



STACK OVERFLOW DEVELOPERS SURVEY

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OUTLINE



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

EXECUTIVE SUMMARY



- Data description and analysis goal.
- Methodology description.
 - Data gathering
 - Data Analysis
 - Data visualization
- Presentation Results supported with graphs and trends.
- Discussion of overall findings and implications regarding the results previously exposed.
- Final conclusions of analysis.

INTRODUCTION



- Stack Overflow, a popular website for developers, conducted an online survey of software professionals across the world.
- The actual data set has around 90,000 responses.
- Trends to predict where the developers are going
- Characterization of developers around the globe.

METHODOLOGY



- Collect survey data & explore its contents
 - Web scraping
 - APIS
 - Exploring Data
- Data Wrangling & Preprocessing
- Exploratory Data Analysis
 - Data distribution
 - Detect Outliers
 - Correlations
- Data Visualization
 - Highlight distribution of data, relationships, composition and comparison of data
- Dashboard.

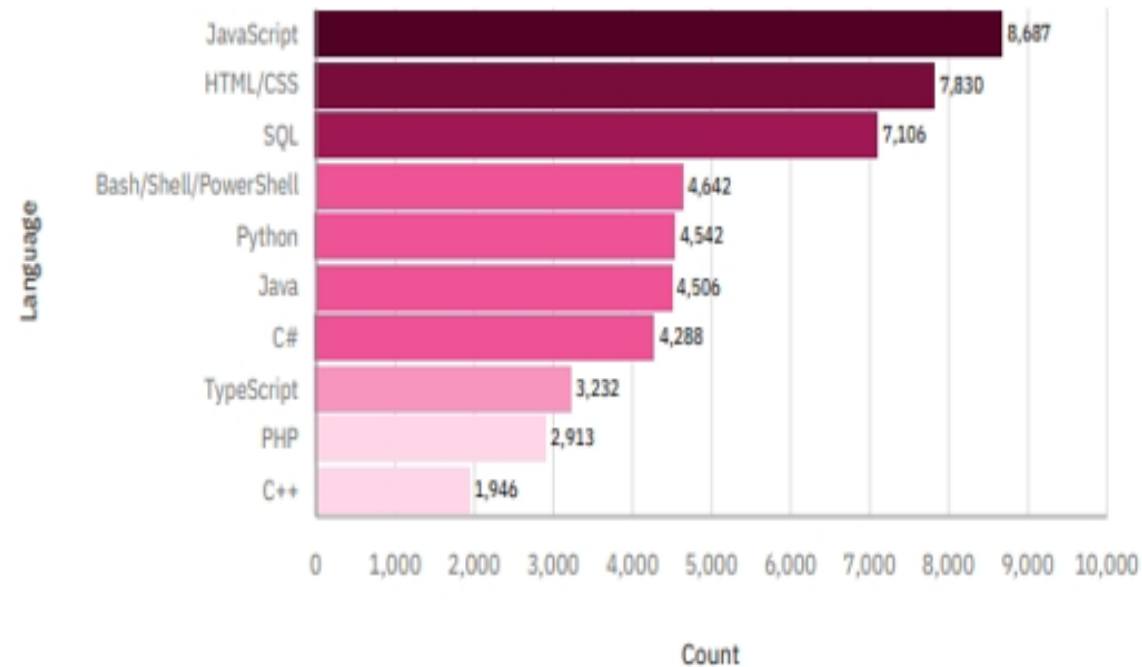
RESULTS



PROGRAMMING LANGUAGE TRENDS

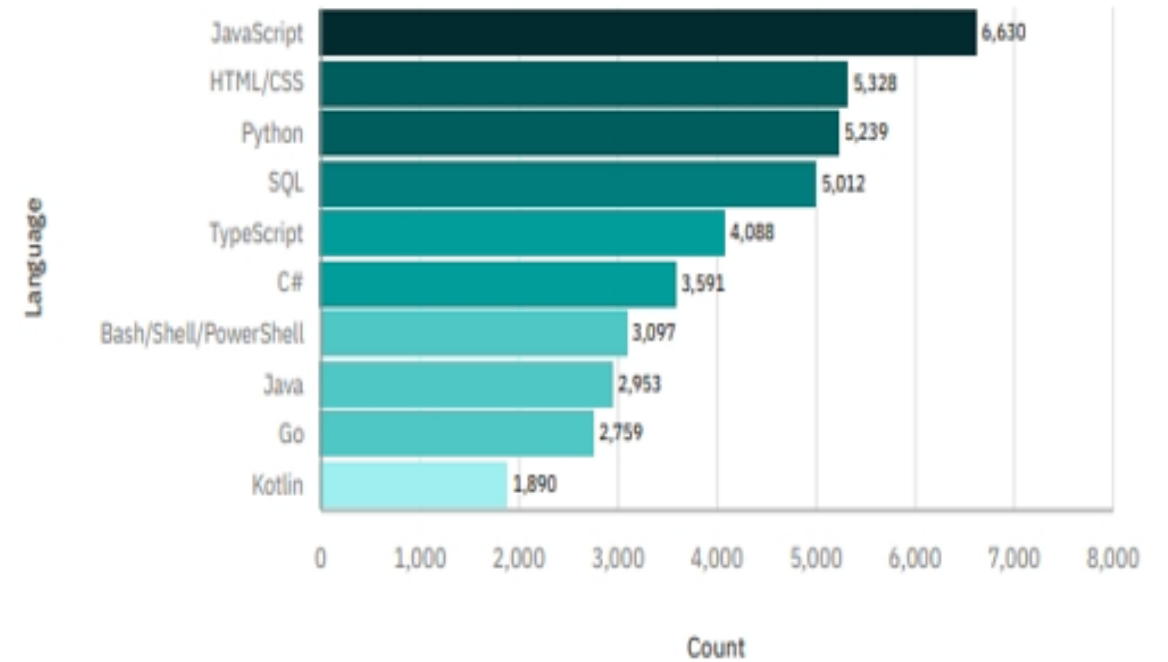
Current Year

Top 10 Languages Worked With



Next Year

Top 10 Languages Desired Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript seems to be leading language.
- Python Fastest-growing.
- Great interest in TypeScript

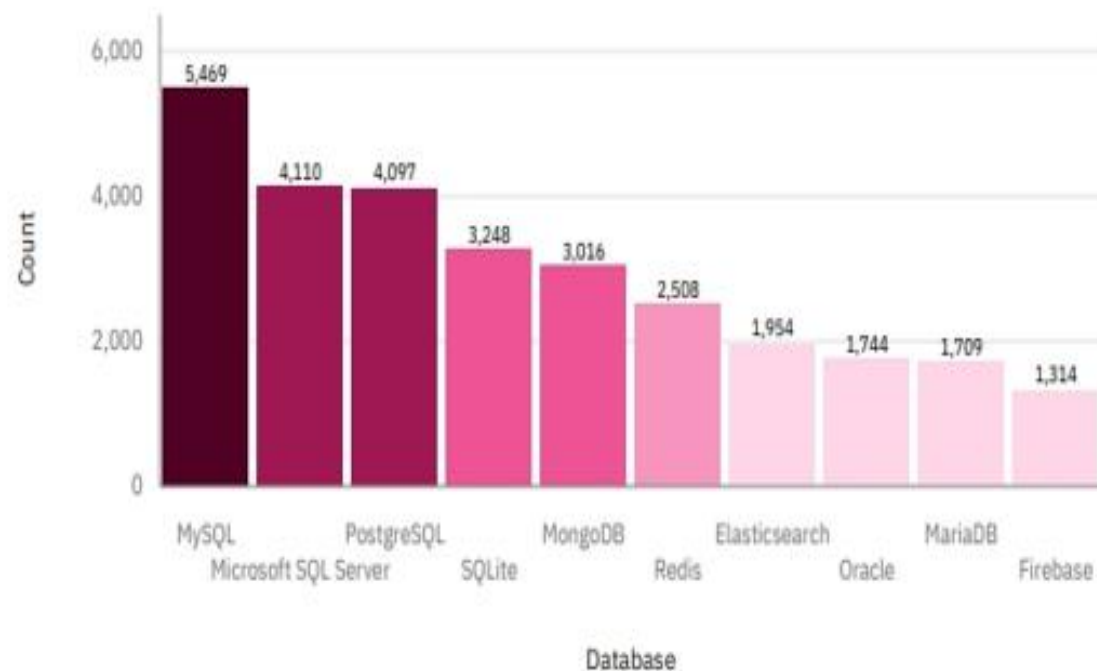
Implications

- Possible Developers migration from JavaScript to TypeScript.

DATABASE TRENDS

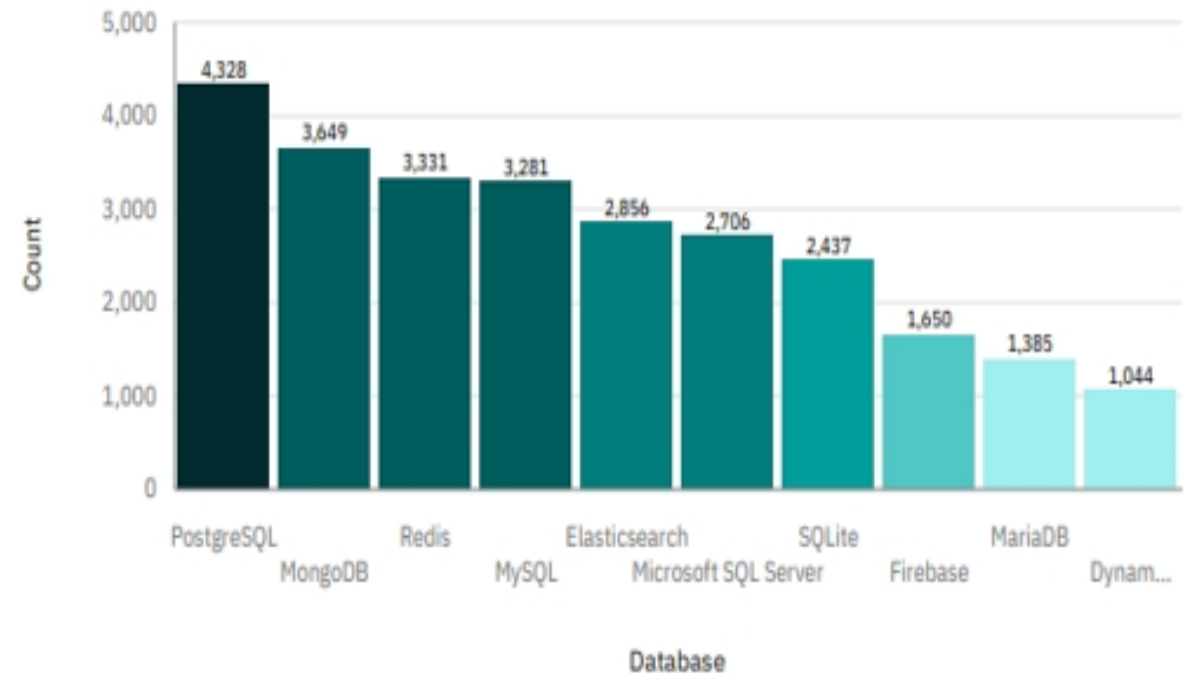
Current Year

Top 10 Databases Worked With



Next Year

Top 10 Databases Desired 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

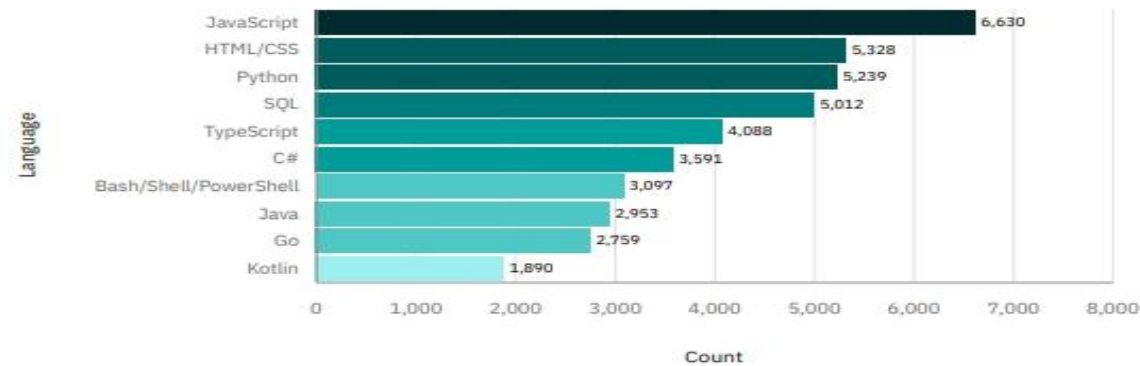


<https://github.com/Hussein14269/IBM-Data-Analytics-Dashboard>

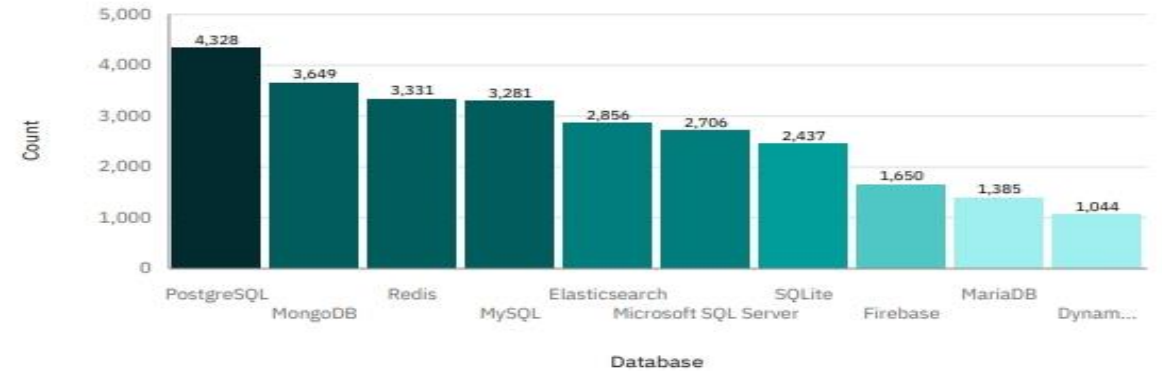
CURRENT TECHNOLOGY USAGE

Future Technology Trend

Top 10 Languages Desired Next Year



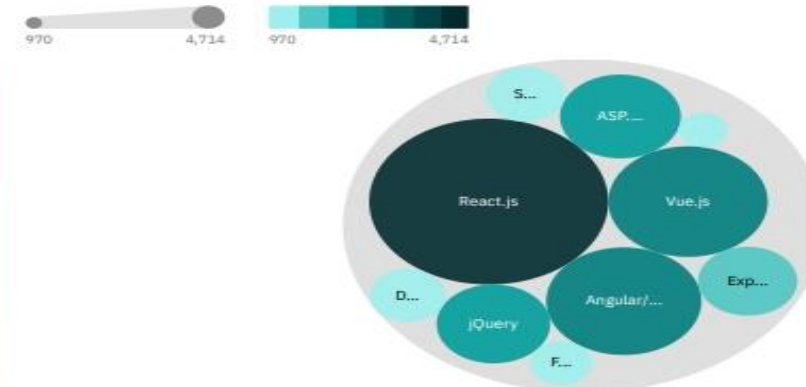
Top 10 Databases Desired Next Year



Top Platforms Desired Next Year



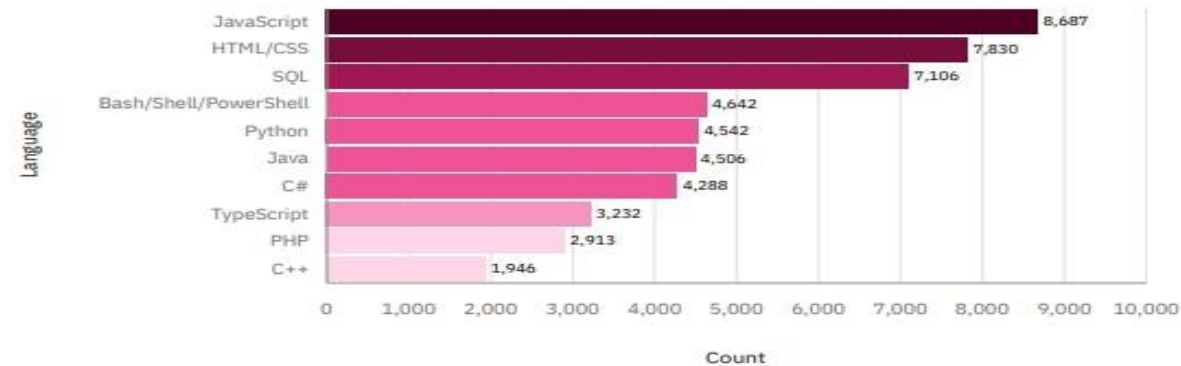
Top 10 Web Frameworks Desired to Work With Next Year



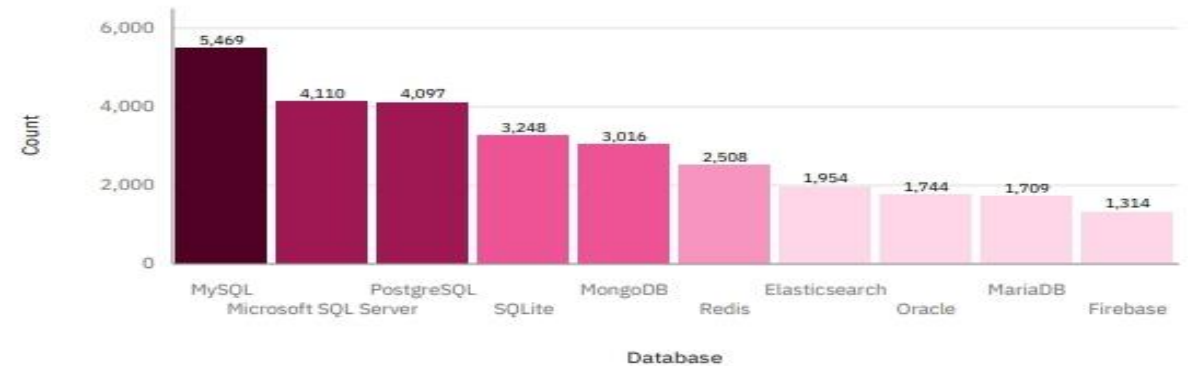
FUTURE TECHNOLOGY TREND

Current Technology Usage

Top 10 Languages Worked With



Top 10 Databases Worked With



Top Platforms Worked With



Top 10 Web Frameworks Worked With

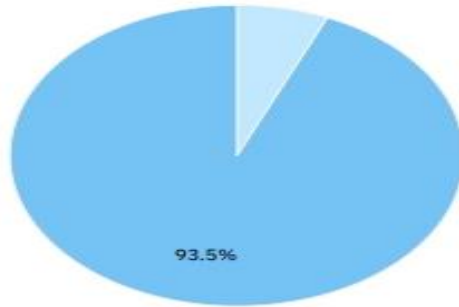


DEMOGRAPHICS

Demographics

Respondent Count by Gender

Gender
Woman Man

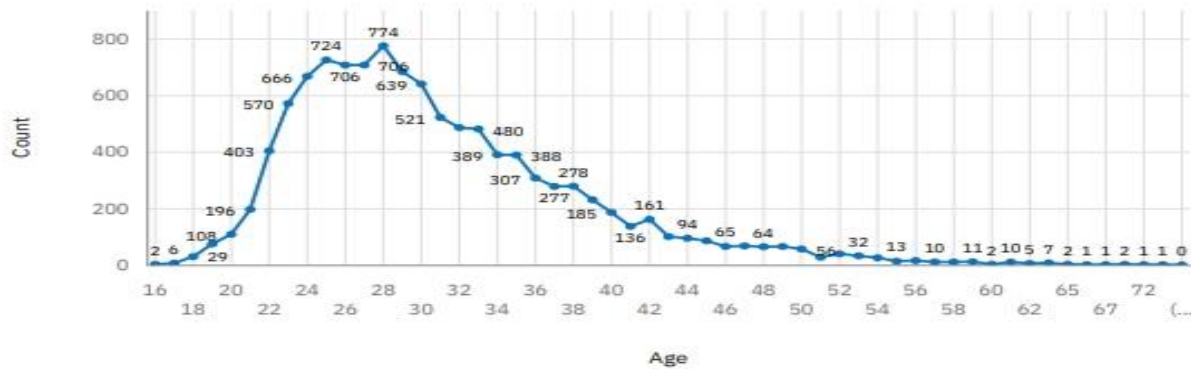


Respondent Count by Country

Country (Count)
1 3,058

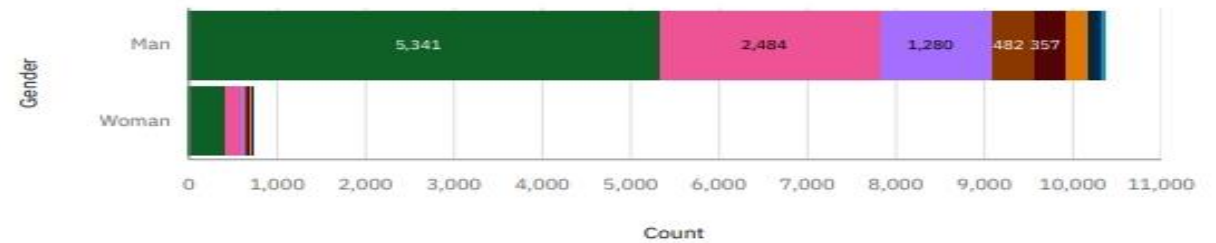


Respondent Count by Age

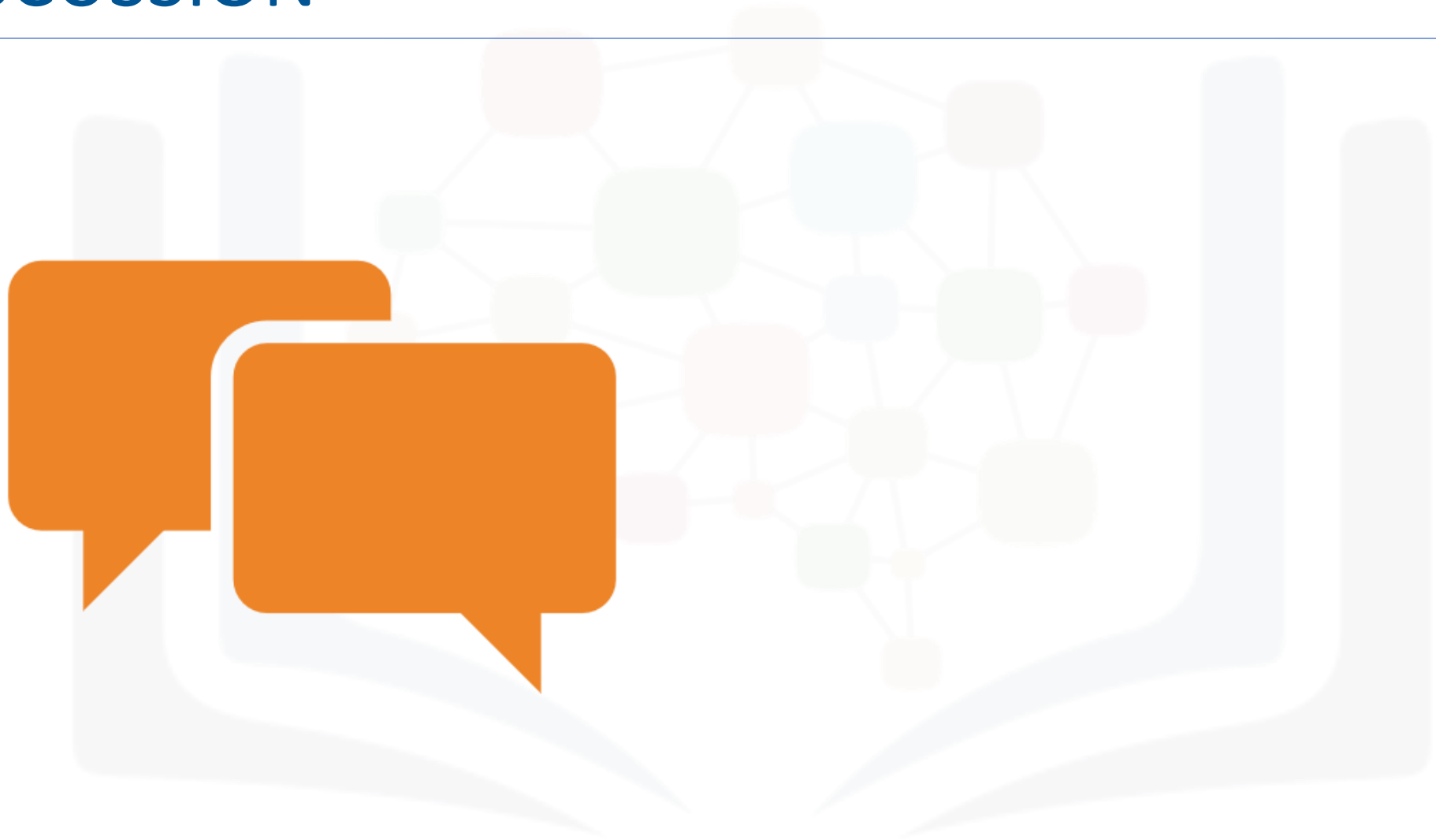


Respondent Education Level Count by Gender

Education Level
● Bachelor's degree (BA, BS, B.Eng., etc.)
● Master's degree (MA, MS, M.Eng., MBA, etc.)
● Some college/university study without earning a degree
● Secondary school (e.g. American high school, German Realschule or Gymnasium, etc.)



DISCUSSION



OVERALL FINDINGS & IMPLICATIONS

Findings

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

Implications

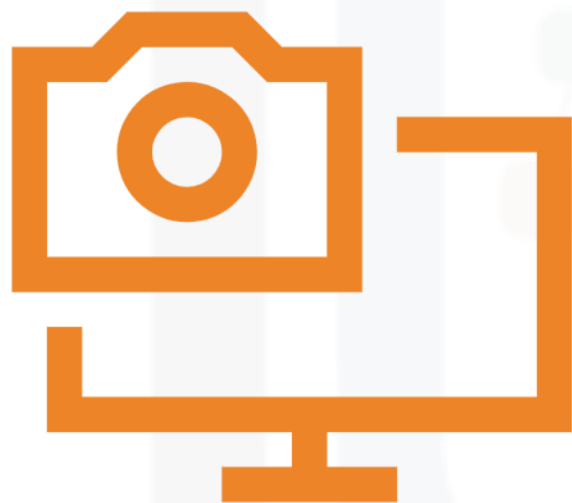
- JavaScript and TypeScript web frames gaining followers.
- Global polarization of developers location and gender.
- Young developers without postgrad. Studies on its majority.

CONCLUSION

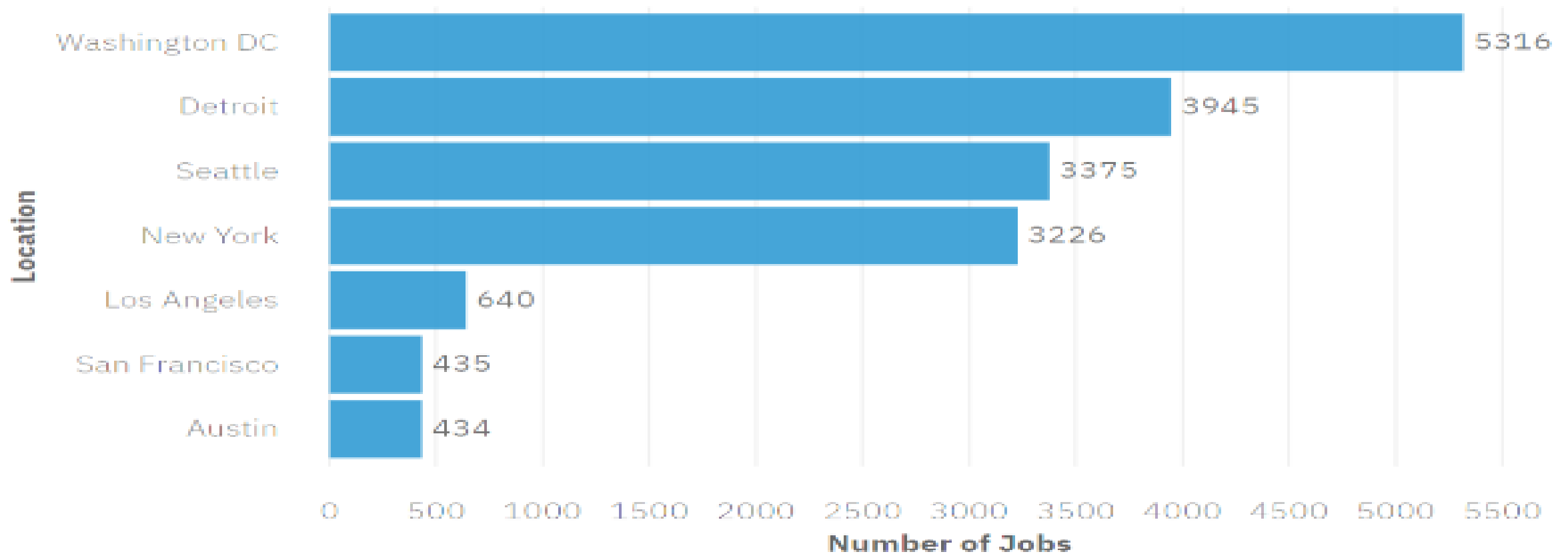


- Developers are people with very marked characteristics.
- A good idea of popularity trends of different tools, platforms and languages can be obtained.
- There is a job to be done to spread accessibility of this labor market to countries in development.

APPENDIX



JOB POSTINGS



AGE DISTRIBUTION BOXPLOT

