



# STACK OVERFLOW DEVELOPER SURVEY 2019

SATHISH KUMAR .S  
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# OUTLINE

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

# EXECUTIVE SUMMARY

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- Data contextualization and analysis goal.
- Methodology description:
  - Data Collection
  - Data Analysis
  - Data Visualization
- Results presented with supporting graphs and trends
- Discussion of overall findings and implications regarding the results previously exposed.
- Final conclusions of the carried out research.

# INTRODUCTION

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- Stacks Overflow 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 were surveyed
- Understanding the developers
  - Predicting the trends where developers are going,
  - Characterization of developers around the world.

# METHODOLOGY

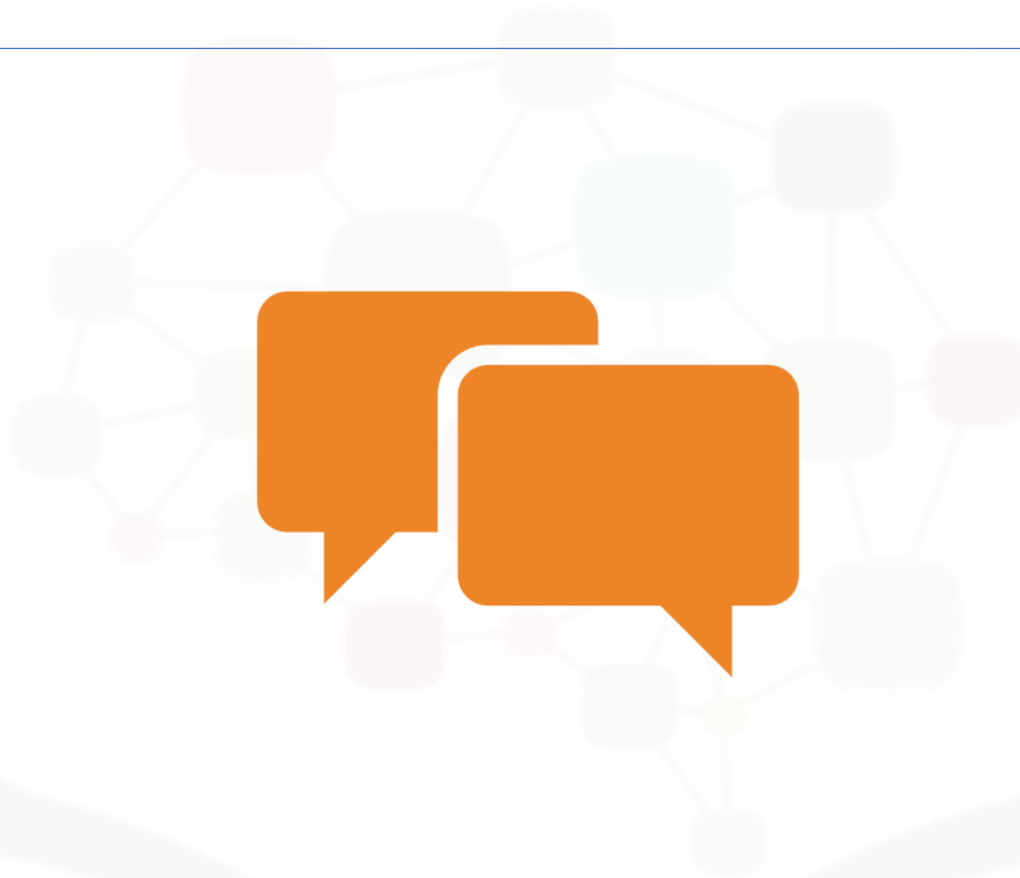
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- Collect survey data & explore it
  - WEB Scraping
  - APIs
  - Request Library
- Data Wrangling
- Exploratory Data Analysis ( EDA )
  - Analyzing data distribution
  - Handling Outliers
  - Correlations
- Data Visualization
  - Highlight distribution of data, relationships, the composition and the comparison of data
- Dashboards

# RESULTS

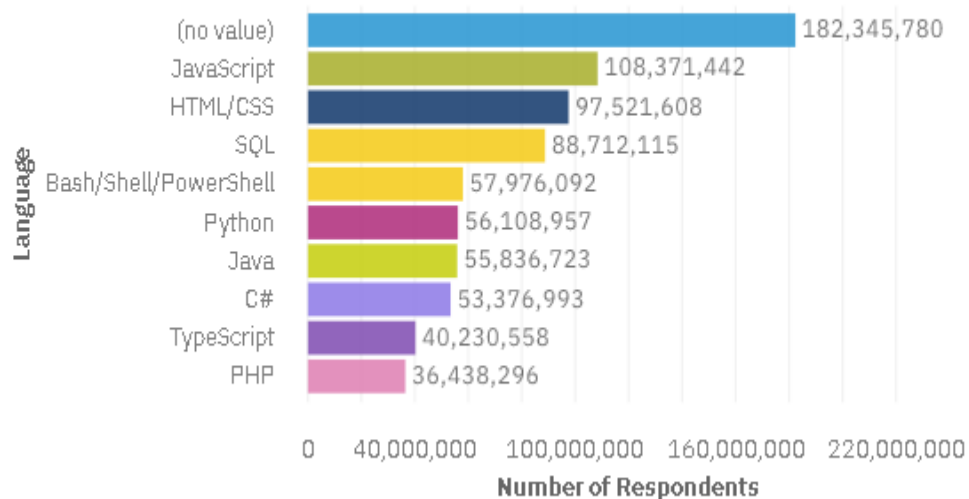
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# PROGRAMMING LANGUAGE TRENDS

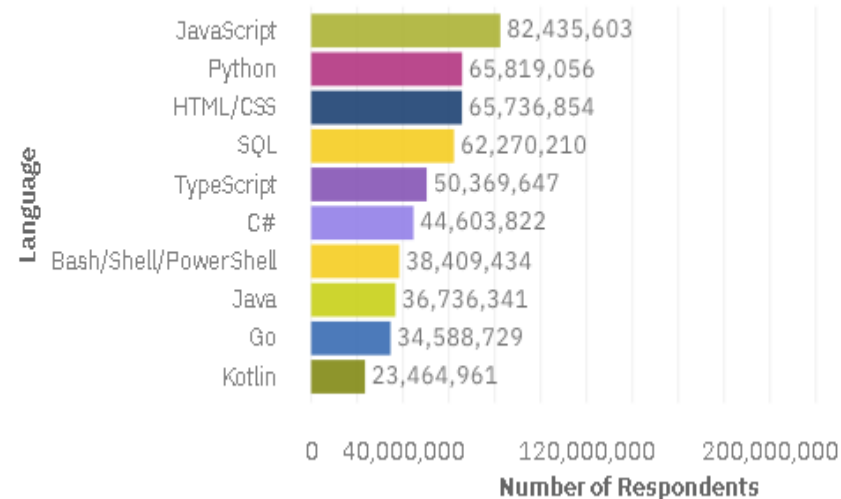
Current Year

Top 10 Programming Language



Next Year

Top 10 Desired Languages to learn



# PROGRAMMING LANGUAGE TRENDS – FINDINGS & IMPLICATIONS

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## Findings

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

## Implications

- Possible developers migration from JavaScript to Typewriting

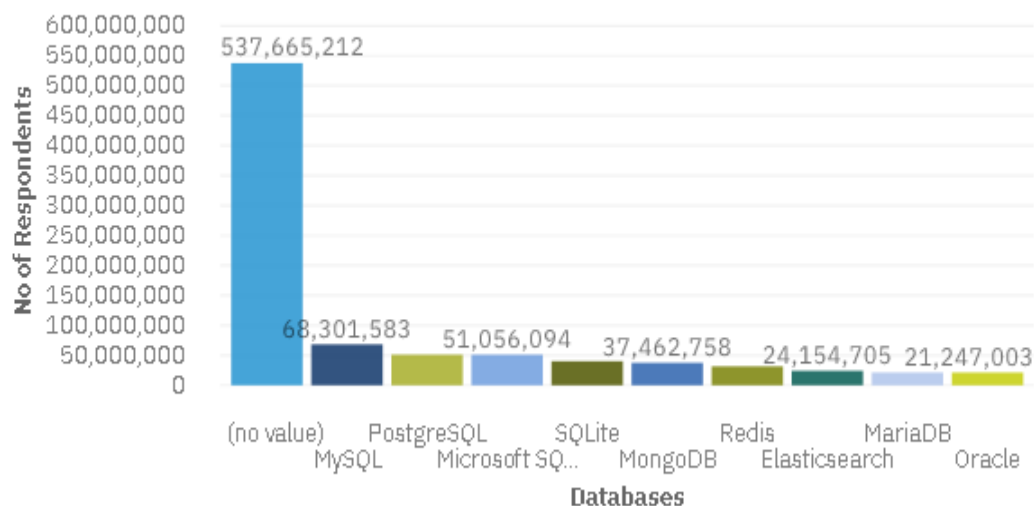


# DATABASE TRENDS

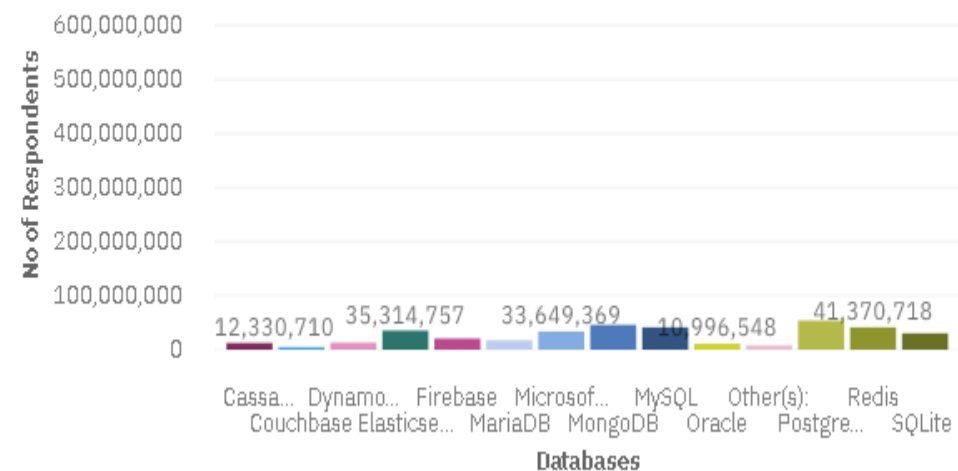
Current Year

Next Year

Top 10 Database Worked With



Top 10 Desired Databases to learn



# DATABASE TRENDS – FINDINGS & IMPLICATIONS

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## Findings

- MySQL are the most used database
- Lack of interest in Microsoft SQL Server & SQLite
- Increasing interest in PostgreSQL & MongoDB

## Implications

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

# DASHBOARD

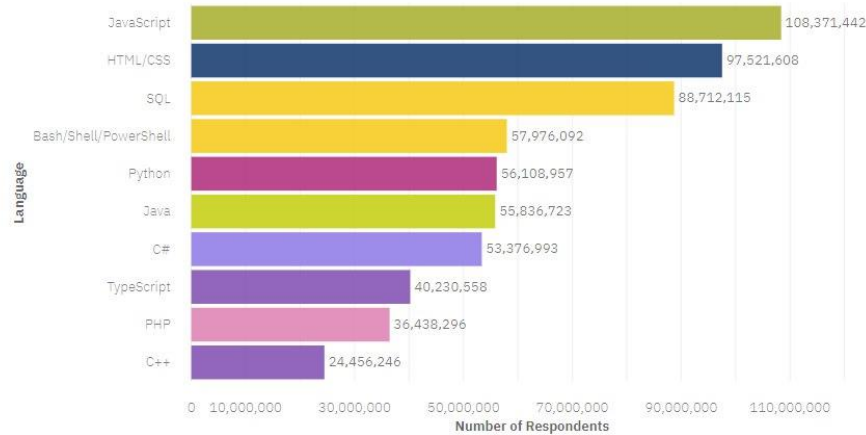
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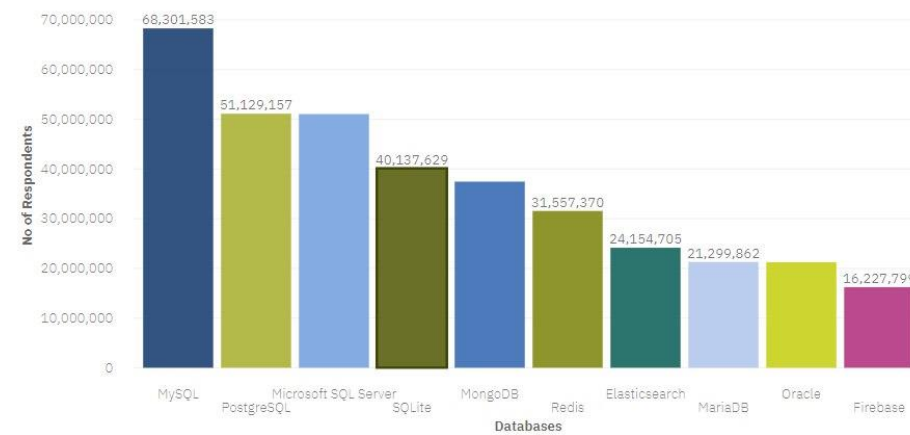
Building A Dashboard With Cognos  
Dashboard Embedded

# CURRENT TECHNOLOGY USAGE

Top 10 Programming Language



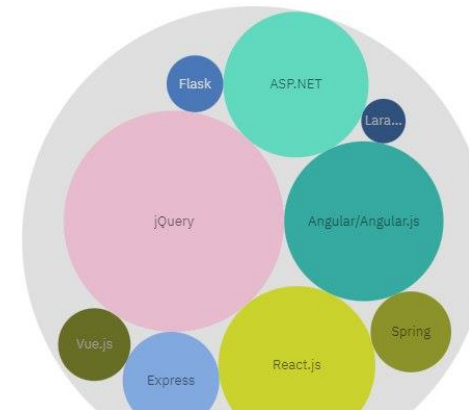
Top 10 Database Worked With



Platforms Interacted

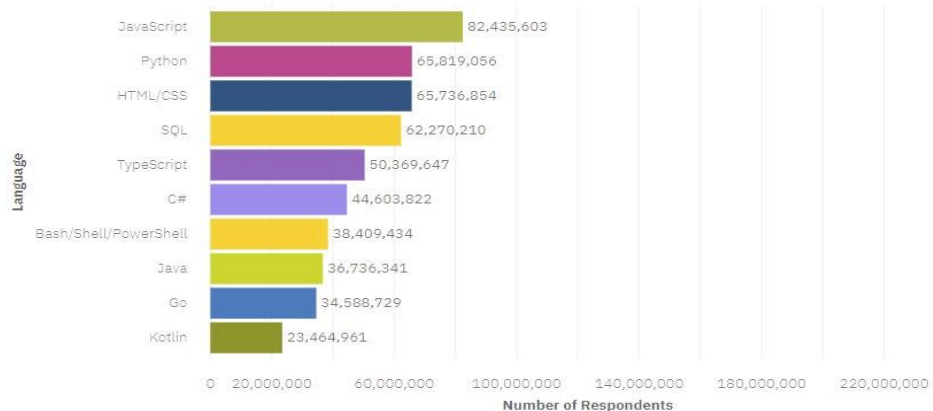


Top 10 WebFrames Used

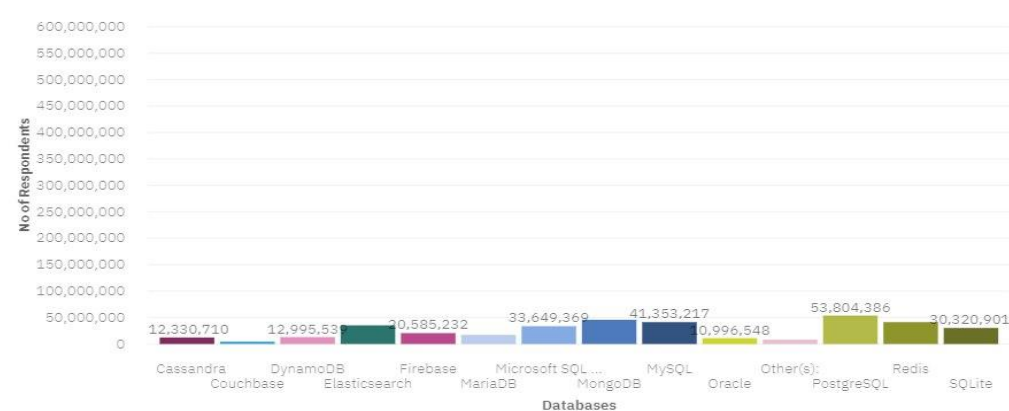


# FUTURE TECHNOLOGY TREND

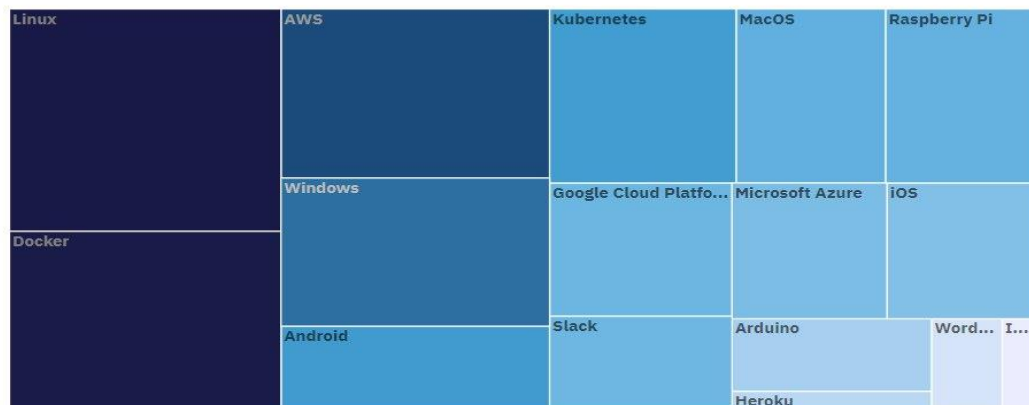
Top 10 Desired Languages to learn



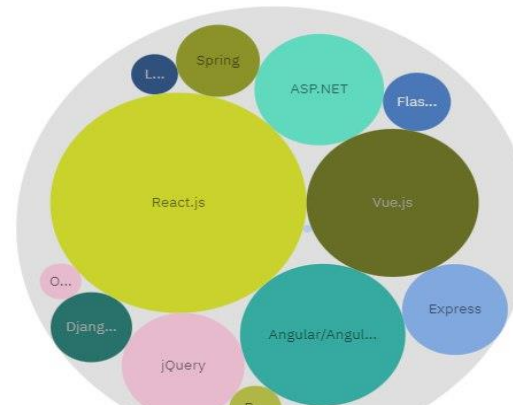
Top 10 Desired Databases to learn



Platform Next Year



Top 10 WebFrame Next Year

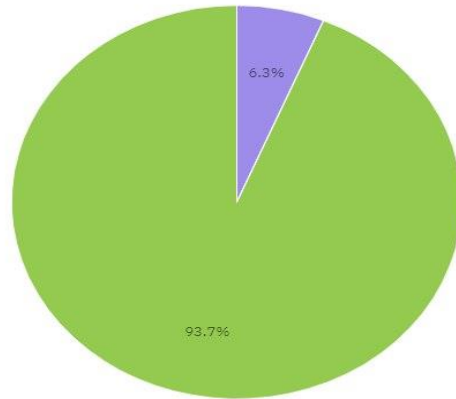


powered by IBM Cloud Pak fo

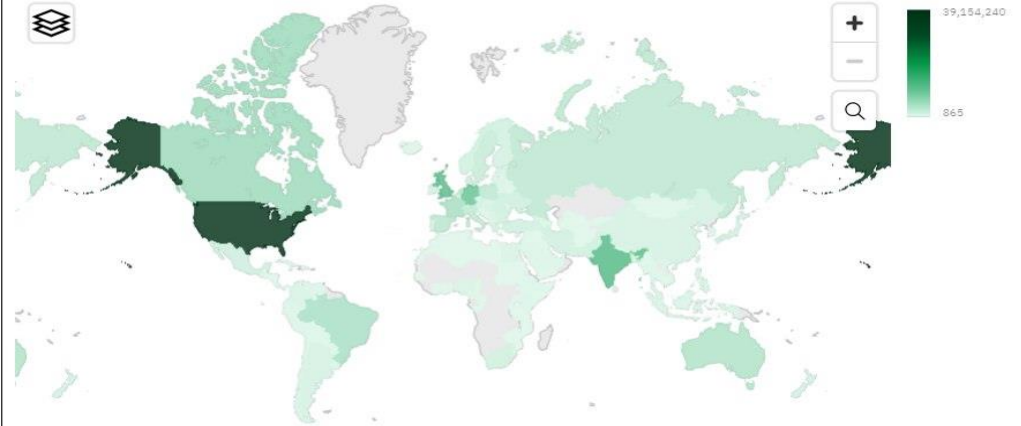
# DEMOGRAPHICS

Respondents by Gender

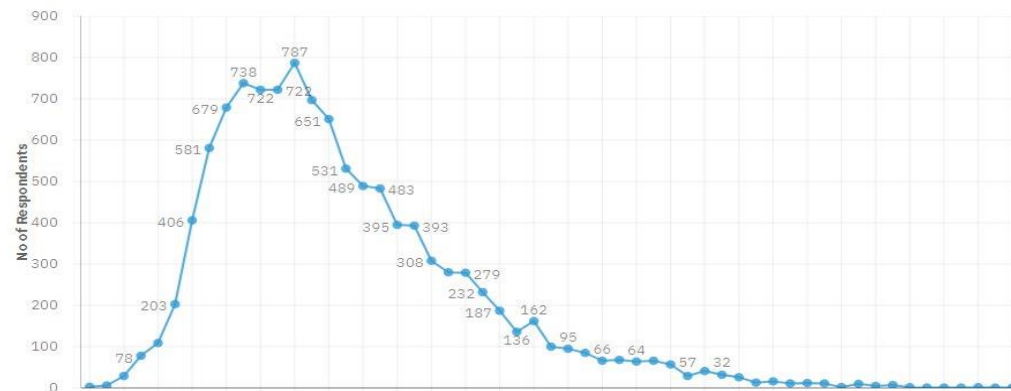
Gender  
Woman Man



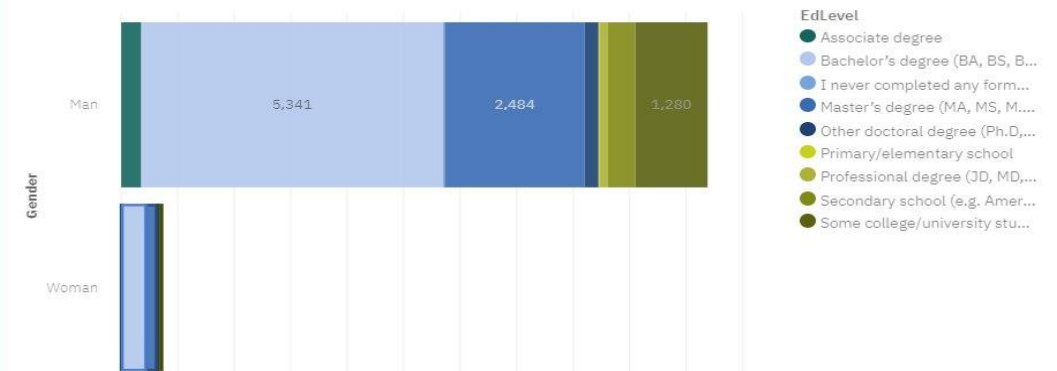
Respondent Locations



Respondents by Age



Formal Education by Gender



# DISCUSSION

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# OVERALL FINDINGS & IMPLICATIONS

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## Findings

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

## Implications

- JavaScript % TypeScript web frames gaining followers
- Global polarization of developers location & gender
- Young developers without postgrad studies on majority



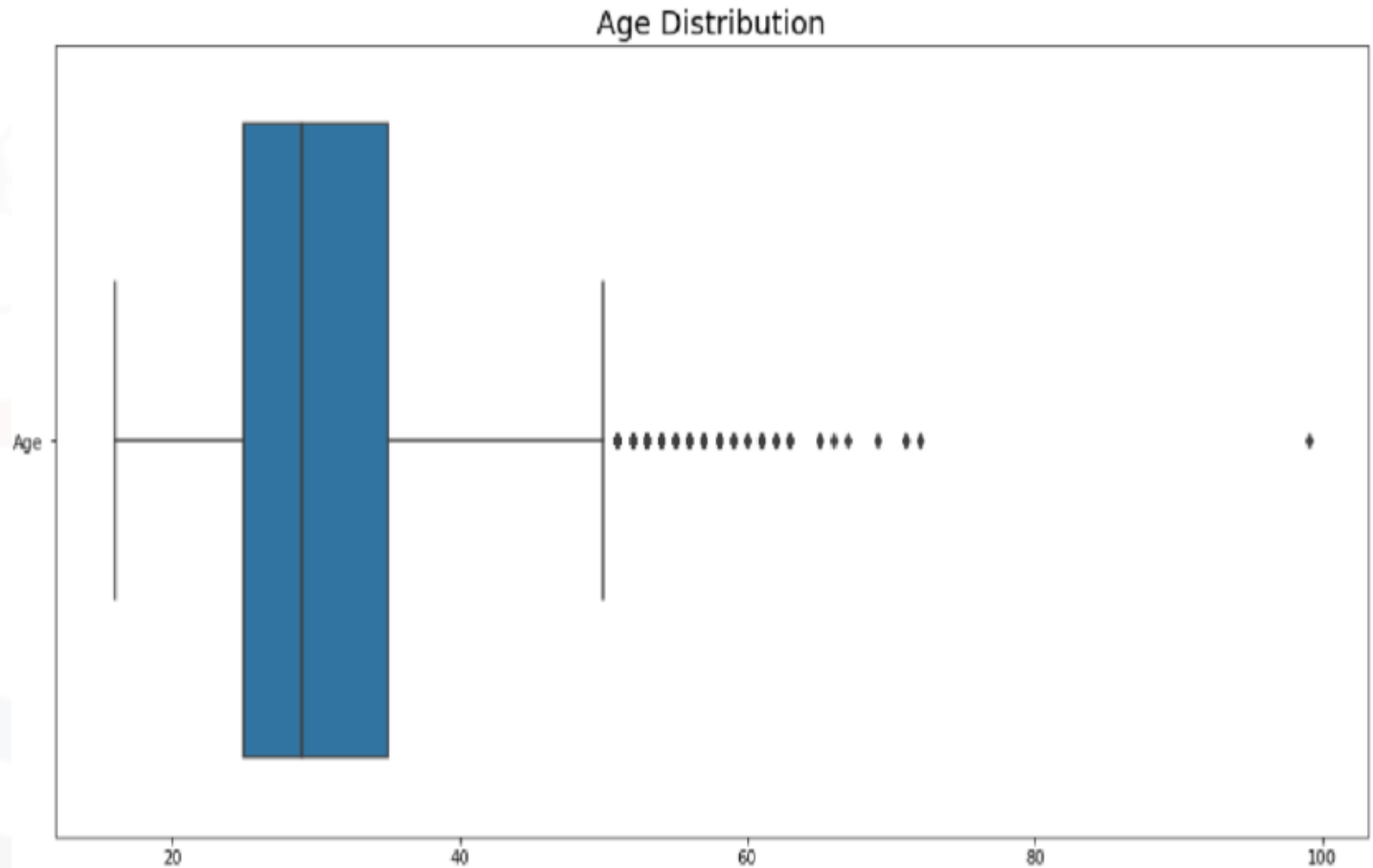
# CONCLUSION

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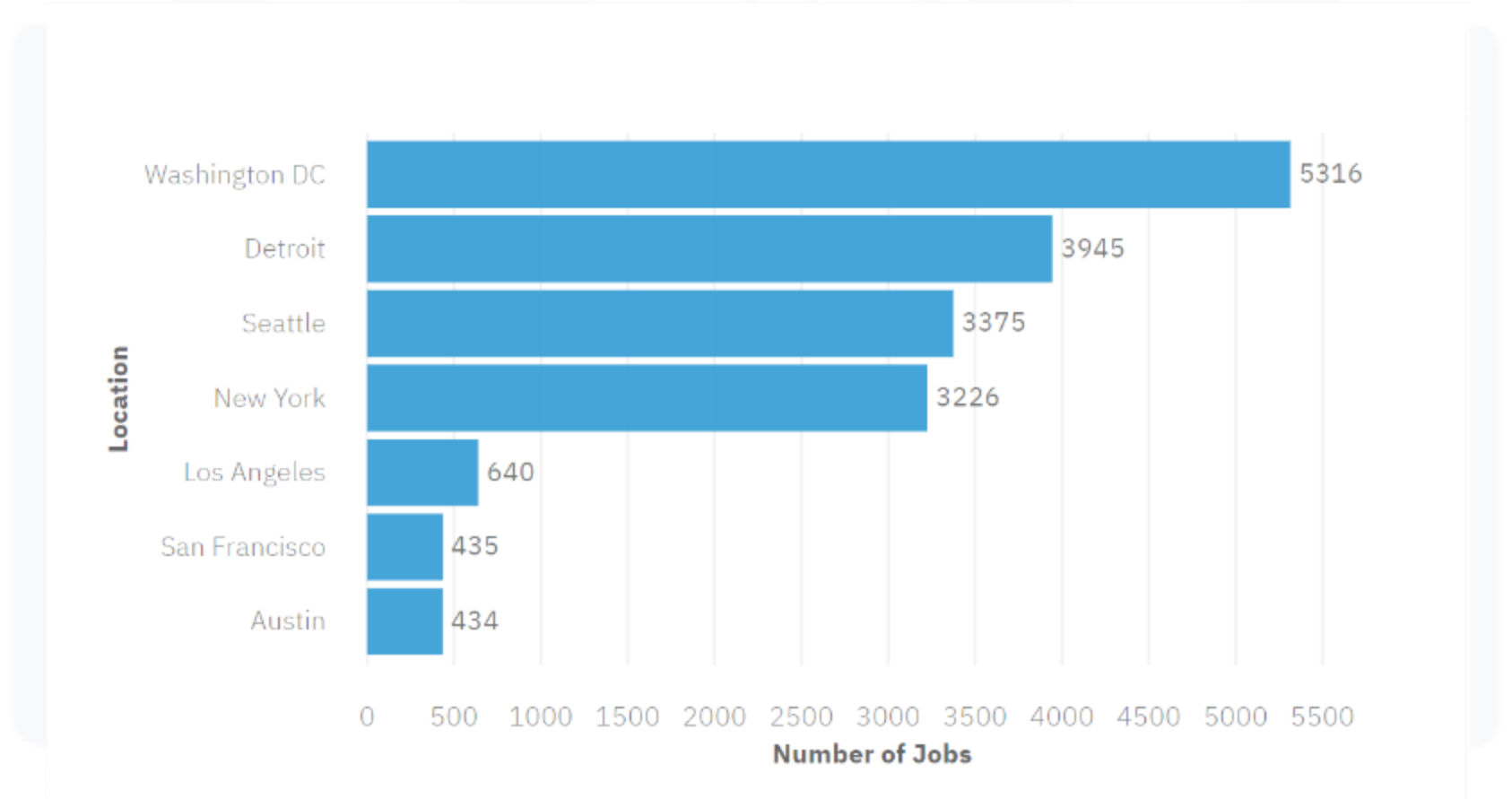
- Developers are people with very marked characteristics
- A good idea of popularity trends of different tools, platforms & Languages can be obtained.
- There is a job to be done to spread accessibility of this labor market to countries development

# APPENDIX



# JOB POSTINGS

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# POPULAR LANGUAGES

