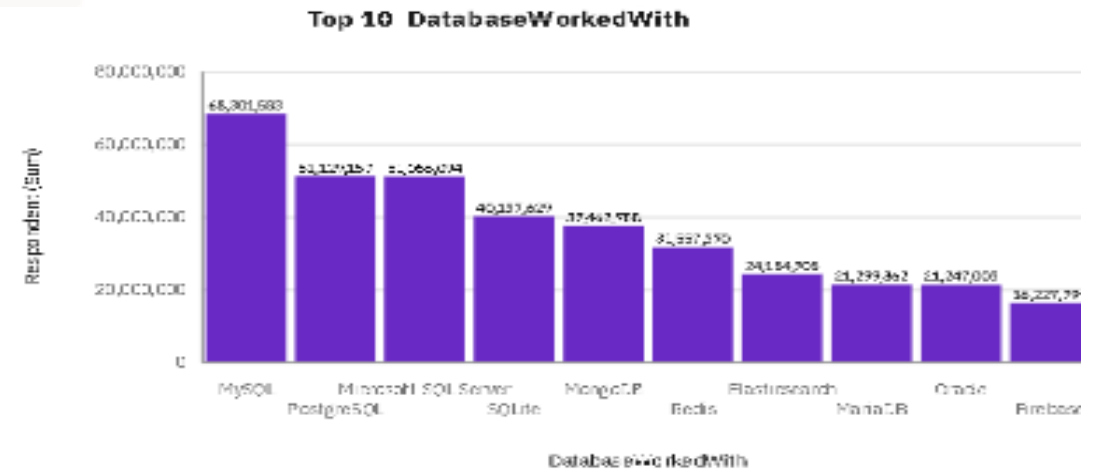
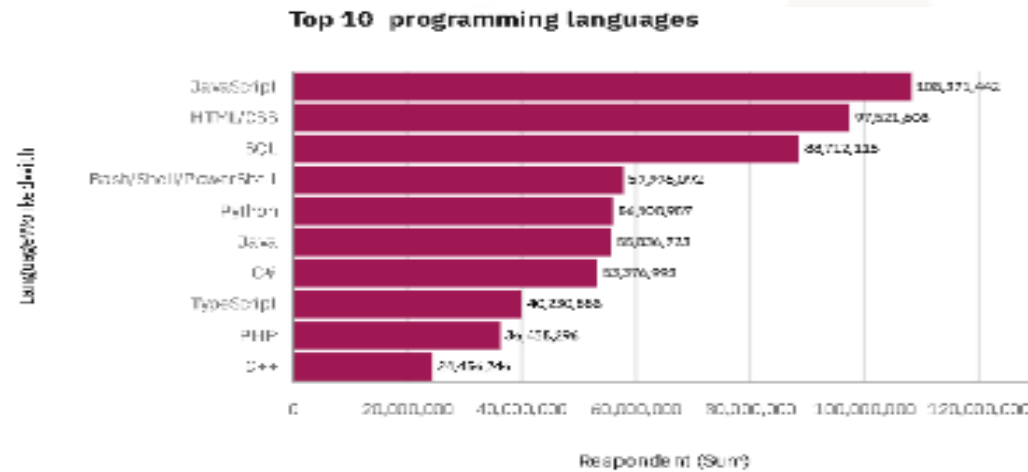
DASHBOARD



<https://github.com/Sandy50/testrepo/blob/fffca7113f3e20298b413c76b3a1581a0cc1b5e3/New%20dashboard%20.pdf>

CURRENT TECHNOLOGY USAGE

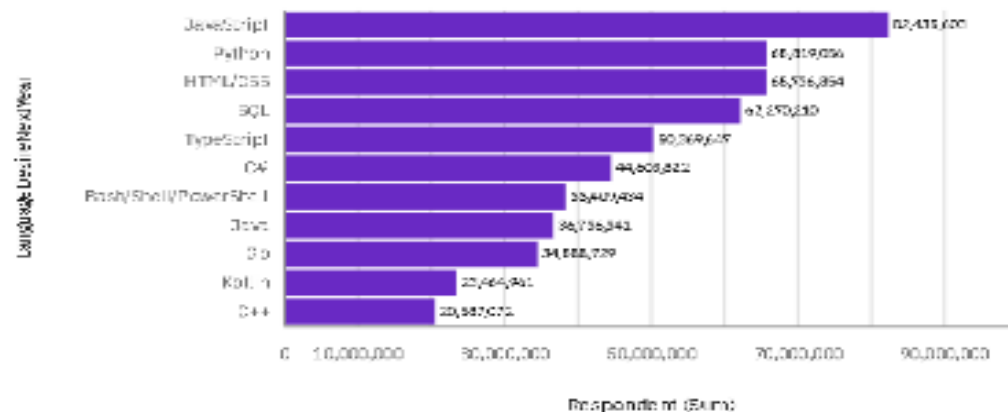
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FUTURE TECHNOLOGY TREND

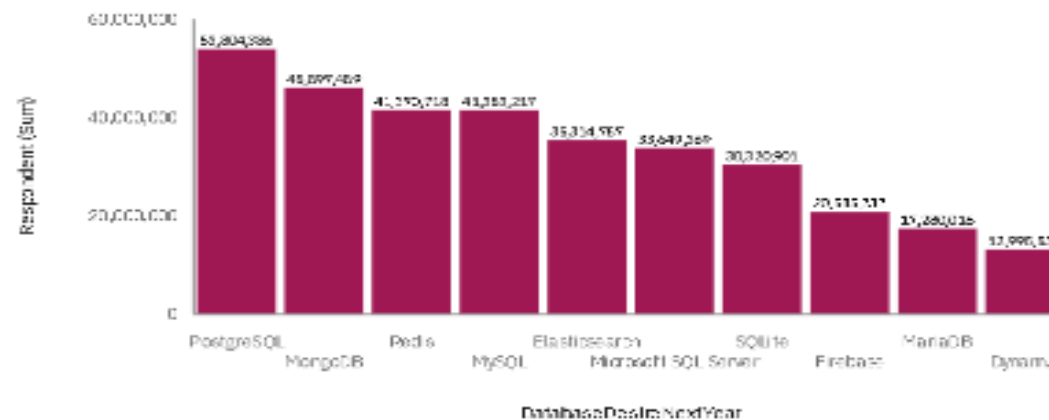
Top 10 LanguageDesireNextYear

1



Top 10 DatabaseDesireNextYear

2

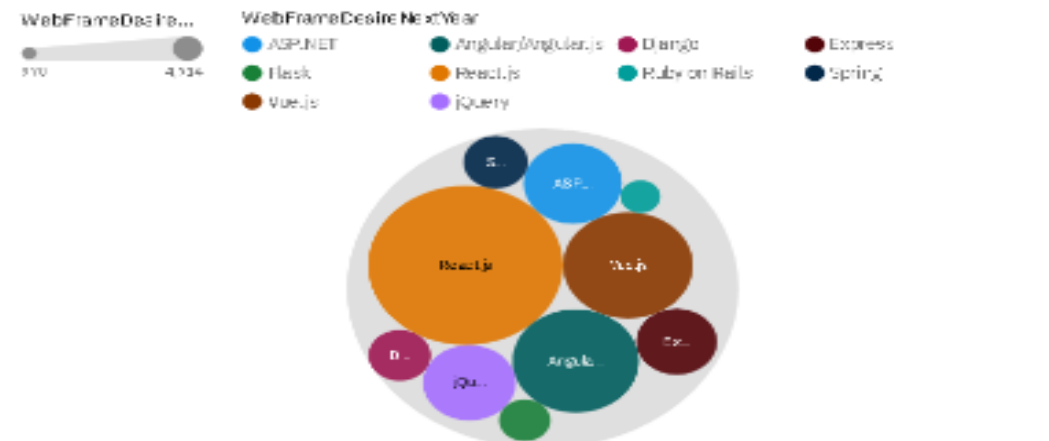


Platform for NextYear



Top 10 WebFrameDesire NextYear

3



DEMOGRAPHICS

Respondent by Gender

Gender
Woman Man



1

Respondent count for Country regions

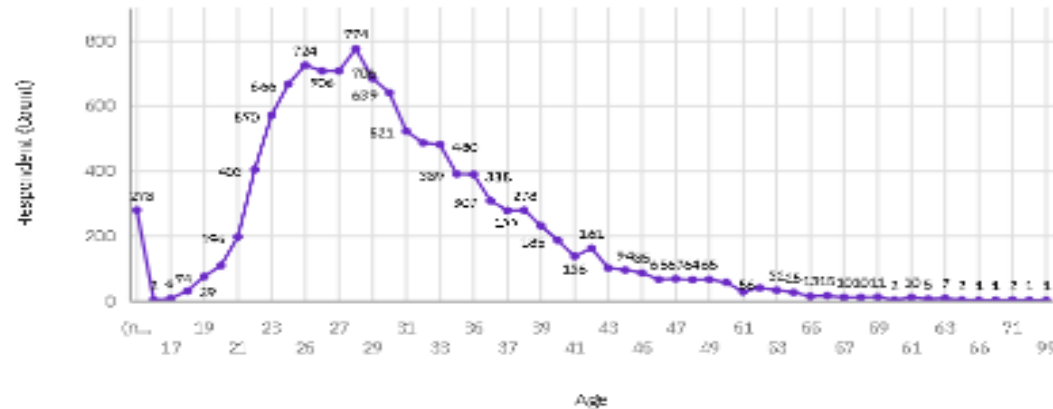
Country - Respondent

New Zealand | 9
 United States | 89
 United States | 70
 Lithuania | 20
 Germany | 14
 United Kingdom | 16
 Israel | 24
 Netherlands | 62
 United Kingdom | 100
 United Kingdom | 100



2

Respondent count by Age

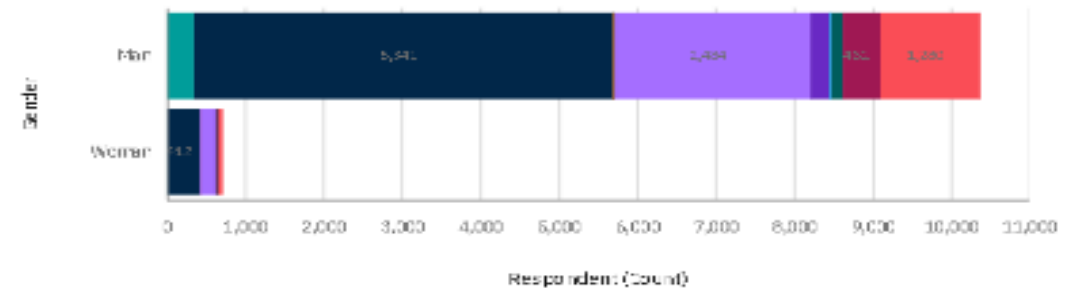


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Respondent by Gender colored by EdLevel

EdLevel

Associate degree
 Master's degree (MA, MS, MEng, etc.)
 Professional degree (JD, MD, etc.)
 Bachelor's degree (BA, BS, BEng, etc.)
 Other doctoral degree (PhD, EdD, etc.)
 Secondary school (e.g. American high school)
 Some college/university study without degree
 I never completed my normal education
 Primary/elementary school



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DISCUSSION



OVERALL FINDINGS & IMPLICATIONS

Findings

- JavaScript widely used and TypeScript getting popular.
- Over 91% young male developers.
- Developers mostly located in developed countries.

Implications

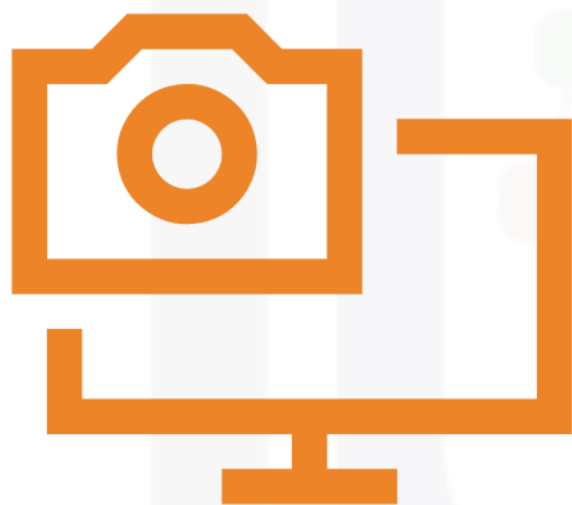
- JavaScript and TypeScript web frames gaining followers.
- Global polarization of developers location and gender.
- Young developers without postgrad studies on its majority.

CONCLUSION

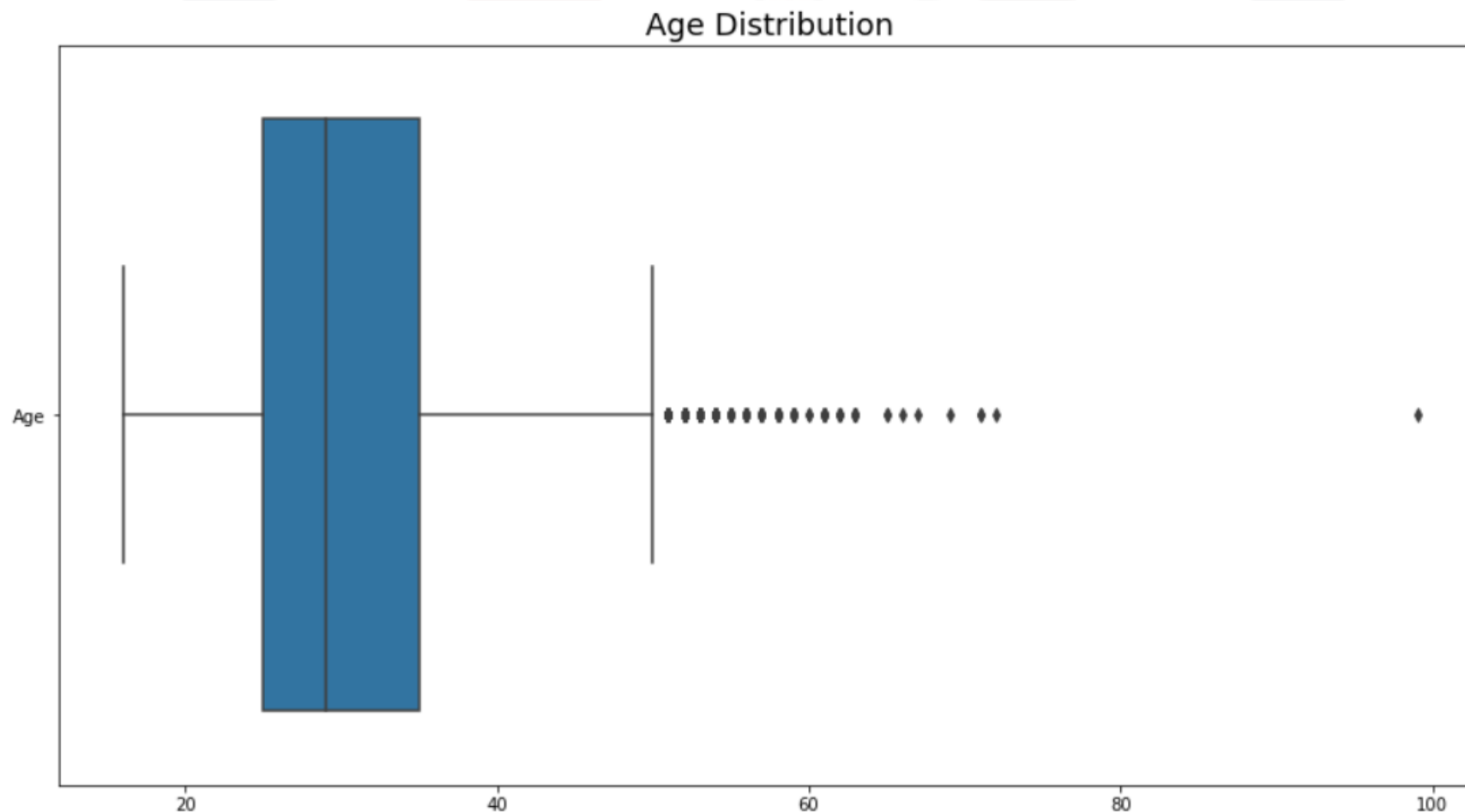


- Developers are people with very marked characteristics.
- A good idea of popularity trends of different tools, platforms and languages can be obtained.
- There is a job to be done to spread accessibility of this labor market to countries in development.

APPENDIX

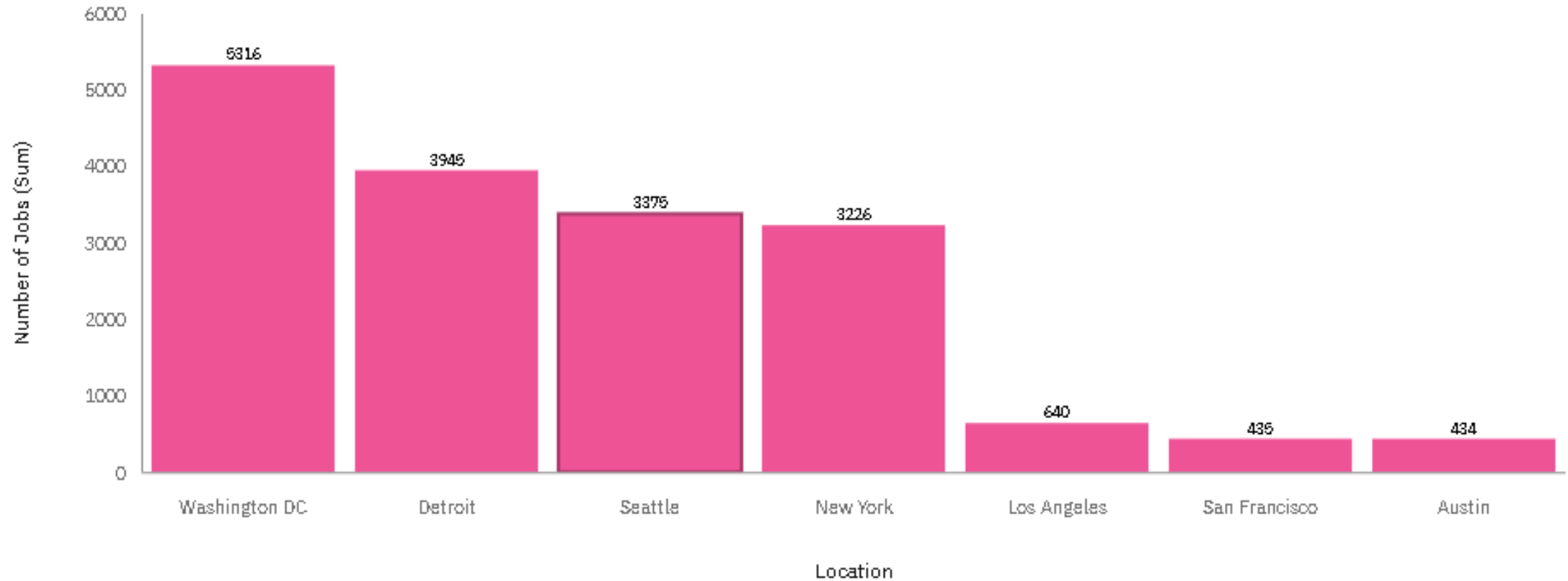
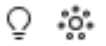


AGE DISTRIBUTION BOXPLOT



JOB POSTINGS

Number of Jobs by Location



POPULAR LANGUAGES

