Developer Survey IBM Capstone

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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.

- Results presentation supported with graphs and trends.

- Discussion of overall findings and implications regarding the results of the previously exposed

- Final conclusions of the carried out research.
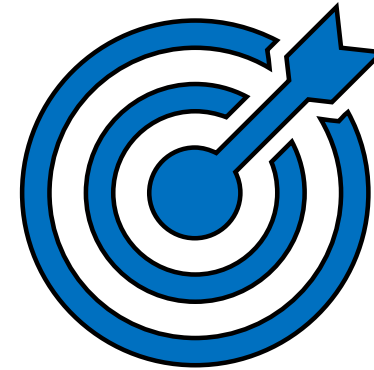
INTRODUCTION

- Stack Overflow's annual Developer Survey is the largest and most comprehensive global survey of coders.

- The results do not reflect the entire developer community equally.

- The survey includes responses from nearly 90,000 developers.

- It identifies trends to forecast the future direction of the developer field.

- It provides insights into the characteristics of developers worldwide.

METHODOLOGY
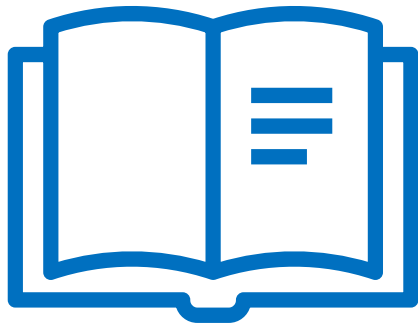
- Collect survey data & explore its content

  - Web Scraping

  - APIs.

- Request library.

- Data Wrangling

- Exploratory data analysis

  - Analyzing data distribution.

  - Handling outliers.

  - Correlations.

- Data Visualization

- Highlight data distribution, relationships, composition and comparisons.

- Dashboards

RESULTS
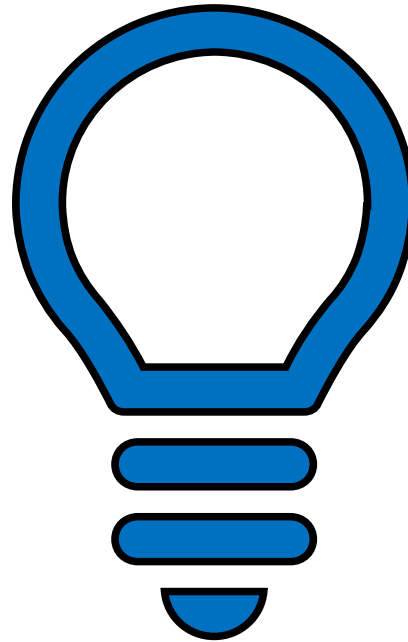
PROGTAMING LANGUAGE –TRENDS FINDSINGS & IMPLICATIONS

FINDINGS

JavaScript, HTML/CSS,SQL, Shell and Python are most widely used.

JavaScript, HTML/CSS, Python and Transcript will be the most used languages next year and future years
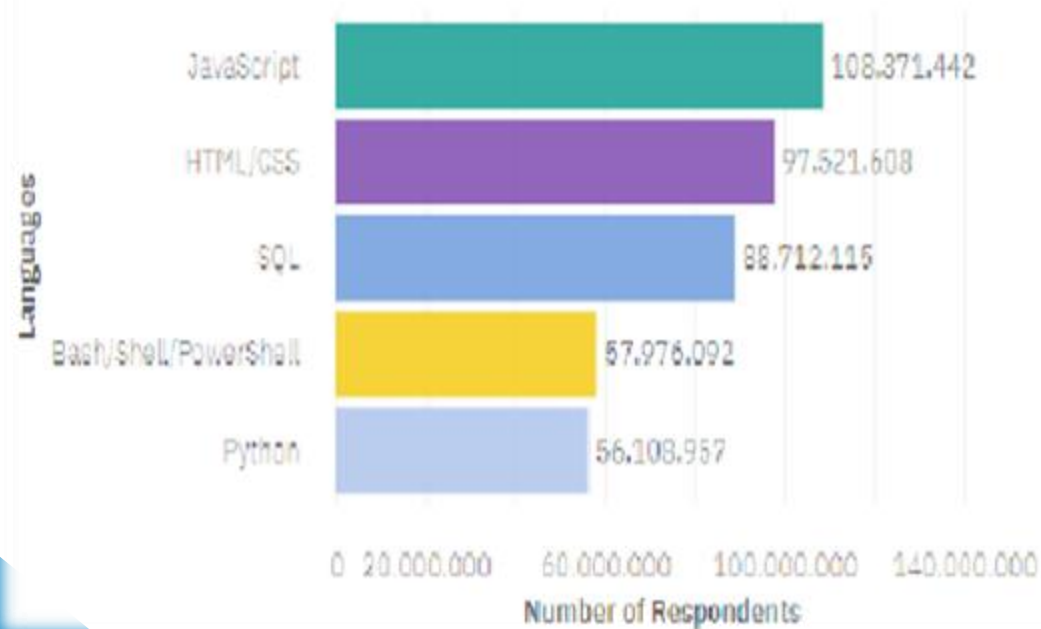
Python will have more demand than SQL next year

IMPLICATIONS

JavaScript and HTML are used for web development meaning, web development as a tech skill has the highest demand especially as Typescript is becoming popular
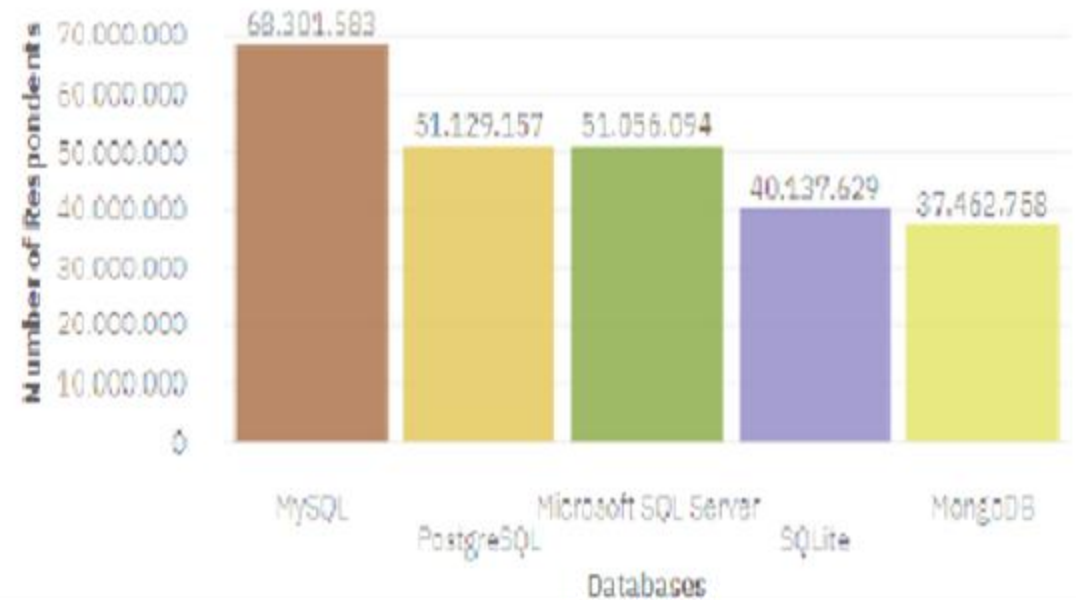
Python is gaining more and more traction due to the increase demand for AI and ML skills

LANGUAGE TRENDS

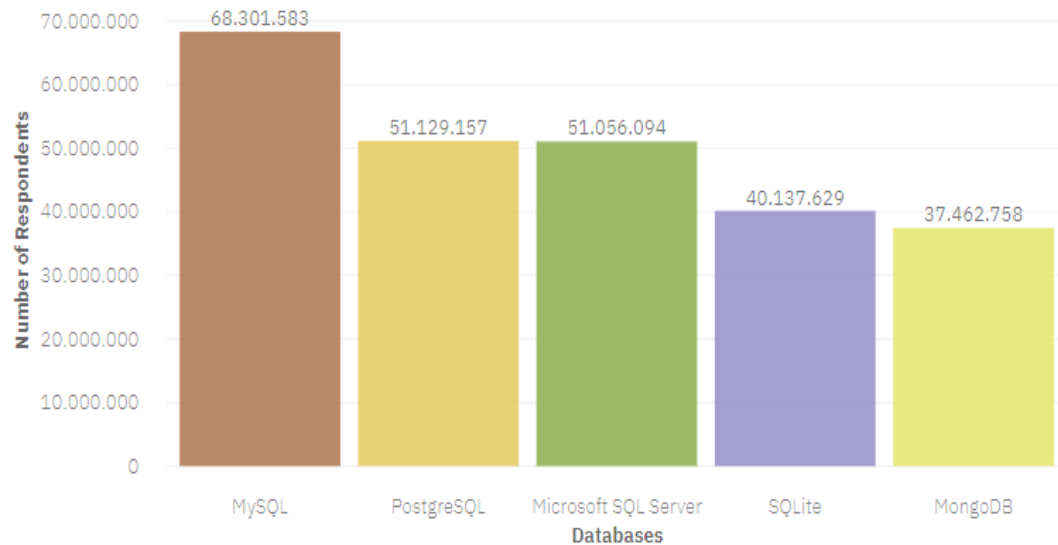Top 5 Programming Language Experience

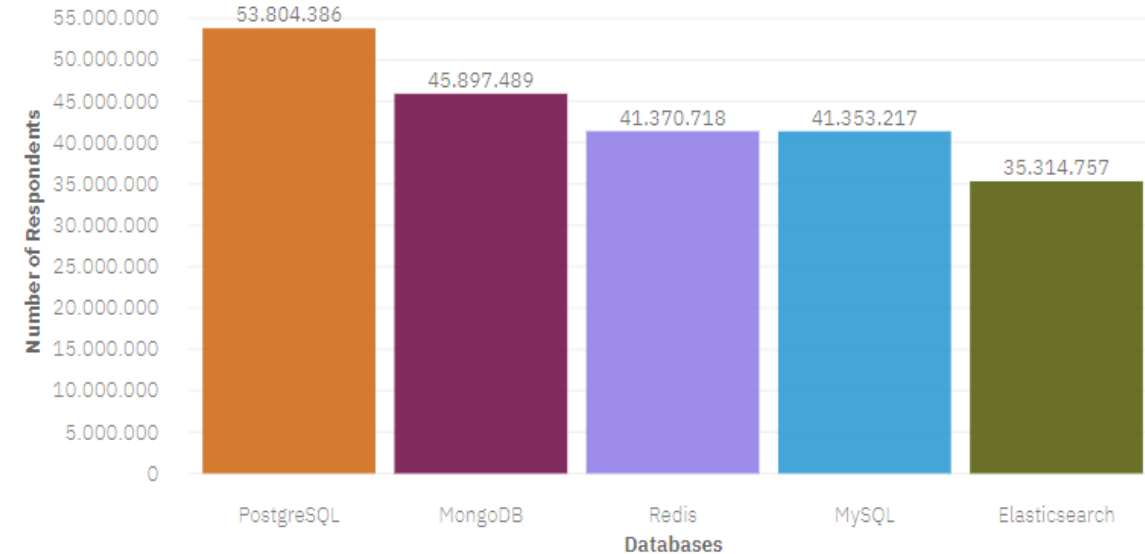| Language	Number of Respondents
JavaScript	108.371.442
HTML/CES	97.521.608
SQL	88.712.115
Bash/Shell/PowerShell	57.976.092
Python	56.108.957

Top 5 Databases Worked with

Database	Number of Respondents
MySQL	68.301.583
PostgreSQL	51.129.157
Microsoft SQL Server	51.056.094
SQLite	40.137.629
MongoDB	37.462.758

DATABASE TRENDS

DATABASE TRENDS & IMPLICATIONS

Findings

-MySQL, Porstgre SQL, SQLite and MongoDB are the top most used Databases at the moment

-However, Postgre SQL, MongboDB,Redis,MySQL and Elasticsense are projected to become more popular in the future

-Redis and Elasticsense are relatively new tools and are set to gain more traction in the IT Space
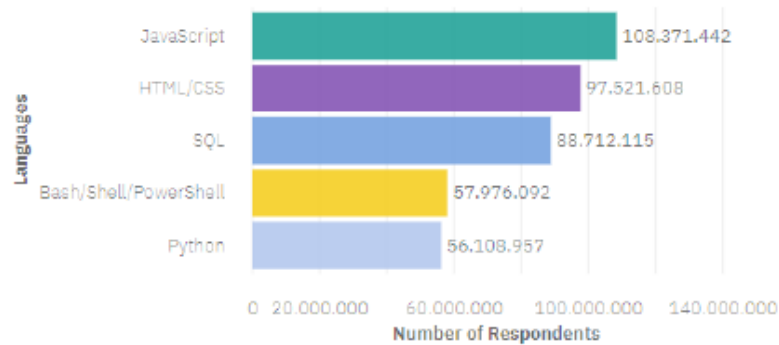
Implications

-SQL is still a top tool to watch out for in data specialists

-Companies still prefer Open source databases.

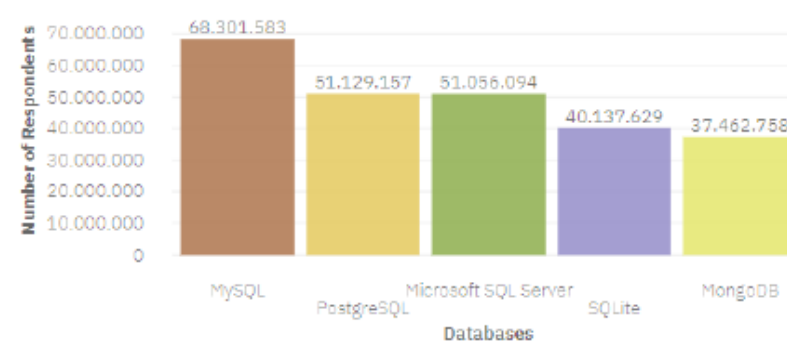-Oracle SQL was not among the top , loosing relevance as time passes

Dashboard

https://github.com/JamesStewart89/testasses/blob/main/6-Dashboard-with-Cognos-Dashboard-Embedded-(CDE).pdf

CURRENT TECHNOLOGY USAGE
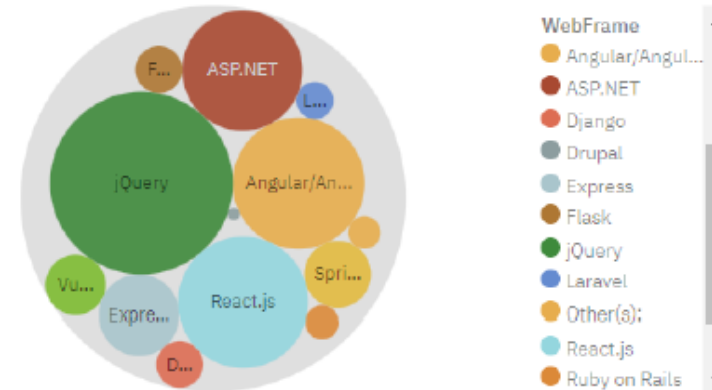

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Platforms Interacted

AWS · Slack · Microsoft Azure · Android · Windows · Docker · Linux · WordPress · Google Cloud Platform · iOS · Arduino · Heroku · MacOS · Kubernetes · Raspberry Pi

Top 10 WebFrames Used

WebFrame
- Angular/Angul...
- ASP.NET
- Django
- Drupal
- Express
- Flask
- jQuery
- Laravel
- Other(s):
- React.js
- Ruby on Rails

FUTURE TECHNOLOGY TREND
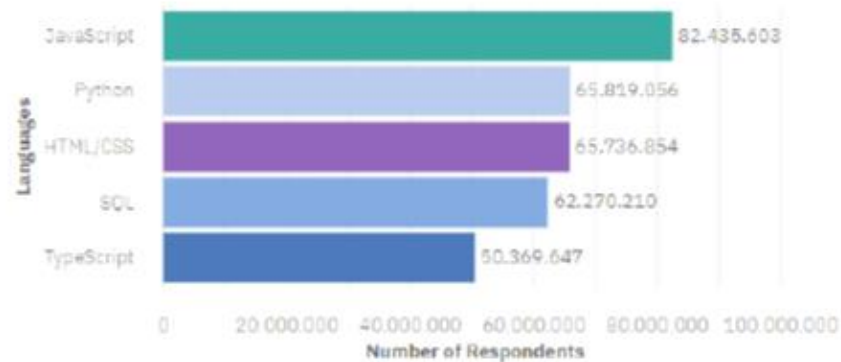
DEMOGRAPHICS
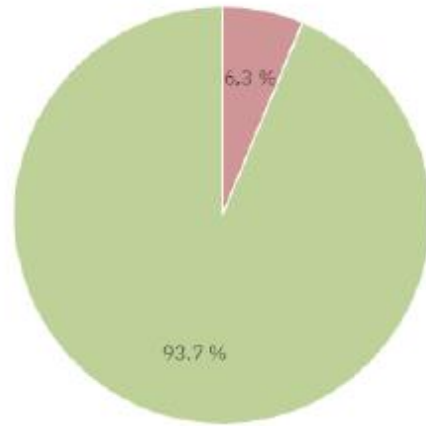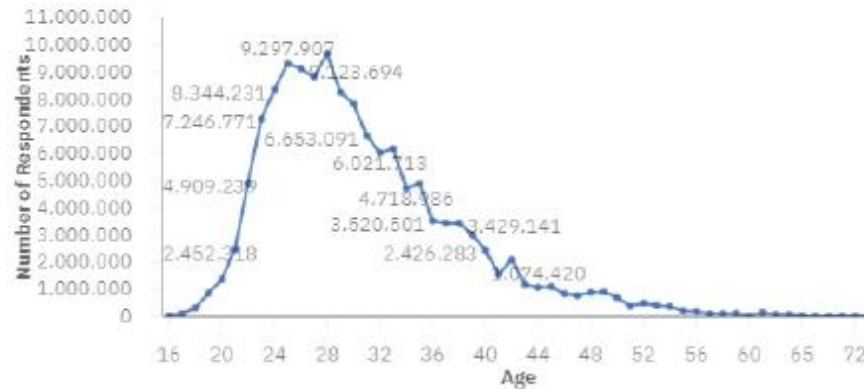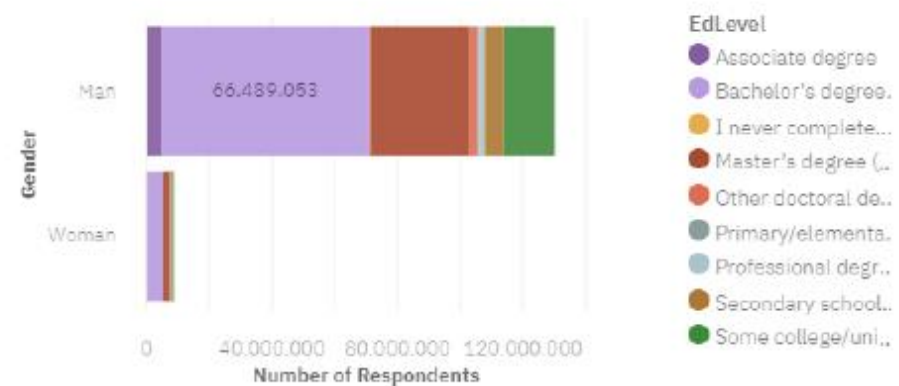
DISCUSSION

- Upskilling trends in the technology sector.

- Future relevance of Oracle SQL.

- Is a master's degree truly necessary?

- Expanding tech education, access, and development in underdeveloped regions.

OVERALL FINDINGS AND IMPLICATIONS

FIndings

- JavaScript widely used and TypeScript is gaining popularity

- Over 90% young male developers.

- Developers are 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.
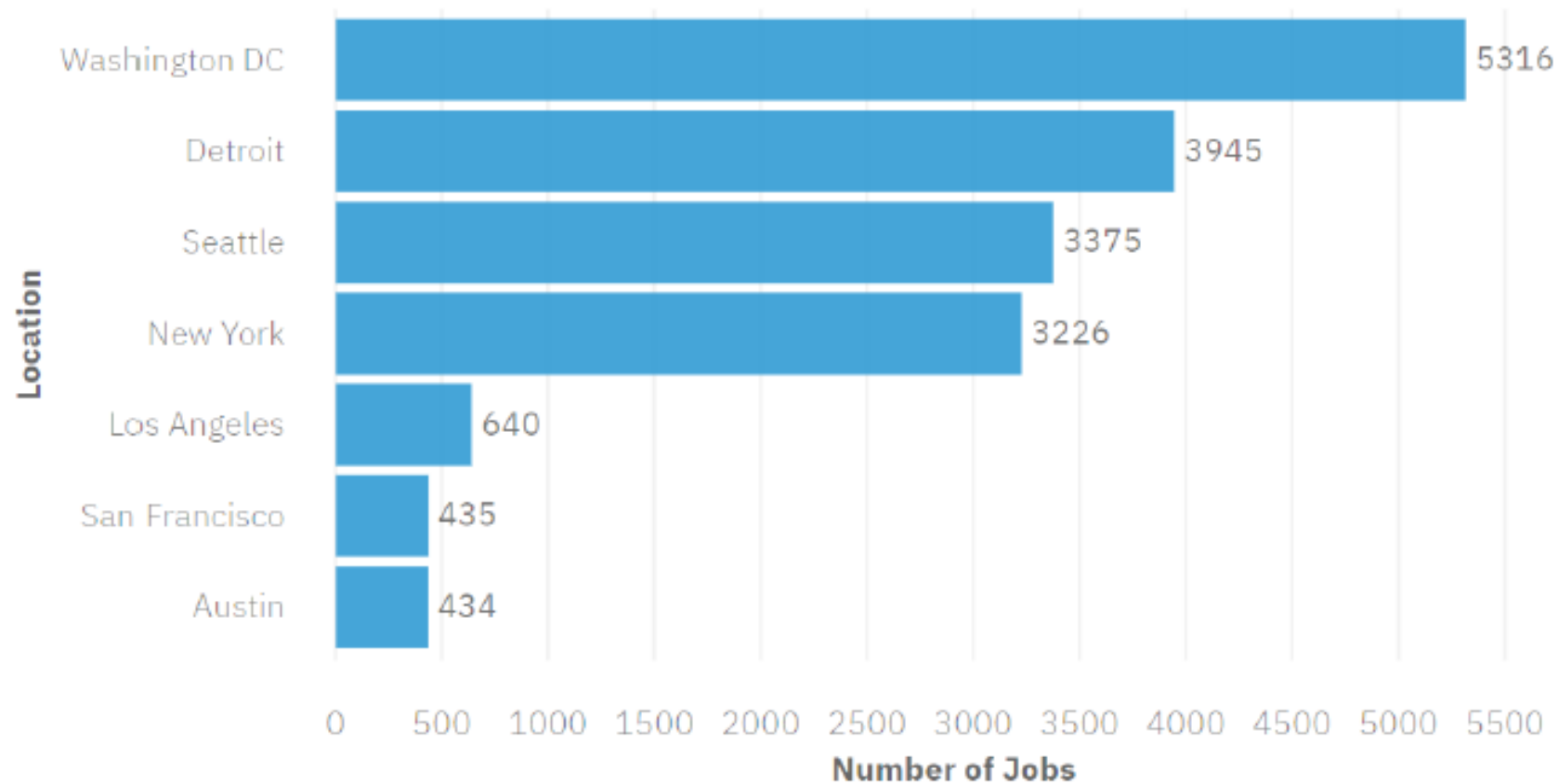
CONCLUSION

- Developers have distinct and notable 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 labour market to countries in development.

APPENDIX

JOB POSTINGS

AGE DISTRIBUTION BOXPLOT

Age Distribution