



Capstone Project 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
- Result presentation supported with graphs and trends
- Discussion of findings, challenges and limitations
- Conclusion

INTRODUCTION



- Stack Overflow's annual Developer Survey is the largest and most comprehensive survey of people who code around the world.
- Random survey samples do not necessarily represent the developer community evenly but provide insights.
- The presentation will help identify future skill requirements in the global IT sector necessary for the firm to keep pace with changing technologies and remain competitive.
- Characterization of developers around the globe.
- Recommendations will be stated based on the analysis.

METHODOLOGY



- Collecting Data – Stack Overflow Developer Survey 2019
- Data Wrangling
- Exploratory data analysis
 - Finding Duplicates & Removing Duplicates.
 - Finding & Imputing Missing Value.
 - Normalizing Data.
 - Handling Outliners.
 - Correlation
- Visualization Data
 - Visualization distribution, relation, composition & comparison of data
- Dashboards

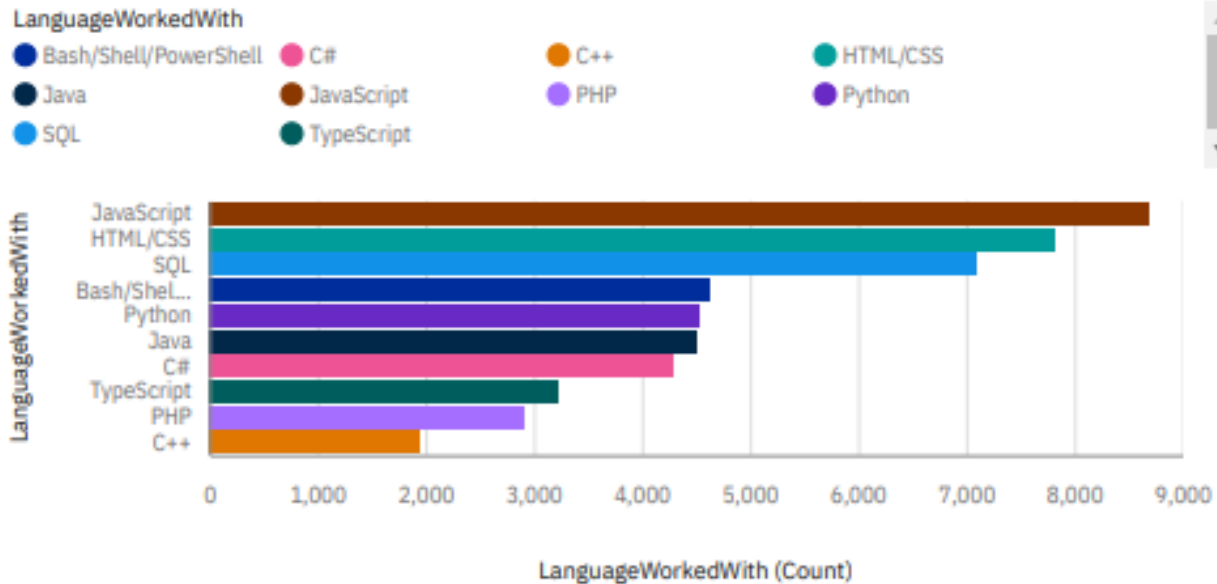
RESULTS



PROGRAMMING LANGUAGE TRENDS

Current Year

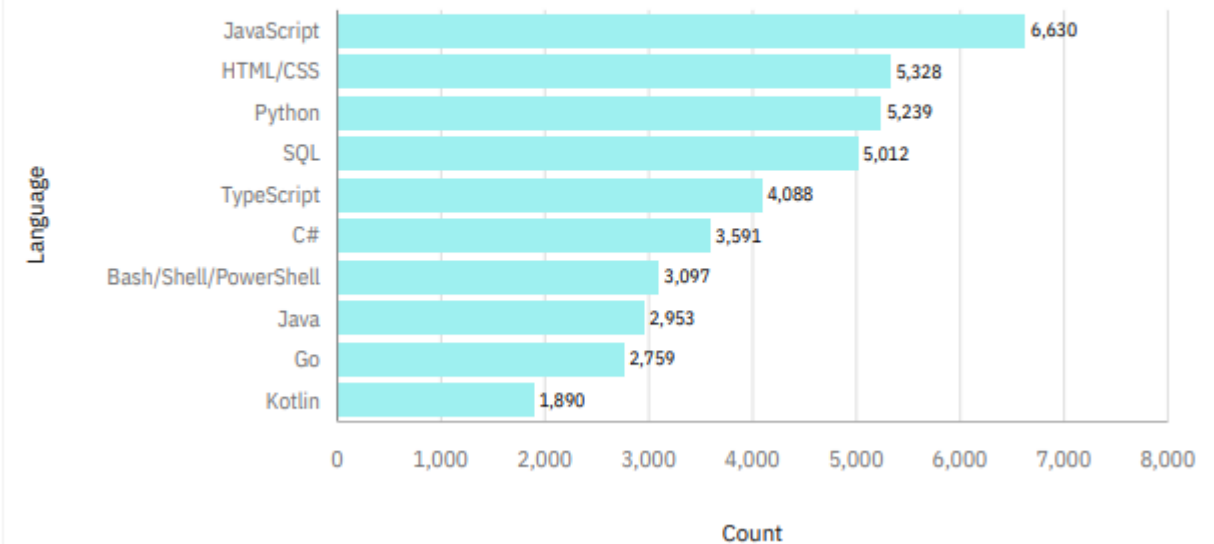
Top 10 Languages Worked With



Next Year

Future Technology Trend

Top 10 Language Desire Next Year



PROGRAMMING LANGUAGE TRENDS – FINDINGS & IMPLICATIONS

Findings

- JavaScript & HTML/CSS shows to be top dominant languages.
- Javascript, html/css, SQL will be the most use languages next year and future years.
- Python will have more demand then SQL next year.
- Python & TypeScript are climbing the top 10 languages ladder.

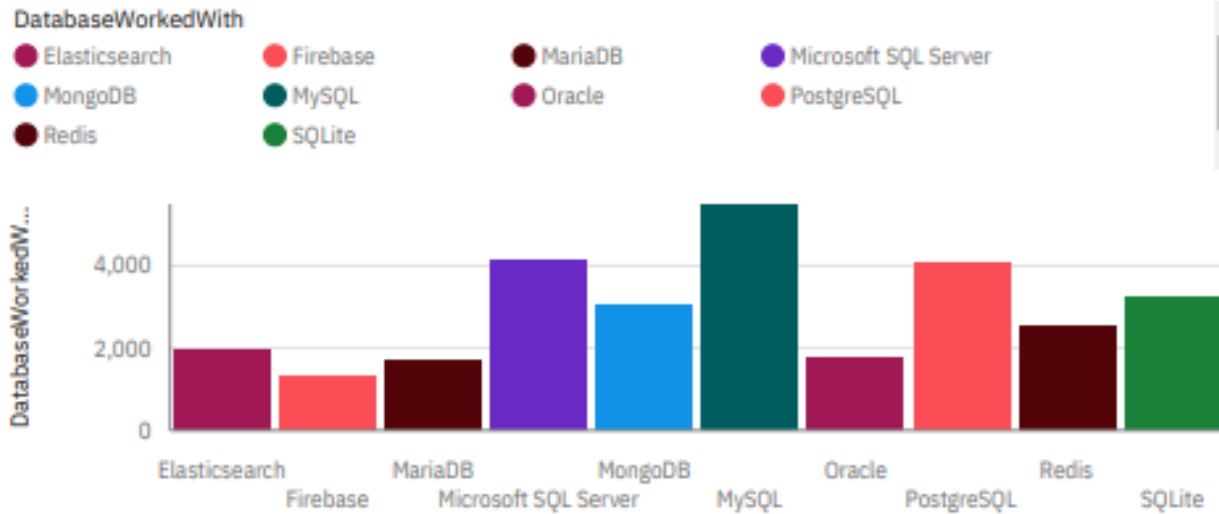
Implications

- Bash/Shell/PowerShell and Java are in decline.
- JavaScript and HTML are used for web development as a tech skill has the highest demand especially Typescript is getting viral.
- Python is gaining more and more traction due to the increasing demand for AI and ML skills.

DATABASE TRENDS

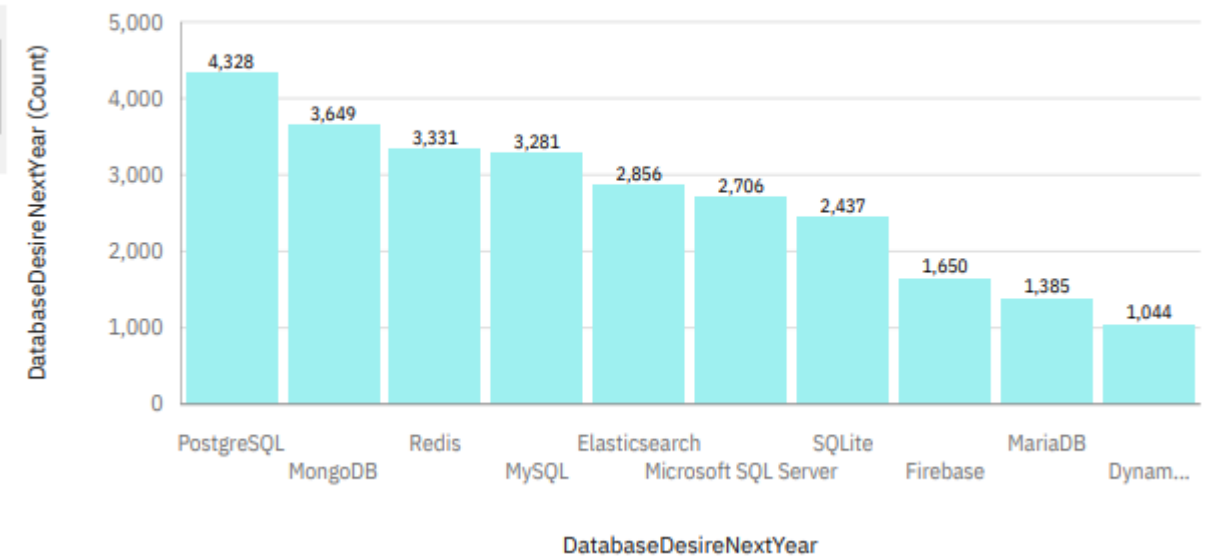
Current Year

Top 10 Databases Worked With



Next Year

Top 10 Database Desire Next Year



DATABASE TRENDS – FINDINGS & IMPLICATIONS

Findings

- PostgreSQL & MongoDB respectively are fast-growing
- MySQL & Microsoft SQL Server popularity are expected to decline.
- New Databases are gaining popularity and joining the race.

Implications

- SQL is still a top told to watch out for in data specialist.
- Companies still prefer open source databases.
- Oracle SQL was not among the top 5. It's losing relevance as time passes.
- Firebase & Oracle are expected to be eliminated from top 10 databases.

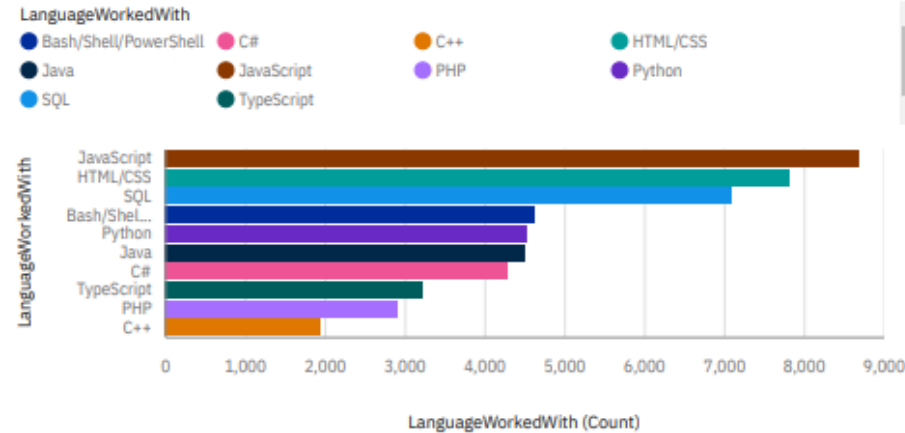
DASHBOARD



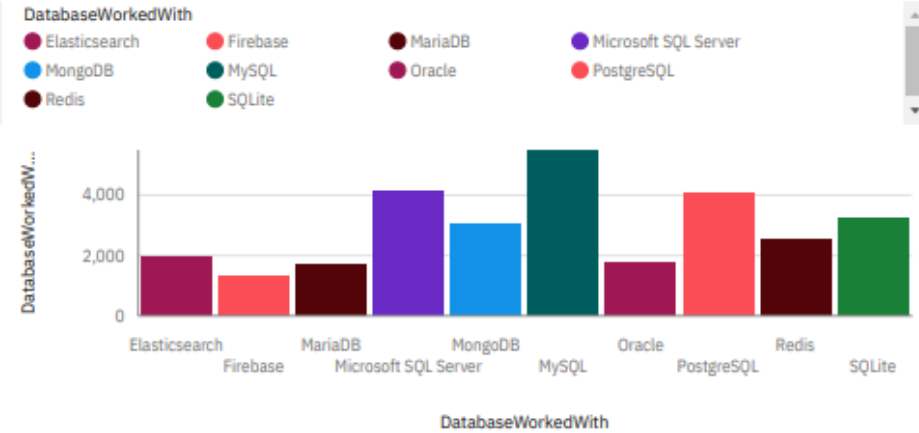
<The GitHub link of the Cognos dashboard goes here.>

DASHBOARD TAB 1

Top 10 Languages Worked With



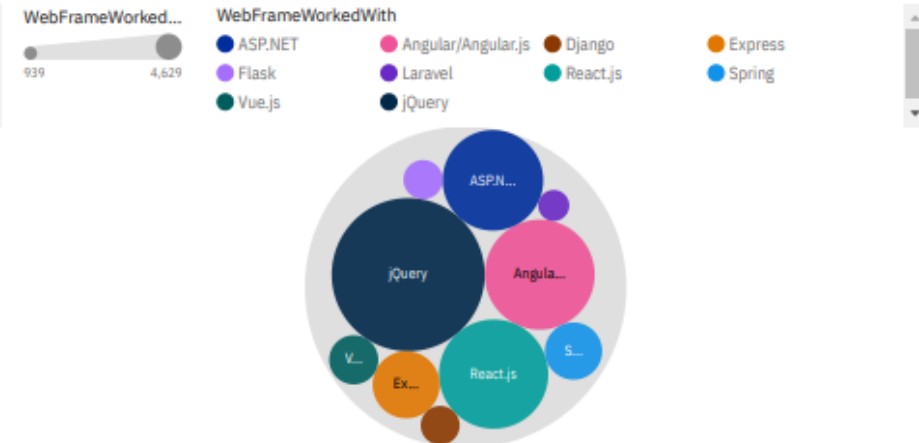
Top 10 Databases Worked With



Platforms Worked With



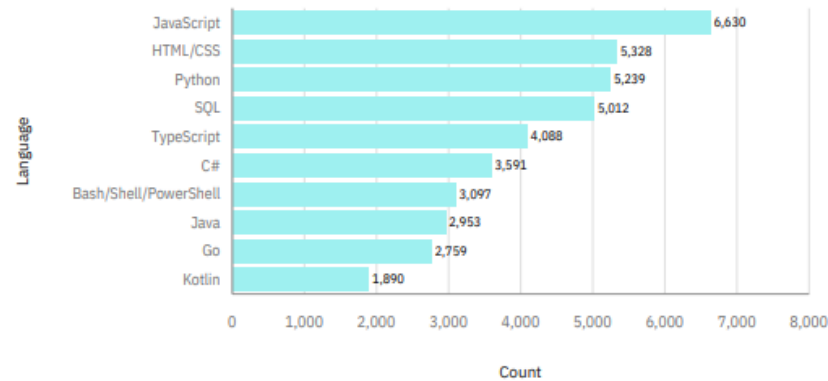
Top 10 Web Frameworks Worked With



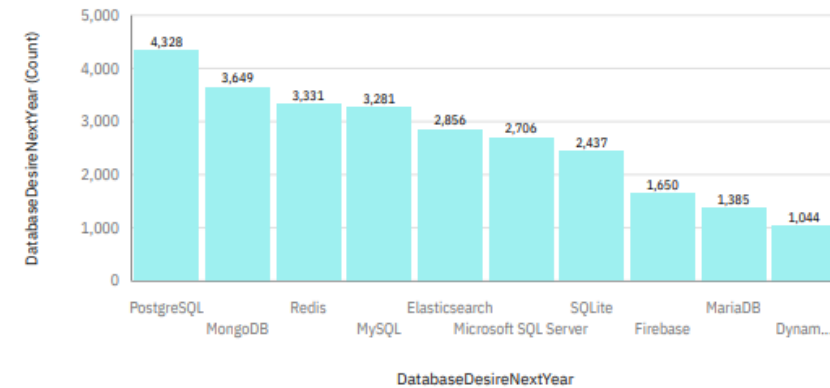
DASHBOARD TAB 2

Future Technology Trend

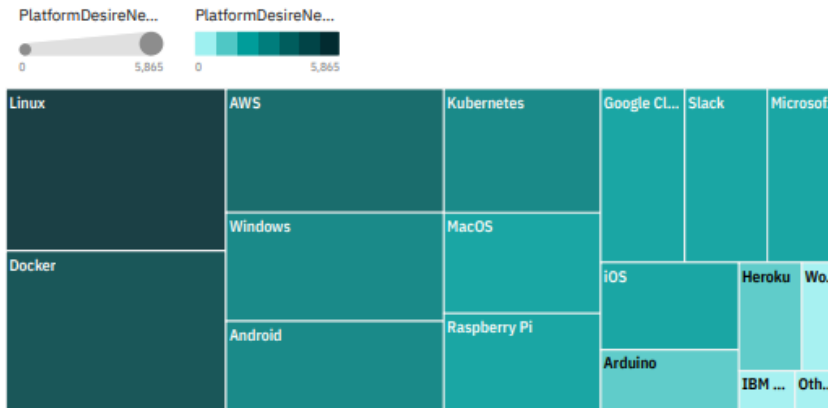
Top 10 Language Desire Next Year



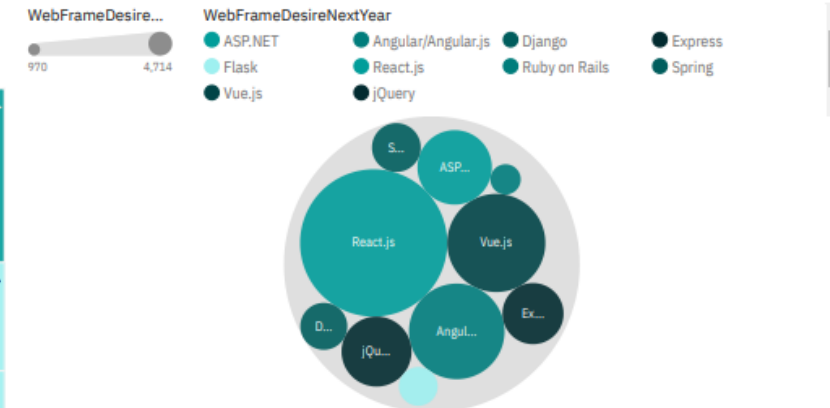
Top 10 Database Desire Next Year



Platform Desire Next Year



Top 10 Web Frame Desire Next Year



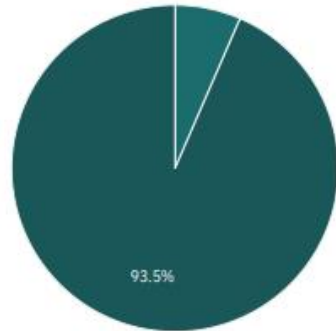
DASHBOARD TAB 3

Demographics

Respondent Classified by Gender

Gender

● Woman ● Man



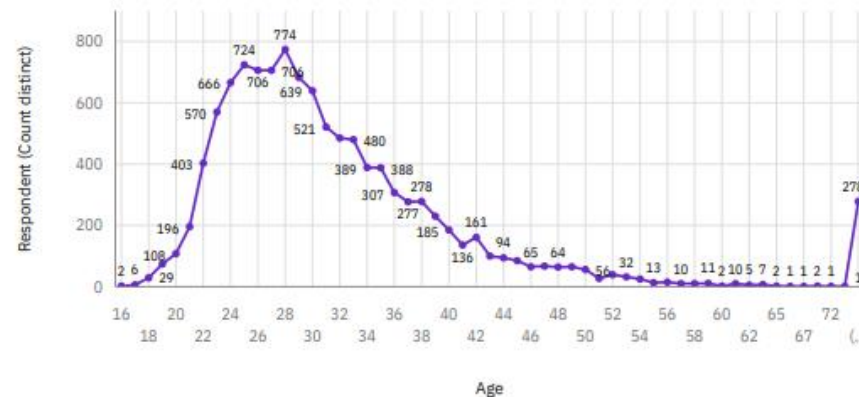
Respondent Count for Countries

Country

● Australia ● Israel ● South Africa
● Austria ● Argentina ● Iran
● Hungary ● United Arab Emirates ● Nicaragua



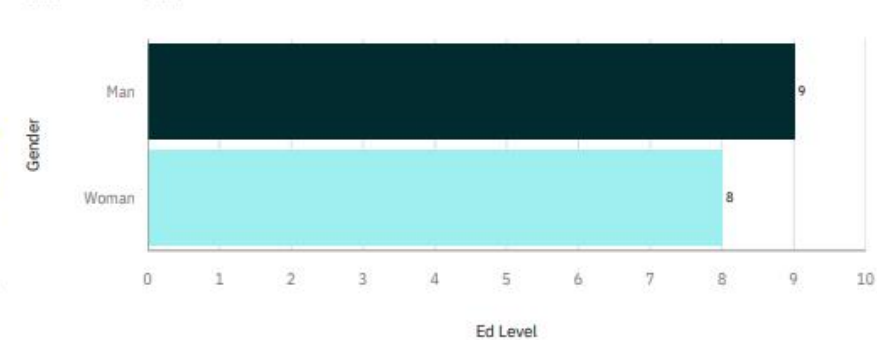
Respondent Count by Age



Respondent by Gender, Classified by Formal Education Level

Age (Average)

29.67 30.87



DISCUSSION



OVERALL FINDINGS & IMPLICATIONS

Findings

- Python & PostgreSQL are fast growing as programming language and database.
- Linux seems to remain dominant platform while React.js topped Webframes.
- Strong youth presence in IT.
- Pure skills contending with formal education might grow.

Implications

- PowerShell & MySQL are in decline respectively.
- Windows lagged behind for Docker as well as jQuery Webframe.
- 3.5 Male respondents predicts more male developers.
- Majority of developers in developed countries

CONCLUSION

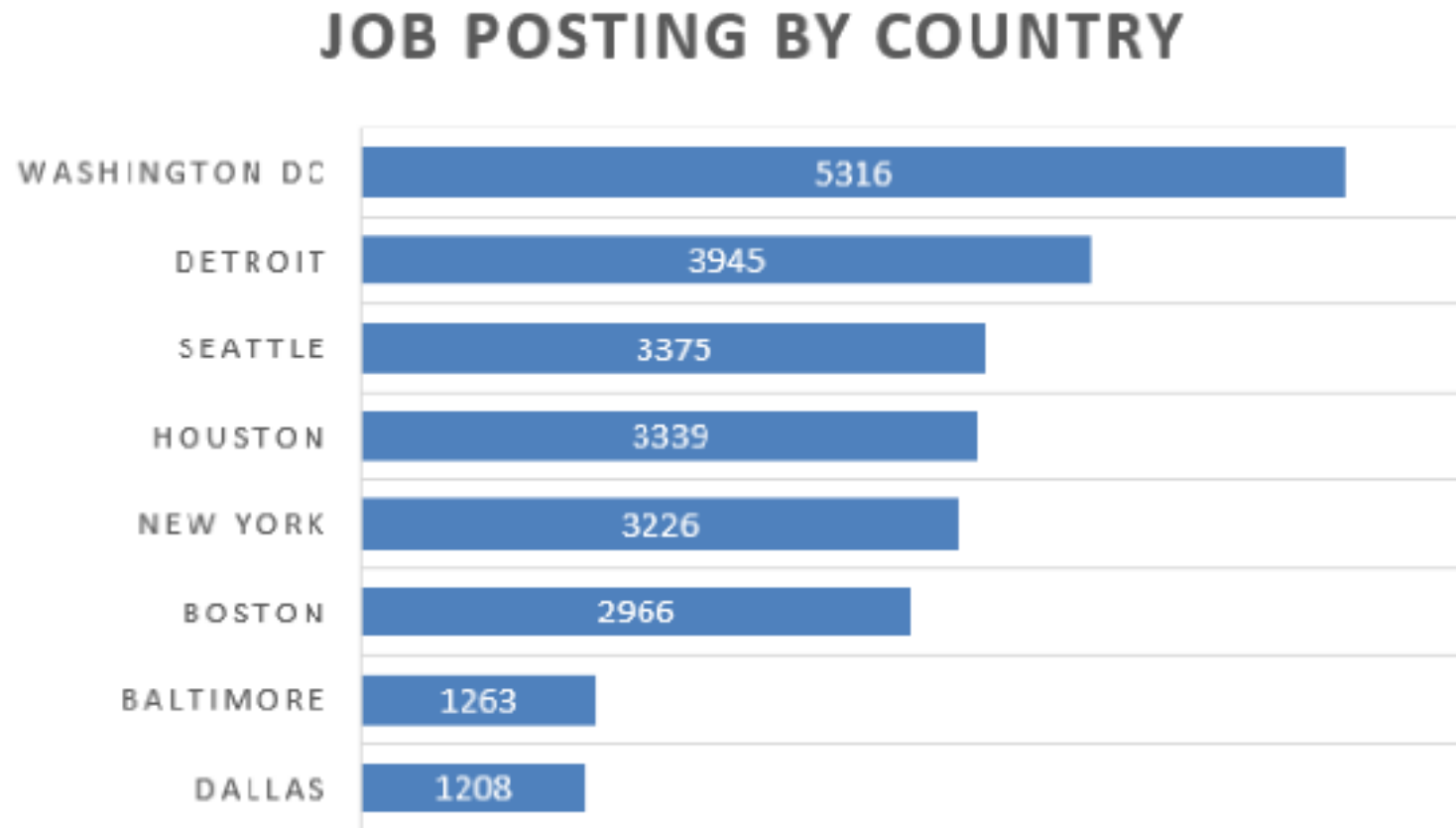


- Change is the only constant in Tech world “survival to the most adaptive”.
- Huge gender gap in IT needs further multivariate analysis.
- Concentration of developers in developed countries insight investigating relation and correlation with immigration trends and governance issues in 3 rd world countries.
- Youth leading IT inspire further studying of skills revolution over formal education.

APPENDIX



JOB POSTINGS



POPULAR LANGUAGES

