STACK OVERFLOW DEVELOPER SURVEY 2019

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OUTLINE

- Executive Summary

- Introduction

- Methodology

- Results
  - Visualization – Charts
  - Dashboard

- Discussion
  - Findings & Implications

- Conclusion

- Appendix

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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
  - Analysing data distribution
  - Handling outliers
  - Correlations
- Data Visualization
  - Highlight distribution of data, relationships, the composition and comparison of data
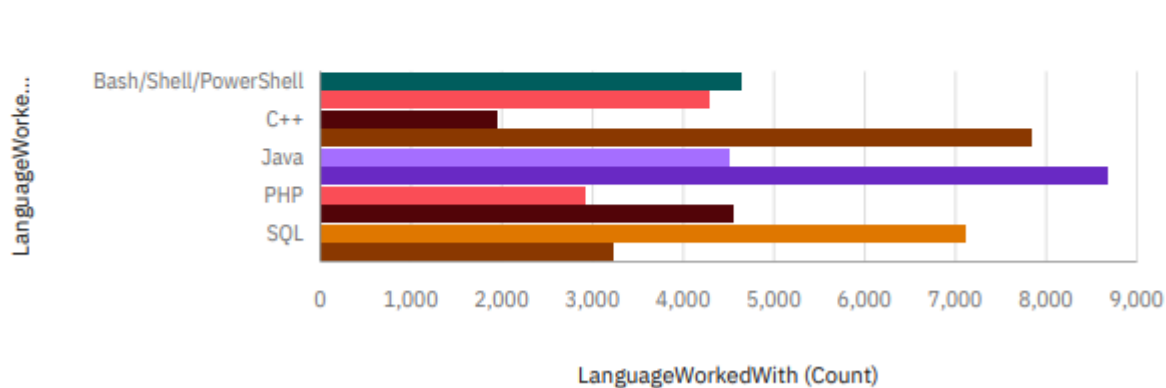- Dashboards

RESULTS

PROGRAMMING LANGUAGE TRENDS

Current Year
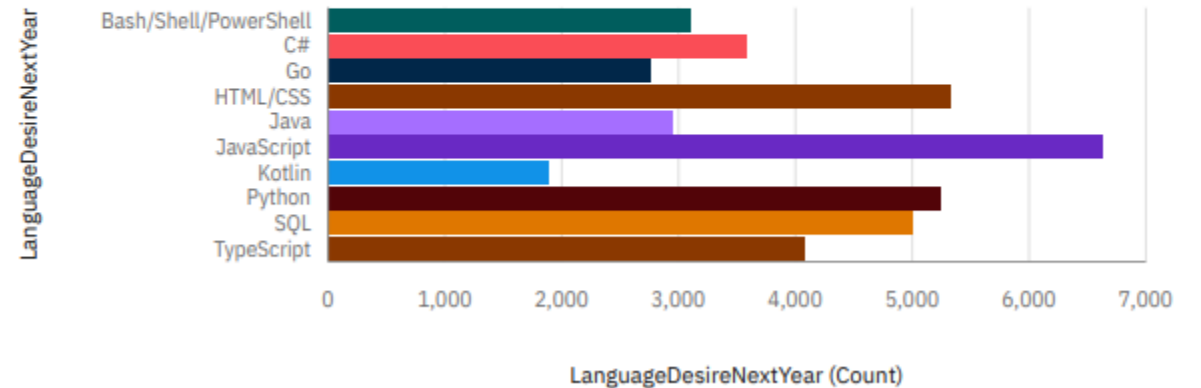
Next Year

PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

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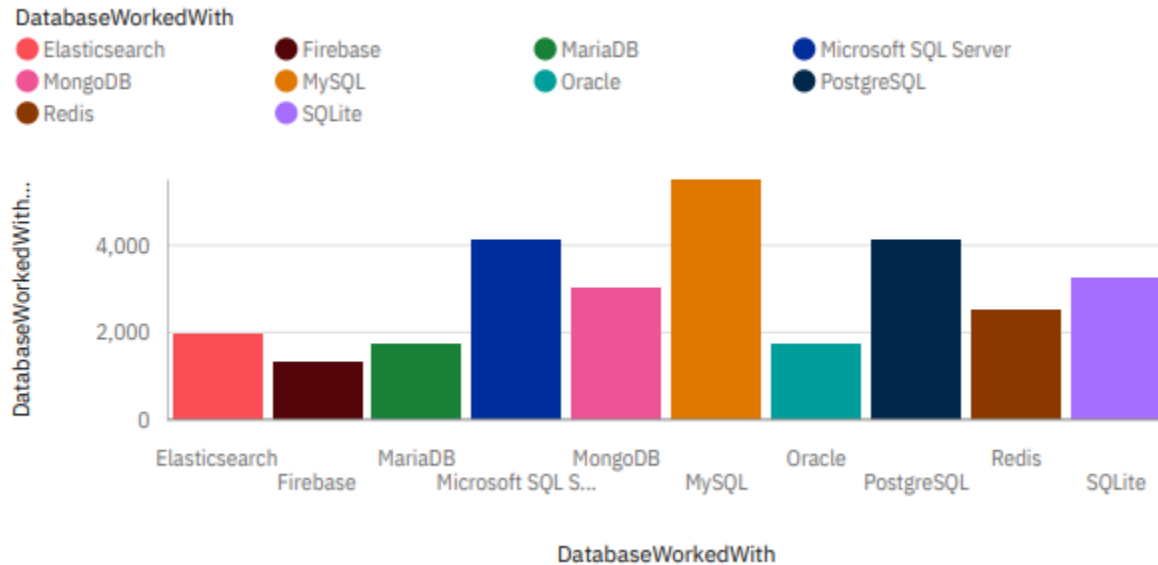- Great interest in TypeScript

Implications

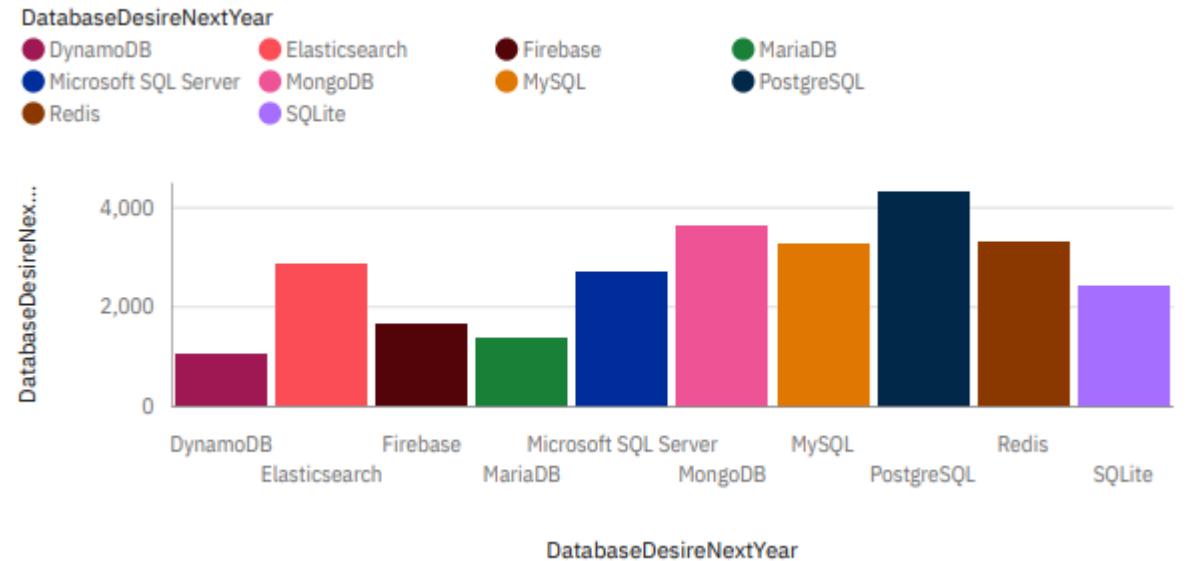- Possible developers migration from JavaScript to TypeScript.

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DATABASE TRENDS

Current Year

Next Year

Top 10 Databases Worked With

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

Top 10 Desired Database to Learn

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

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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
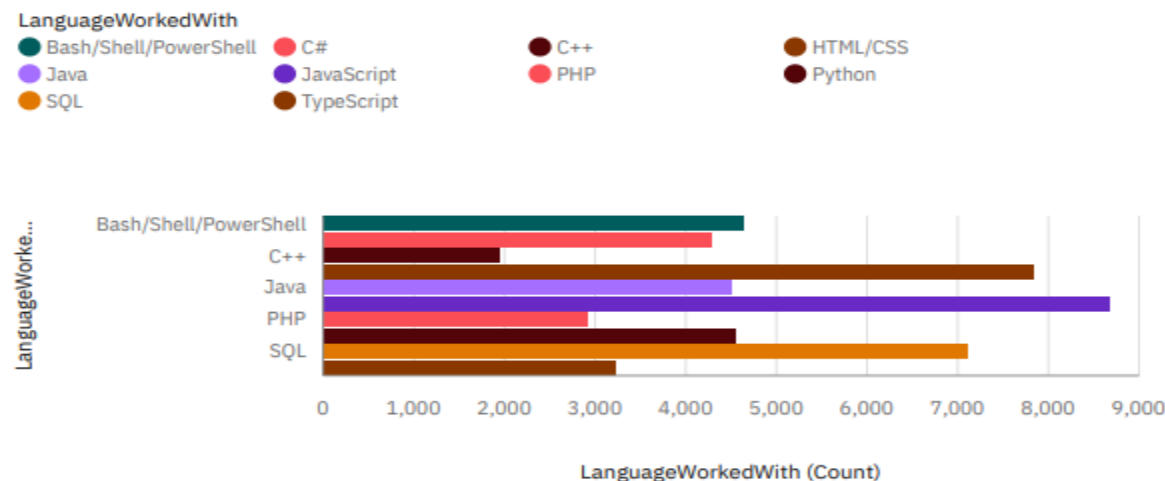
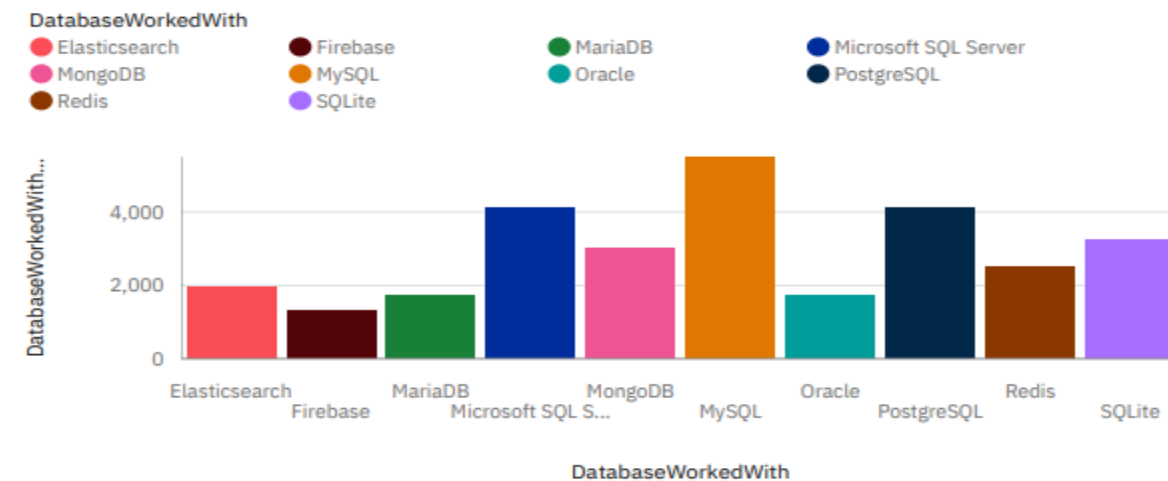IBM Developer

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DASHBOARD

https://github.com/NimishPrakash/IBM-Data-Analyst-Capstone-Project/blob/main/Cognos%20Visualisation%20Project.pdf
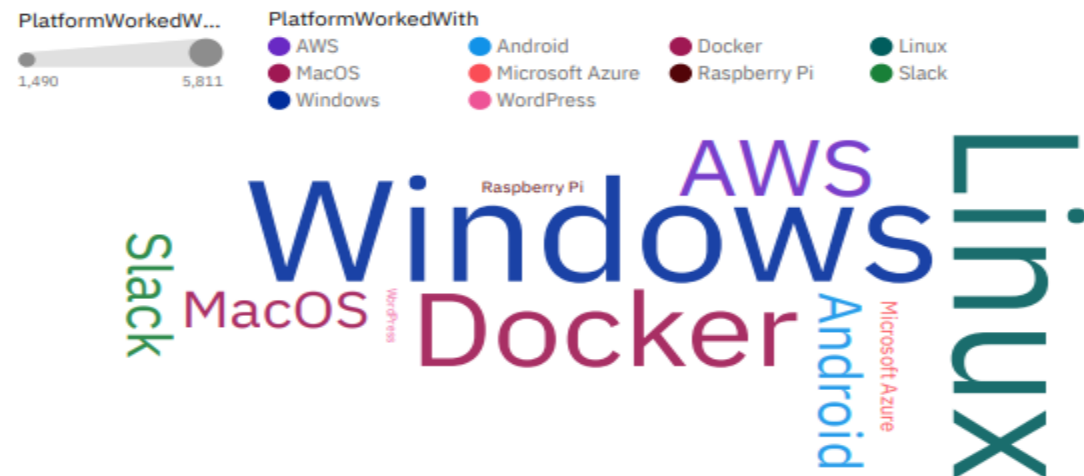
CURRENT TECHNOLOGY USAGE
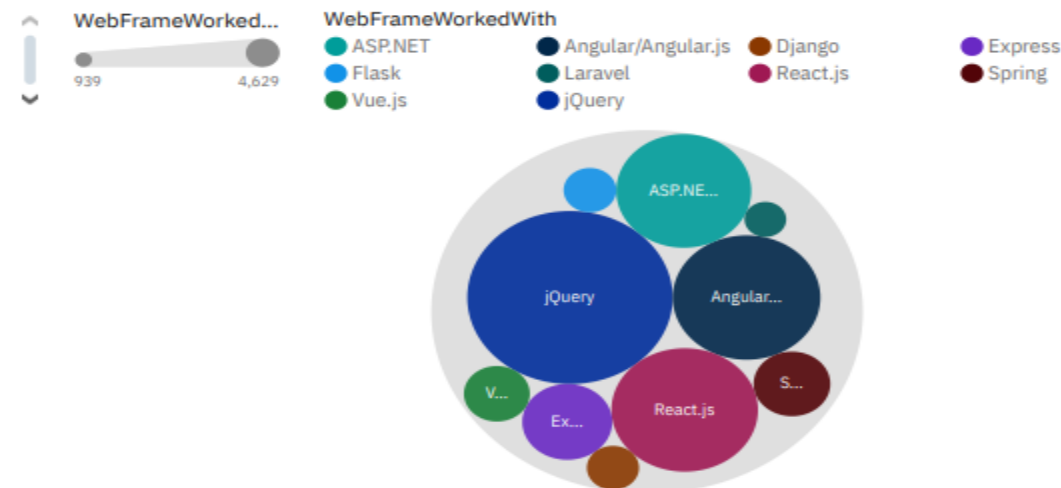
Top 10 Programming Language Experience

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

Top 10 Databases Worked With

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

Platforms Iteracted

PlatformWorkedW... 1,490 — 5,811

PlatformWorkedWith
- ● AWS
- ● Android
- ● Docker
- ● Linux
- ● MacOS
- ● Microsoft Azure
- ● Raspberry Pi
- ● Slack
- ● Windows
- ● WordPress

Top 10 WebFrame Uses

WebFrameWorked... 939 — 4,629

WebFrameWorkedWith
- ● ASP.NET
- ● Angular/Angular.js
- ● Django
- ● Express
- ● Flask
- ● Laravel
- ● React.js
- ● Spring
- ● Vue.js
- ● jQuery

FUTURE TECHNOLOGY TREND

Top 10 Desired Languages to Learn

LanguageDesireNextYear

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

Top 10 Desired Database to Learn

DatabaseDesireNextYear

- ● DynamoDB
- ● Elasticsearch
- ● Firebase
- ● MariaDB
- ● Microsoft SQL Server
- ● MongoDB
- ● MySQL
- ● PostgreSQL
- ● Redis
- ● SQLite
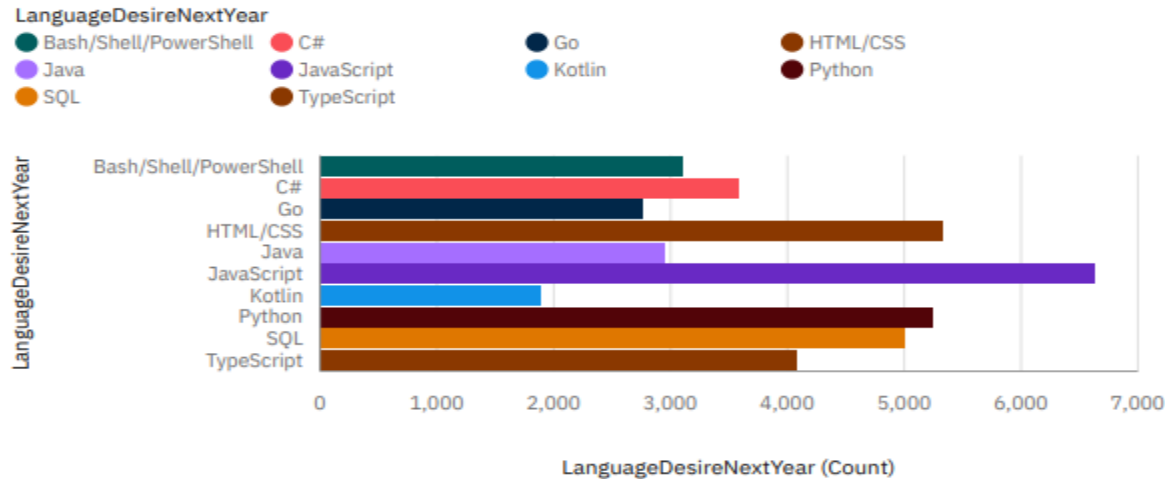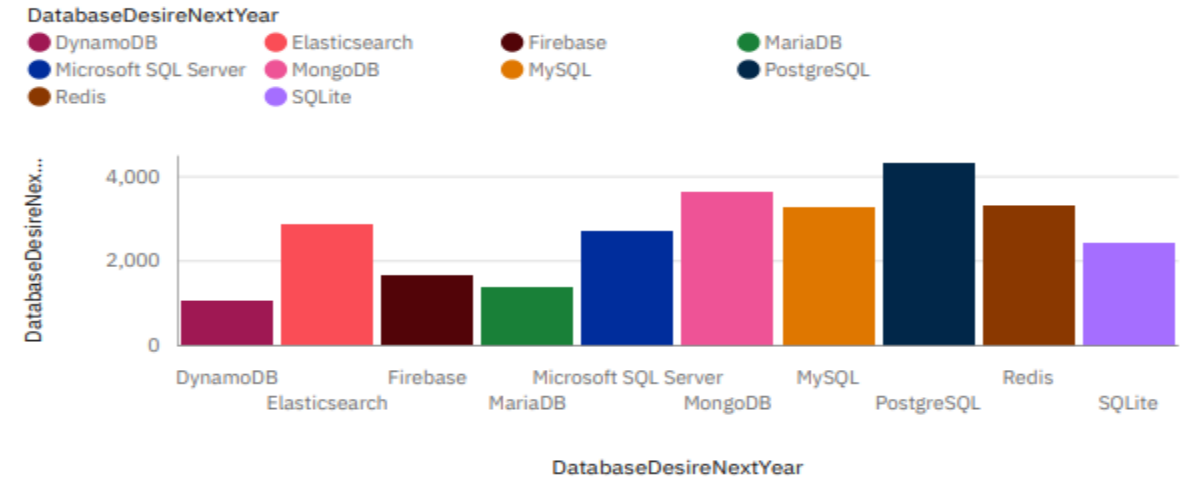
Platform Desired to Learn

PlatformDesireNe...   PlatformDesireNe...

2,359   5,865   2,359   5,865
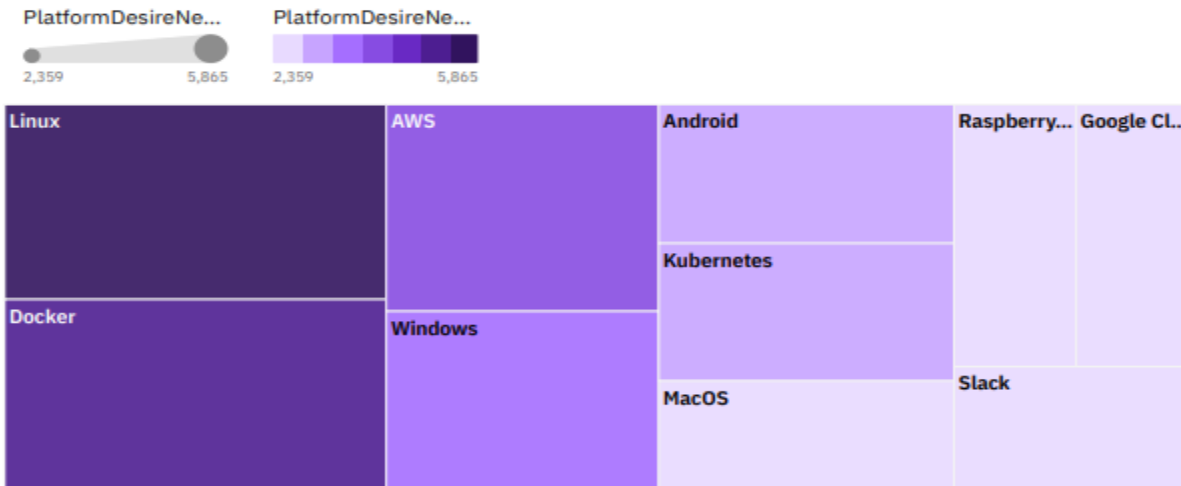
Web Frame Desired to Learn

WebFrameDesire...   WebFrameDesireNextYear

970   4,714

- ● ASP.NET
- ● Angular/Angular.js
- ● Django
- ● Express
- ● Flask
- ● React.js
- ● Ruby on Rails
- ● Spring
- ● Vue.js
- ● jQuery
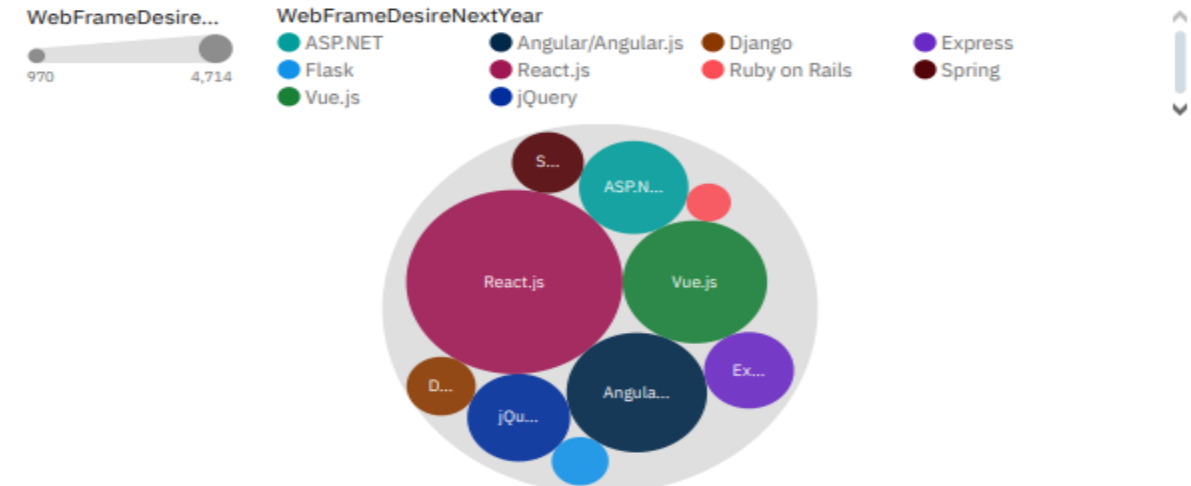
DEMOGRAPHICS

Respondent by Gender

Gender
- Woman
- Man

731

10,480

Respondent Locations

Country
- Australia
- Austria
- Hungary
- Mexico
- Israel
- Argentina
- United Arab Emirates
- South Korea
- South Africa
- Iran
- Nicaragua
- Norway

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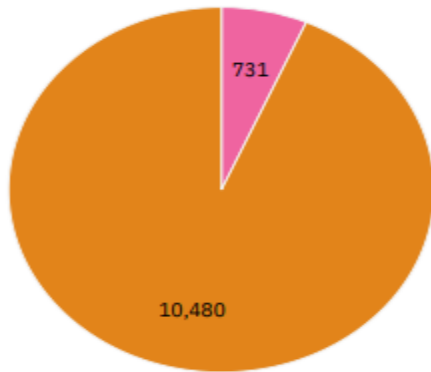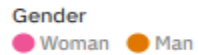
Respondent by Age
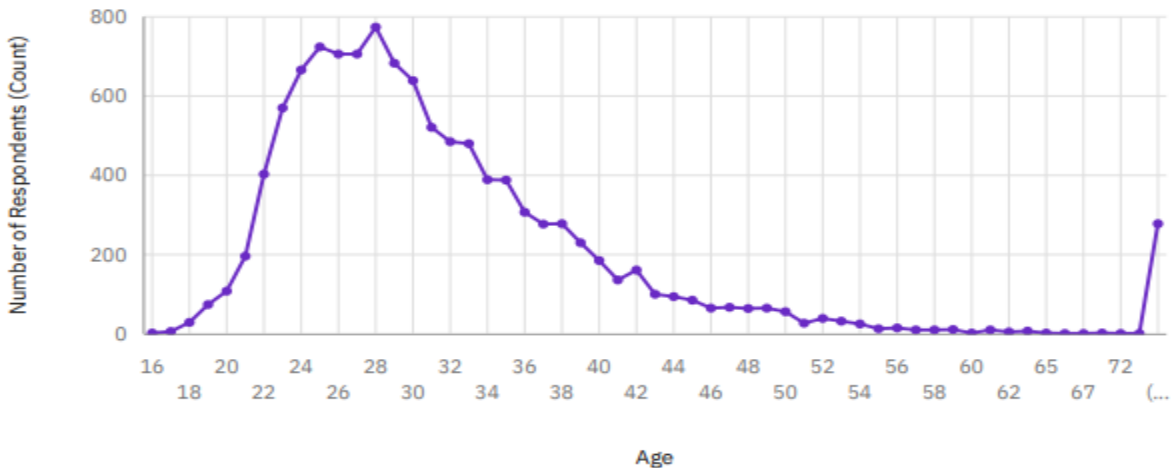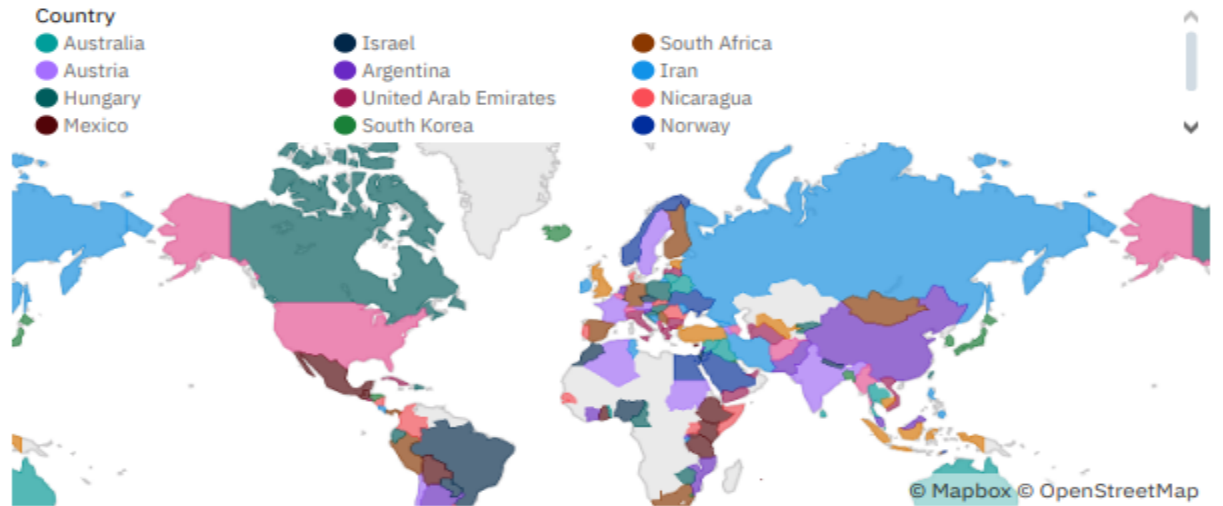
Formal Education/Gender

EdLevel
- Associate degree
- Master's degree (MA, MS, M.Eng.,...
- Professional degree (JD, MD, etc.)
- Bachelor's degree (BA, BS, B.Eng....
- Other doctoral degree (Ph.D, Ed.D...
- Secondary school (e.g. American ...
- I never completed any formal edu...
- Primary/elementary school
- Some college/university study wit...
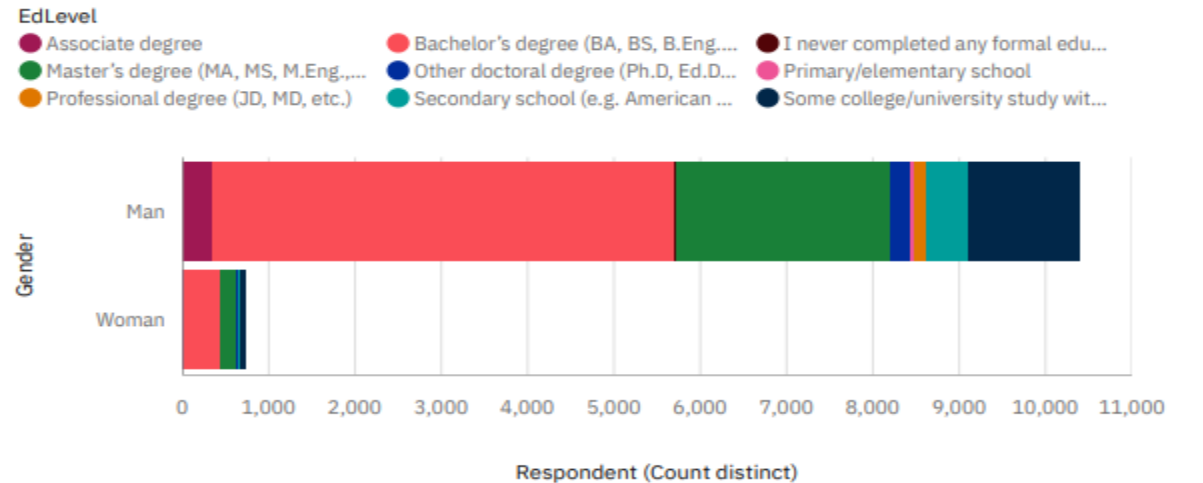
DISCUSSION

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
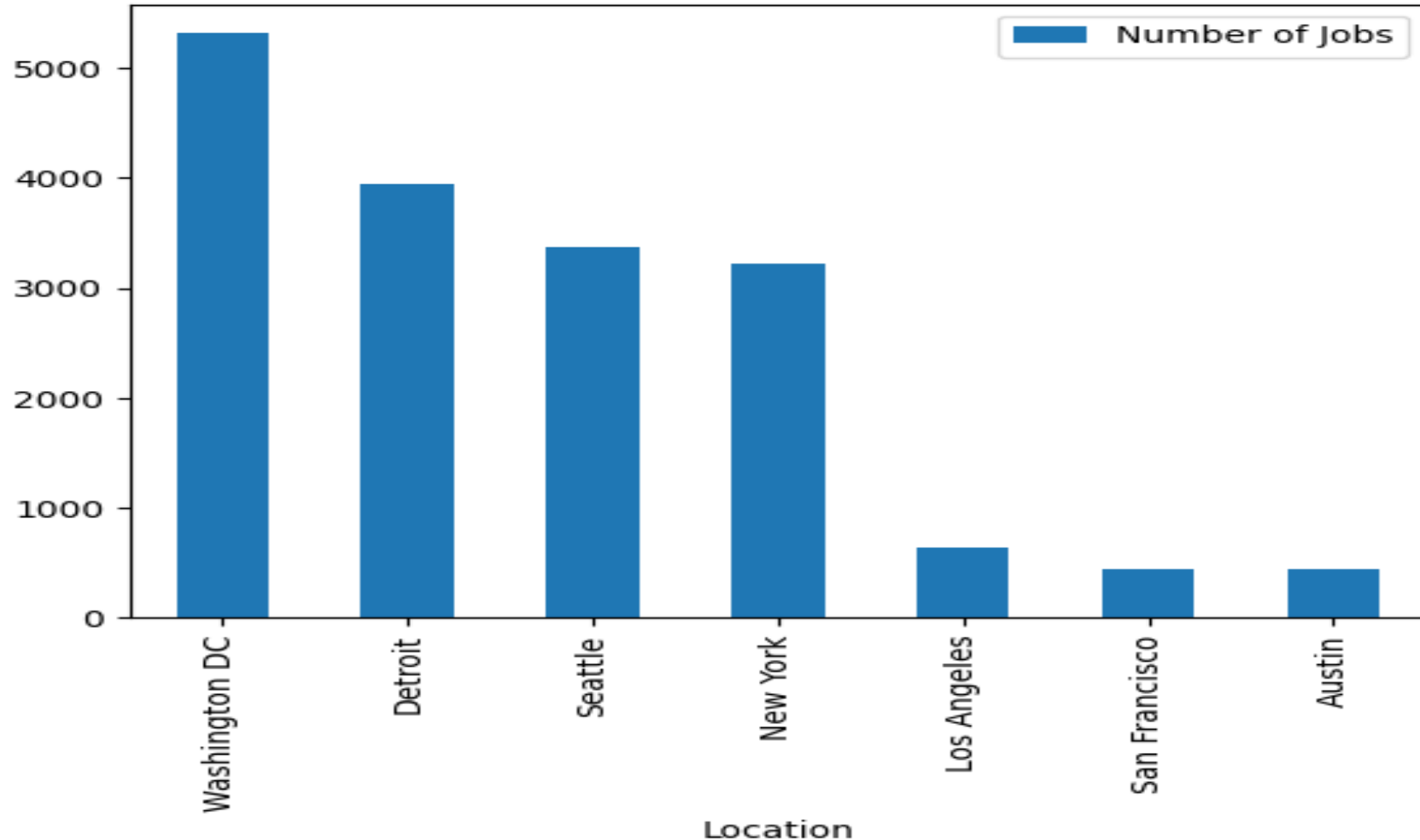
CONCLUSION

- 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.

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APPENDIX

- Include any relevant additional charts, or tables that you may have created during the analysis phase.

JOB POSTINGS

POPULAR LANGUAGES