



2019 Developer Survey Analysis Report

BALA VENKATA SAI PRAKASH

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OUTLINE



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

EXECUTIVE SUMMARY



- Analyze the problem and define solution.
- Methodology
 - Data Gathering
 - Data Analyzing
 - Data Visualizing
- Presenting results using charts, graphs and dashboards.
- Discussions about findings and implications.
- Getting conclusions from those Discussions.

INTRODUCTION



- Stack Overflow annual developer survey 2019 is the largest and most comprehensive survey conducted to know developer interests in various Languages, Platforms, WebFrames, etc.
- This survey conducted for nearly 90,000 developers and helps in finding different trends in developers.
- This survey shows the characterization of developers of different ages across the globe.

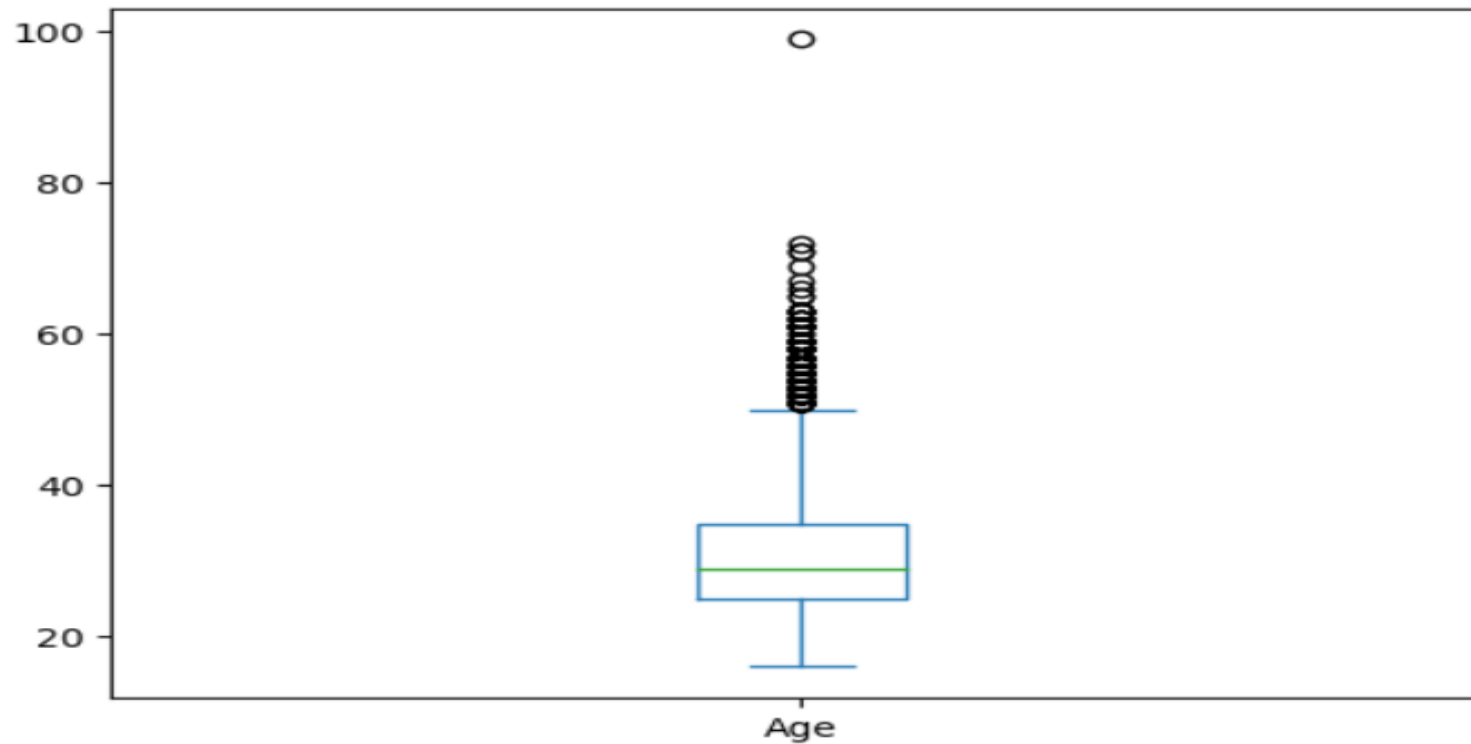
METHODOLOGY



- Data Collection
- Data Wrangling
 - Finding and Removing Duplicates
 - Finding and Imputing Missing Values
 - Normalizing Data
- Exploratory Data Analysis
- Data Visualization
 - Visualizing Distribution of Data
 - Visualizing Relationship
 - Visualizing Composition of Data
 - Visualizing Comparison of Data
- Building Dashboard

RESULTS

DEVELOPERS AGE DISTRIBUTION USING BOXPLOT



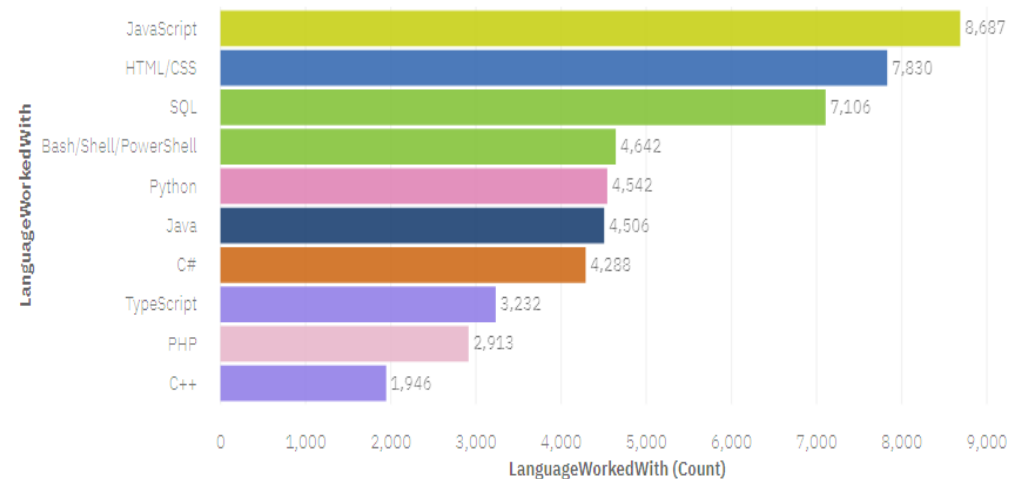
PROGRAMMING LANGUAGE TRENDS

Current Year

Current Top 10 Languages

LanguageWorkedWith

● Bash/Shell/PowerShell ● C# ● C++ ● HTML/CSS ● Java
● JavaScript ● PHP ● Python ● SQL ● TypeScript

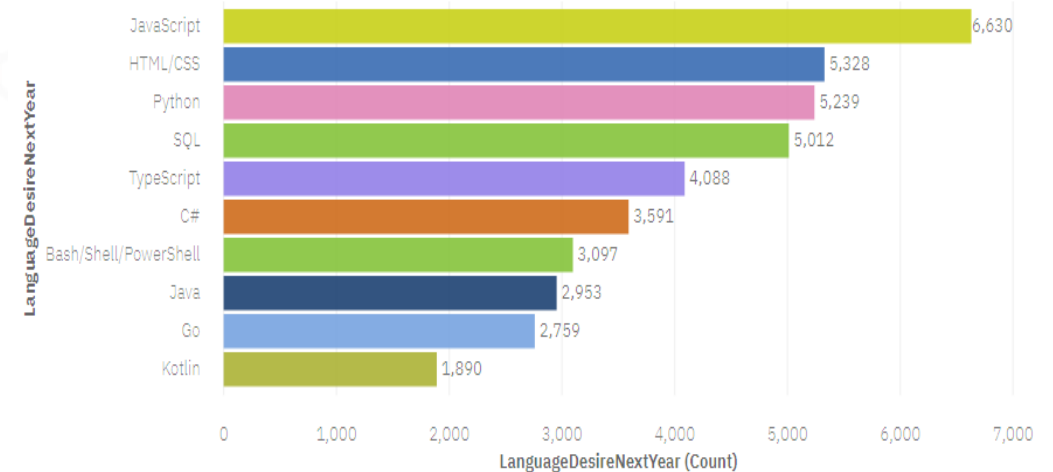


Next Year

Future Top 10 Desired Languages

LanguageDesireNextYear

● Bash/Shell/PowerShell ● C# ● Go ● HTML/CSS ● Java
● JavaScript ● Kotlin ● Python ● SQL ● TypeScript



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript is the top trending language in current times.
- Python is the fast growing language.
- Developers show great interest in TypeScript
- New Languages like Go, Kotlin, etc are going to replace the status of Older ones.

Implications

- Possibility developers may lose interest in older languages by next year.

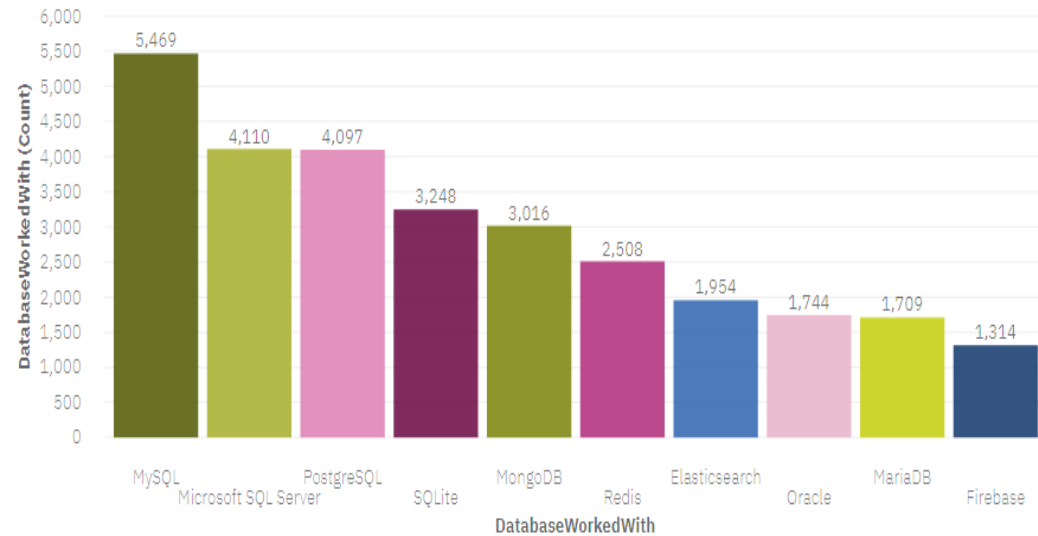
DATABASE TRENDS

Current Year

Current Top 10 Databases

DatabaseWorkedWith

Elasticsearch Firebase MariaDB Microsoft SQL Server MongoDB
MySQL Oracle PostgreSQL Redis SQLite

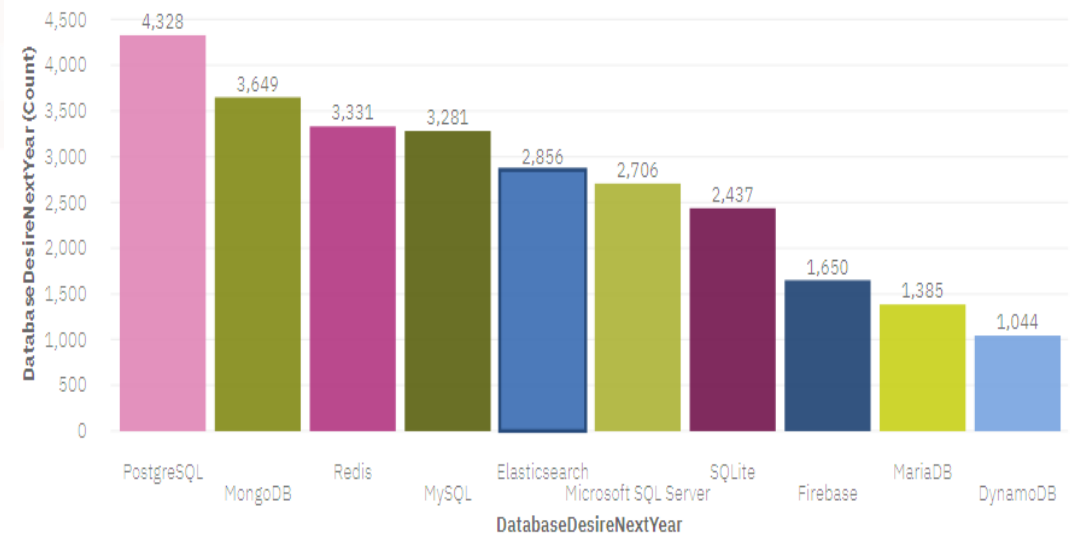


Next Year

Future Top 10 Desired Databases

DatabaseDesireNextYear

DynamoDB Elasticsearch Firebase MariaDB Microsoft SQL Server
MongoDB MySQL PostgreSQL Redis SQLite



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL is the top trending database.
- Lack of interest in Microsoft SQL Server and SQLite
- Interests in PostgreSQL and MongoDB are increase randomly.

Implications

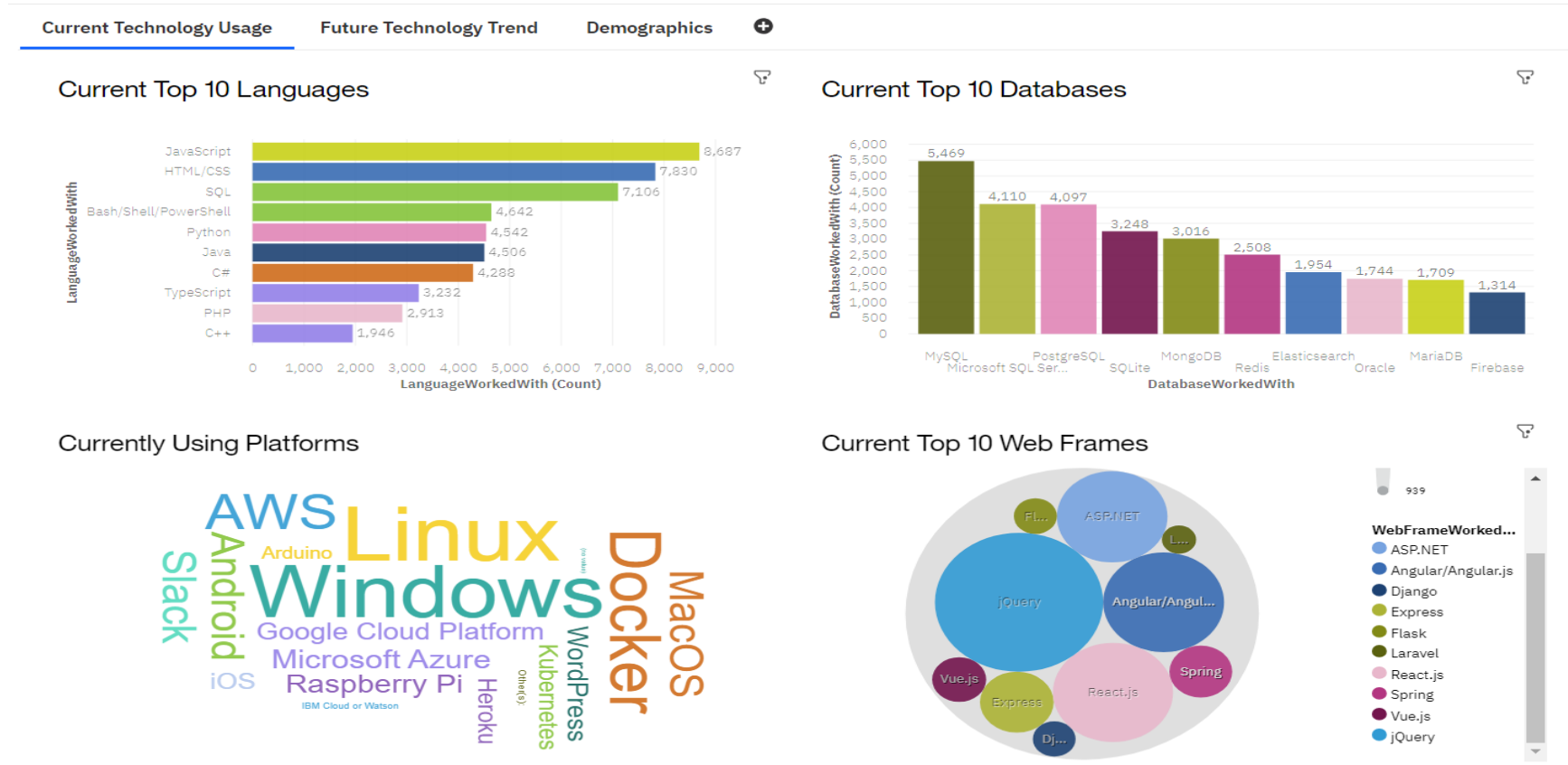
- SQLite and Microsoft SQL Server losing ground in the market.
- Possibility developers may lose interest in Oracle by next year.

DASHBOARD

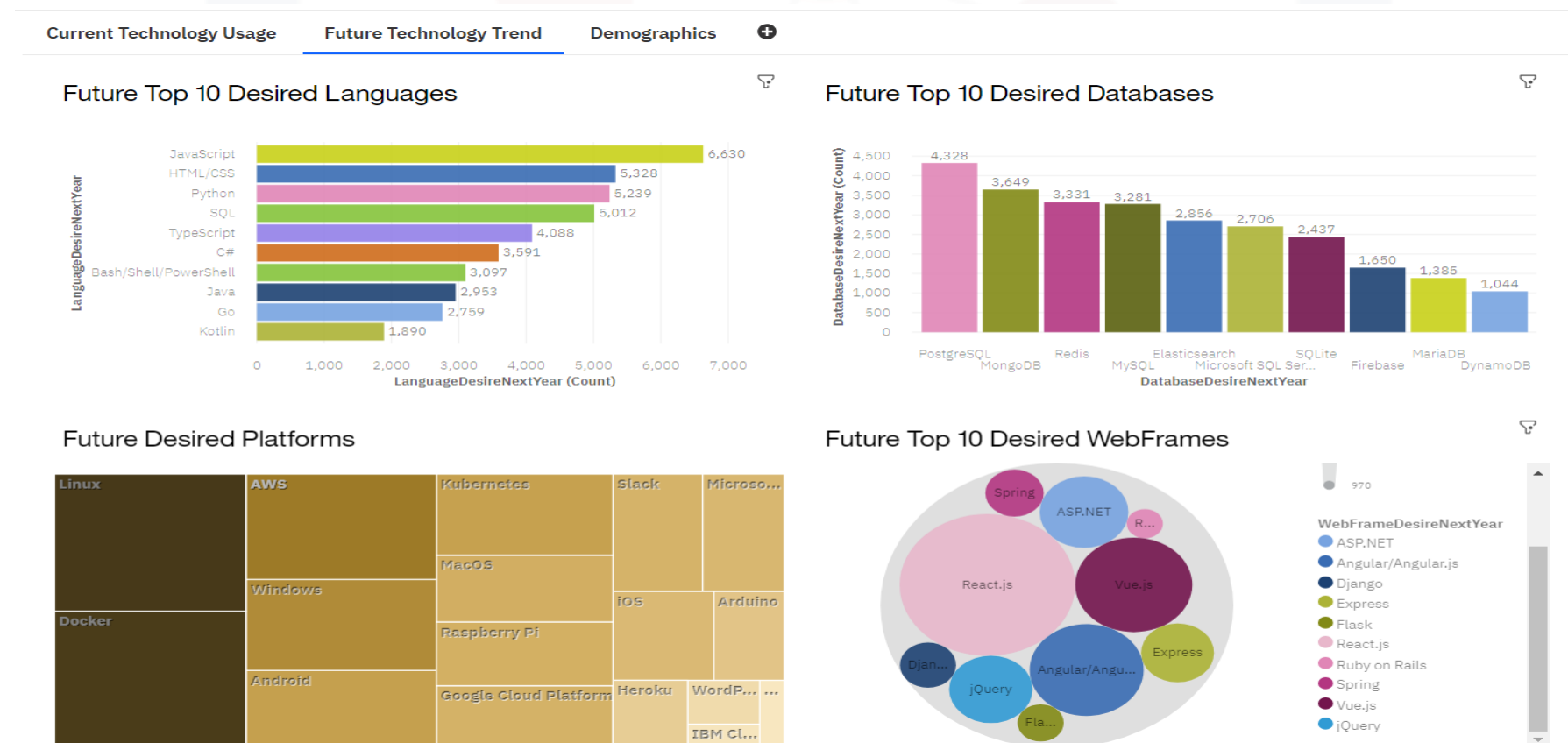


<https://dataplatform.cloud.ibm.com/dashboards/402cda5a-a982-49ed-ac0f-a64da968f188/view/4414a137209512ec16e0c4e407902a5278362409bbbb845186847b490e652397a96b4598c828490c89430366f7e9165cce>

DASHBOARD TAB 1



DASHBOARD TAB 2



DASHBOARD TAB 3

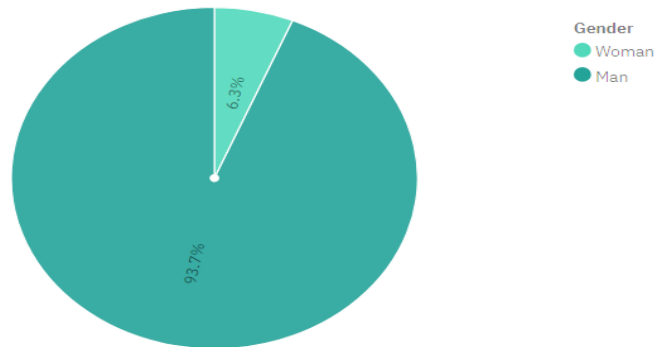
Current Technology Usage

Future Technology Trend

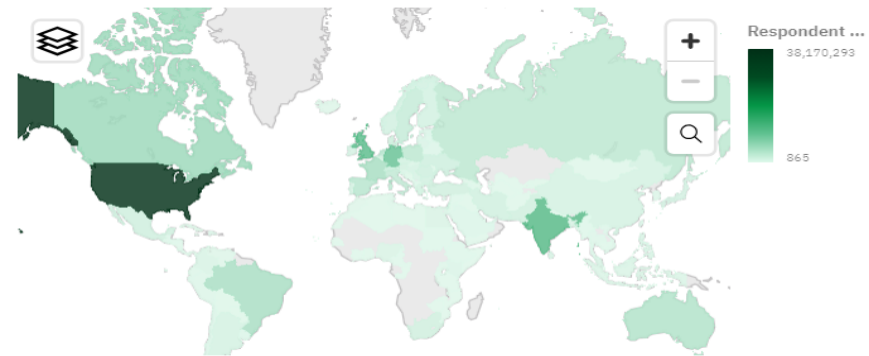
Demographics



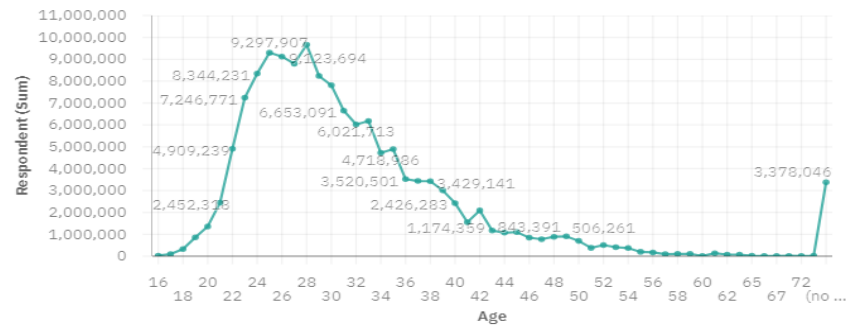
Respondent By Gender



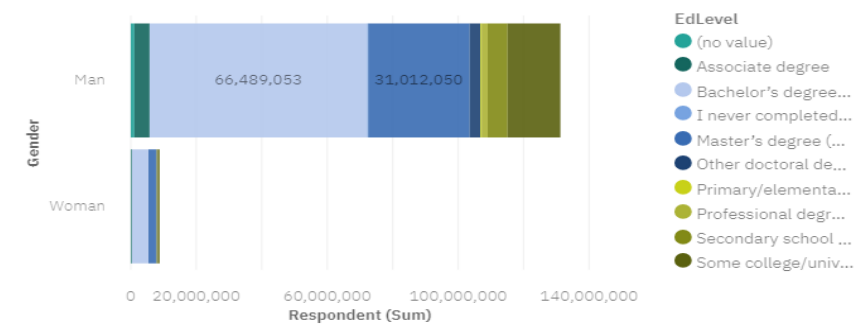
Number of Respondents by Country



Number of Respondents by Age



Formal Education Level of Respondents by Gender



DISCUSSION



- In Demographics dashboard the pie chart shows that the women developers are less than men.
- From the same dashboard, we can observe there are developers whose formal education level is primary/elementary level. This show education is not mandatory to showcase skills.

OVERALL FINDINGS & IMPLICATIONS

Findings

- JQuery and Linux are the top trending WebFrame and Platform
- Most of the developers are bachelor's degree holders
- Over 90% are young male developers

Implications

- Docker and AWS platforms may getting Popular
- Most of the respondents may getting from developed countries
- React.js web frame gaining huge followers

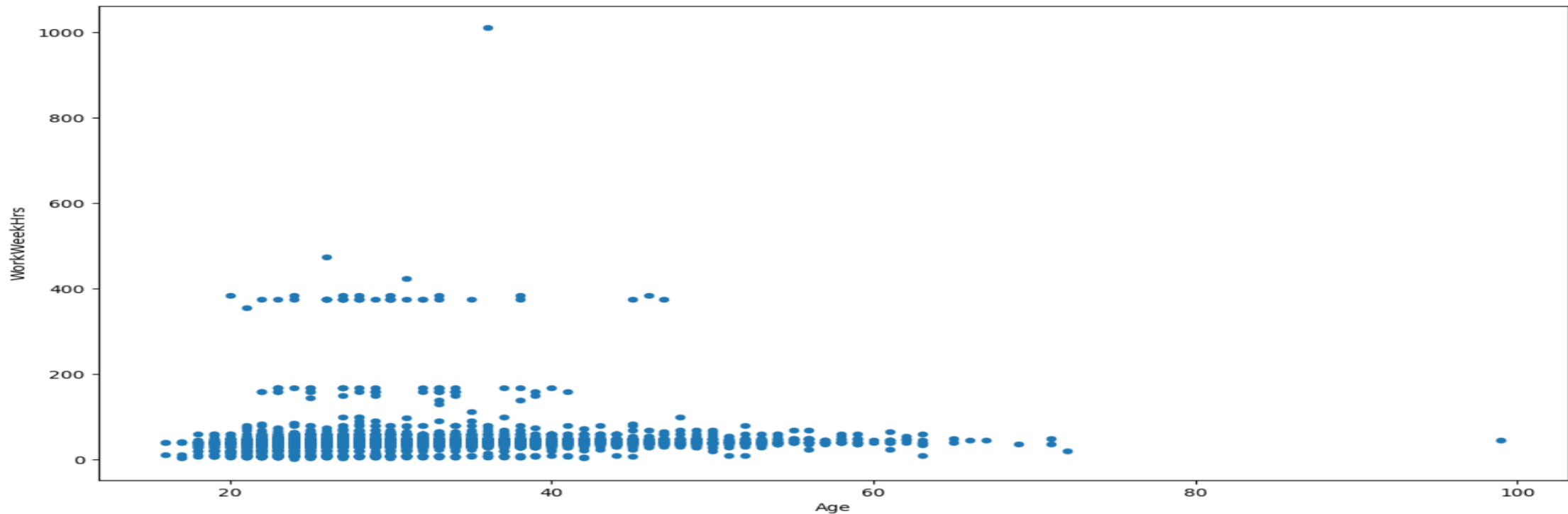
CONCLUSION



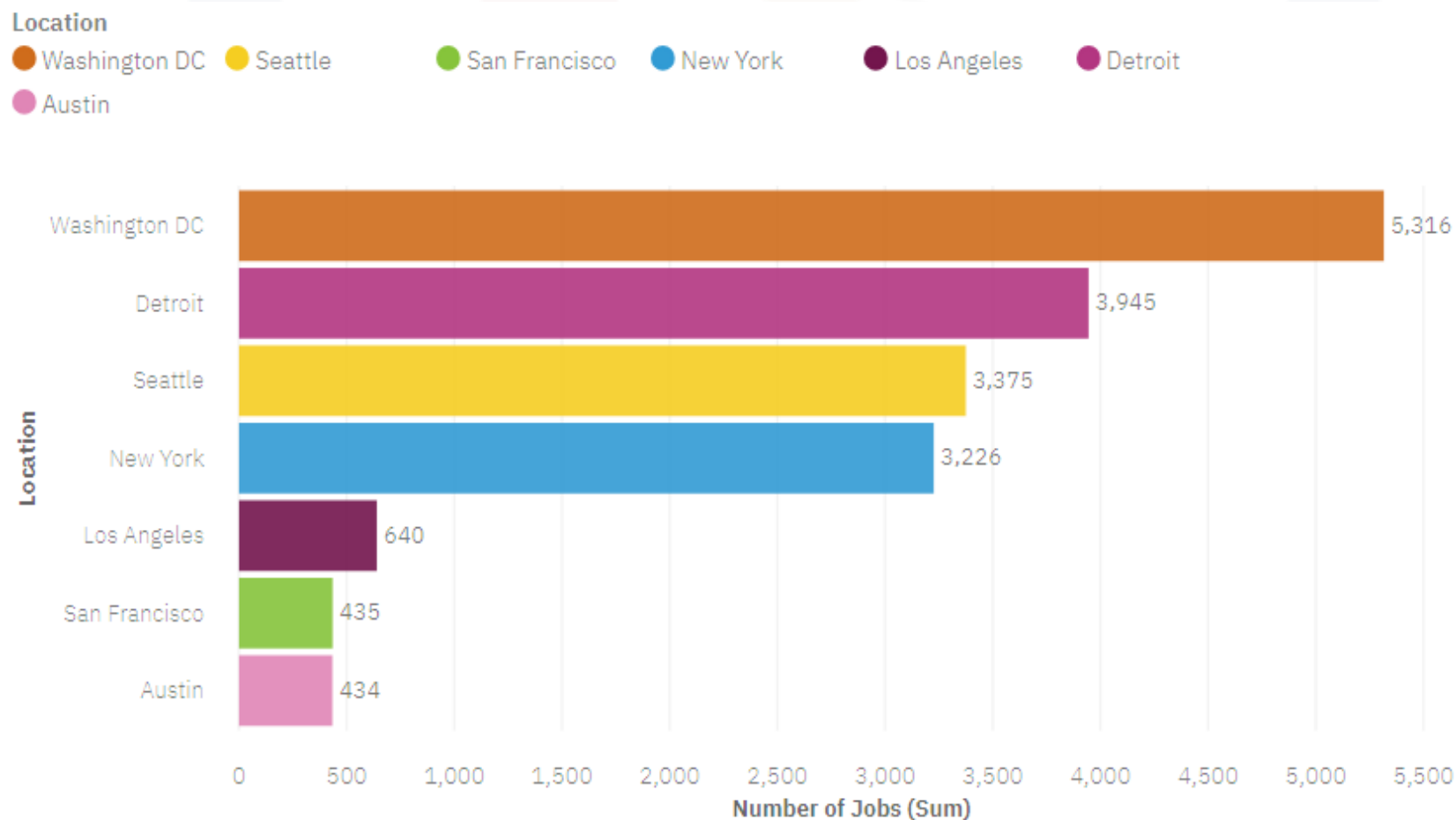
- Developers are the people with variety of characteristics.
- New and good platforms, Databases, Languages and other tools practically and popularly trends.

APPENDIX

- Visualizing Relationship between age and work hours per week



JOB POSTINGS



POPULAR LANGUAGES

