

Stack Overflow Survey

IBM Data Analyst Capstone Project

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OUTLINE



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



EXECUTIVE SUMMARY



As part of the research and survey, identified the below :

- The most popular , sought after and emerging:
 - ☐ Programming languages
 - ☐ Databases
 - ☐ Integrated Development Environments (IDEs)
 - ☐ Web-frame that are in currently in trend
- How is the distribution of the emerging technology based on
 - ☐ Age
 - ☐ Education levels
 - ☐ Countries

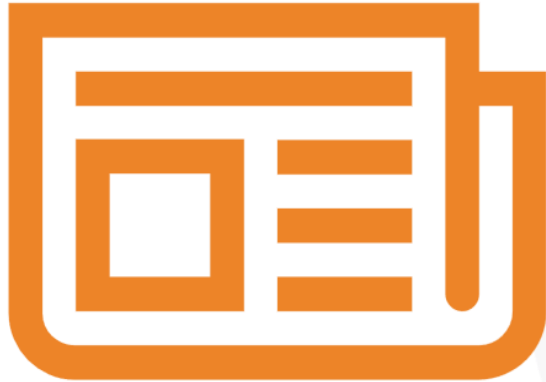
INTRODUCTION



- This project is to identify emerging and future skill requirements
- The latest 'Stack Overflow' survey dataset is to be utilized for this project
- As a data analyst, the tasks to be carried out during the course of the process are:
 - Gathering the necessary data
 - Prepare the data
 - Analyze the data
 - Identify the trends and insights
 - Present the results



METHODOLOGY

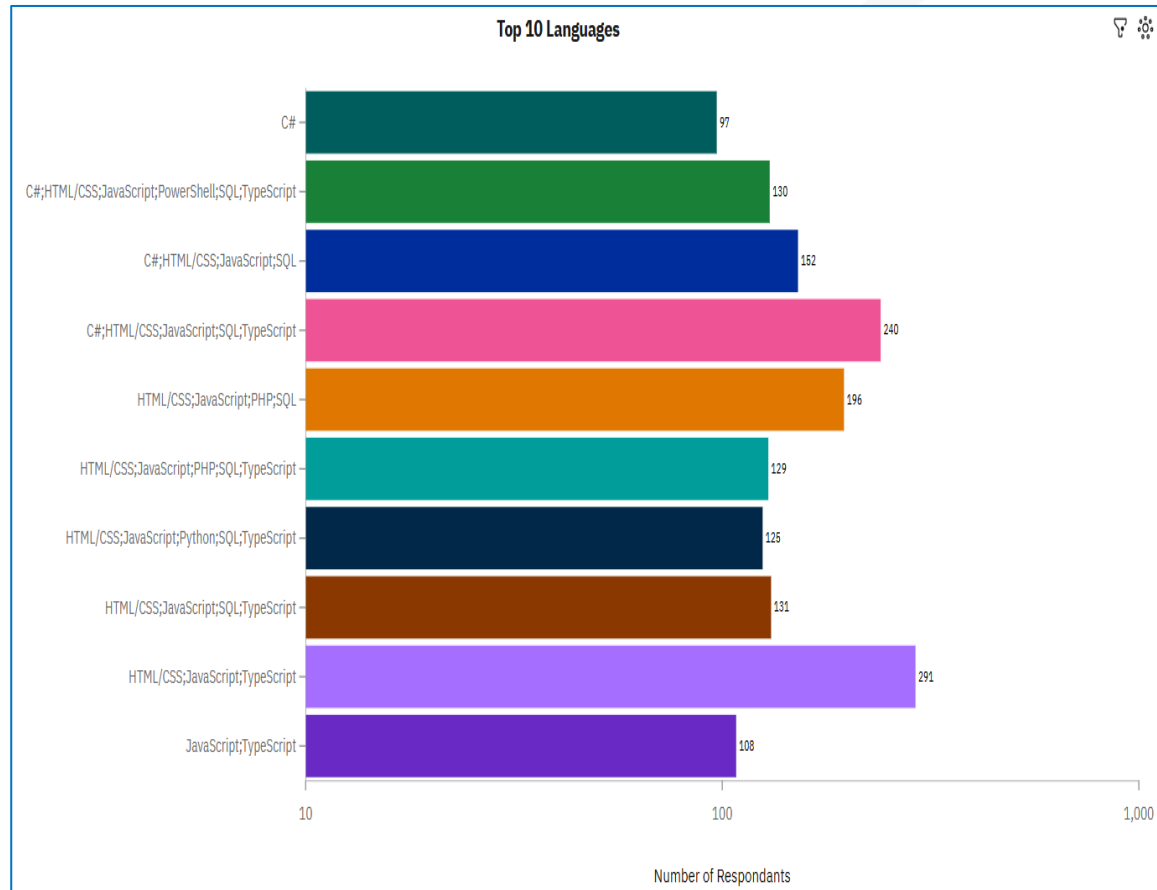


- Gathering the necessary data using python
 - Web Scraping
 - APIs.
 - Request library.
 - Data Wrangling
- Exploratory data analysis using python
 - Analyzing data distribution.
 - Handling outliers.
 - Correlations.
- Data Visualization and Dashboards using IBM Cognos
 - Distribution
 - Relationships
 - Composition
 - Comparison

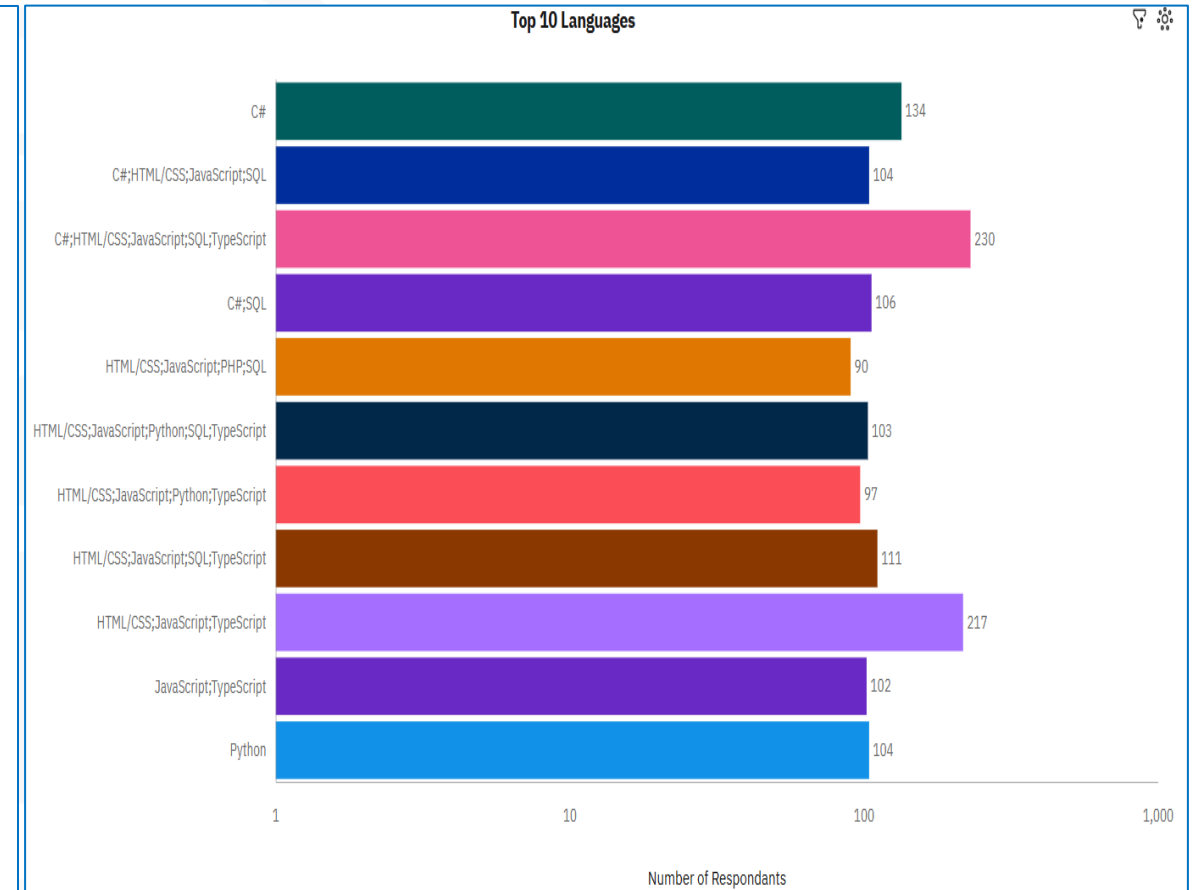


PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



PROGRAMMING LANGUAGE TRENDS

Findings

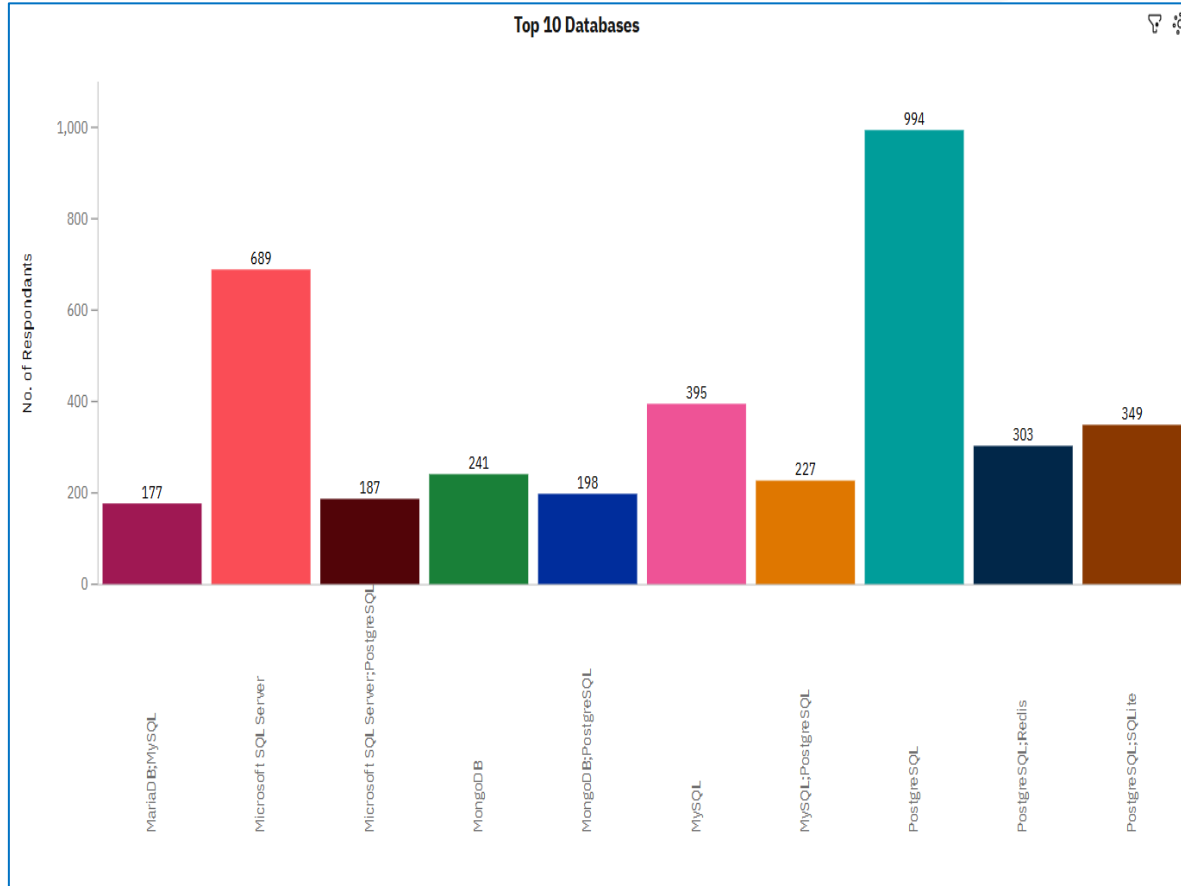
- JavaScript seems to keep as leading language.
- Python fastest-growing.
- Great interest in TypeScript

Implications

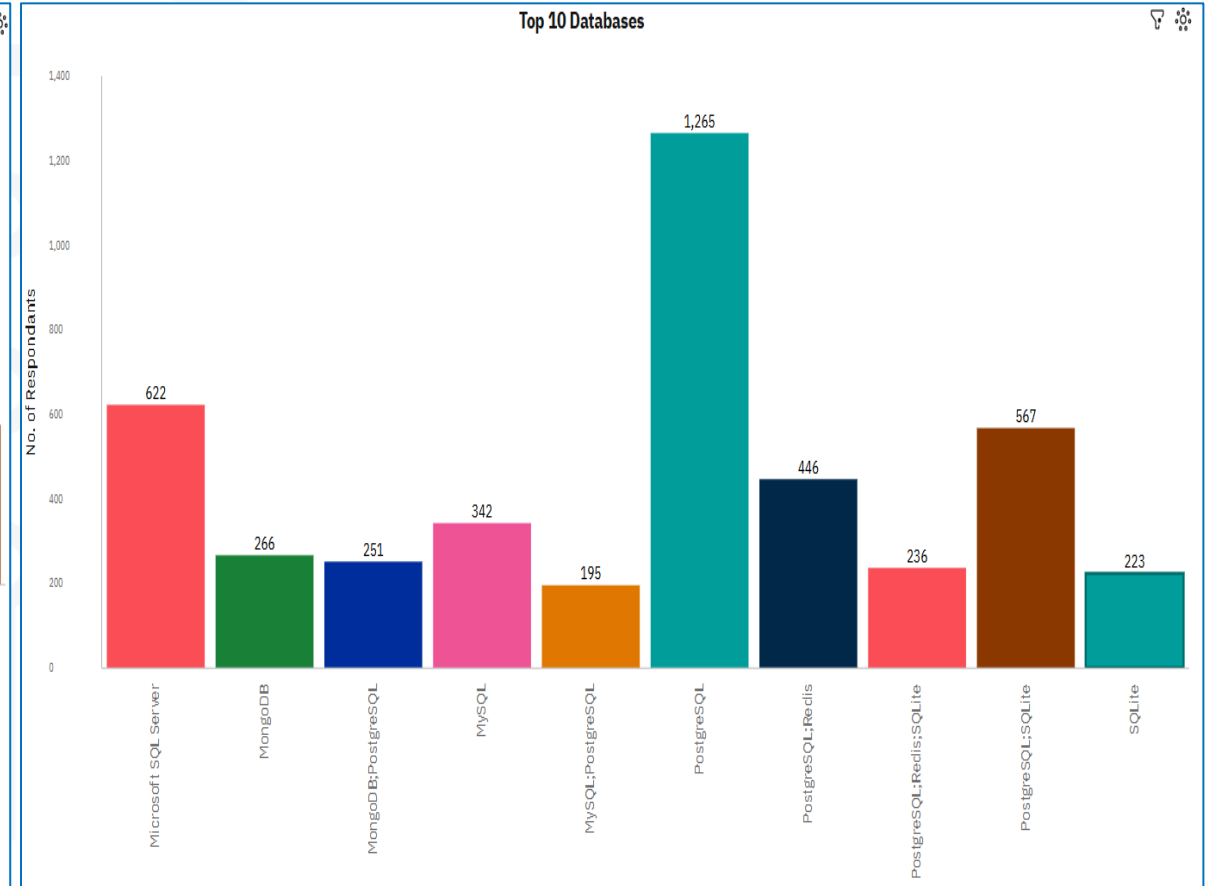
- Possible developers migration from JavaScript to TypeScript.

DATABASE TRENDS

Current Year



Next Year



DATABASE TRENDS

Findings

- PostgreSQL is most used database and the trend continues the next year as well.
- Lack of interest in Microsoft SQL Server and SQLite.
- Increasing interest in MongoDB.

Implications

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



DASHBOARD

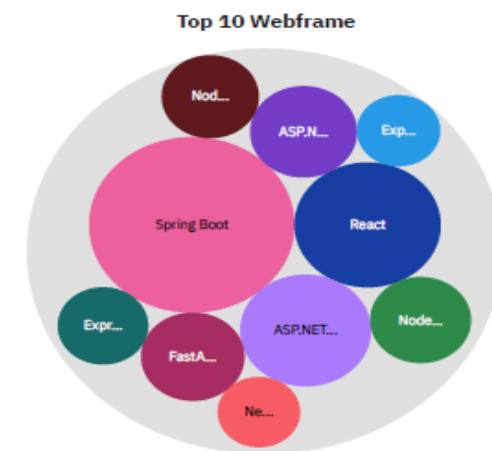
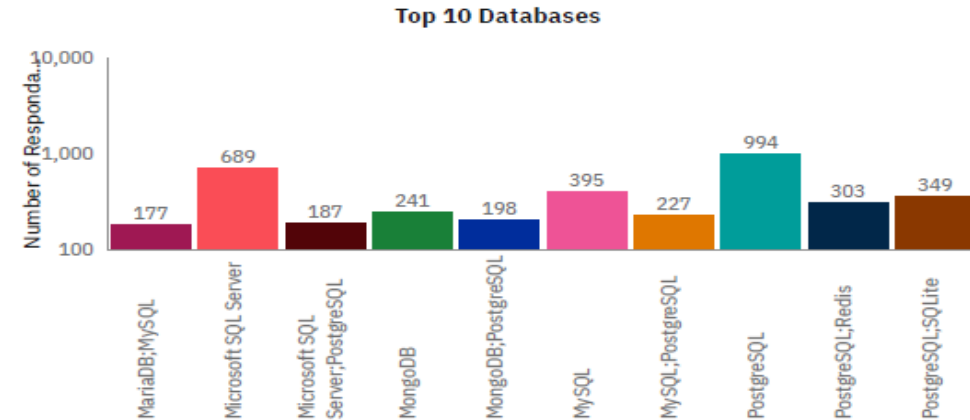
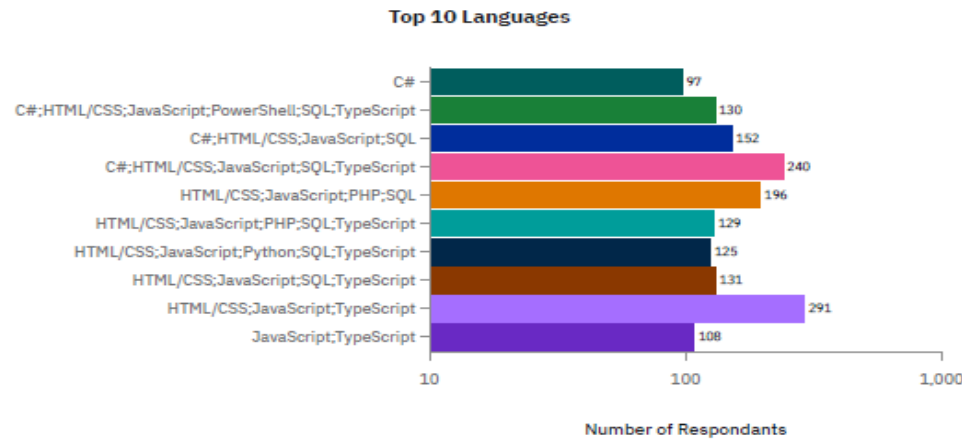


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CURRENT TECHNOLOGY USAGE

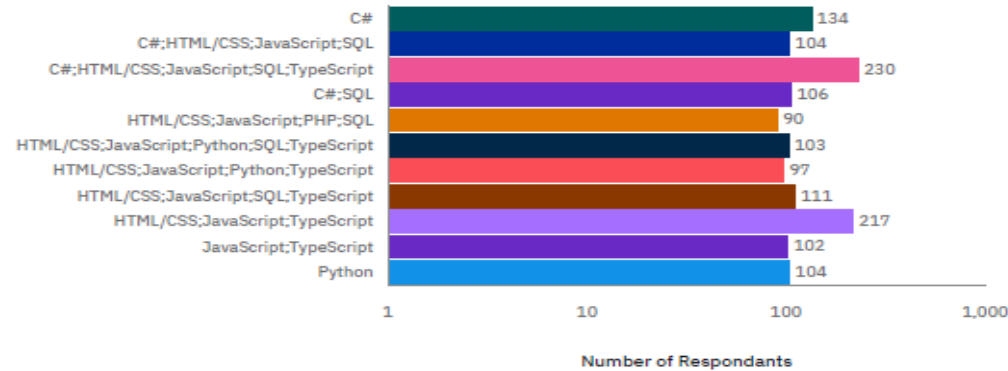
Current Technology Usage.



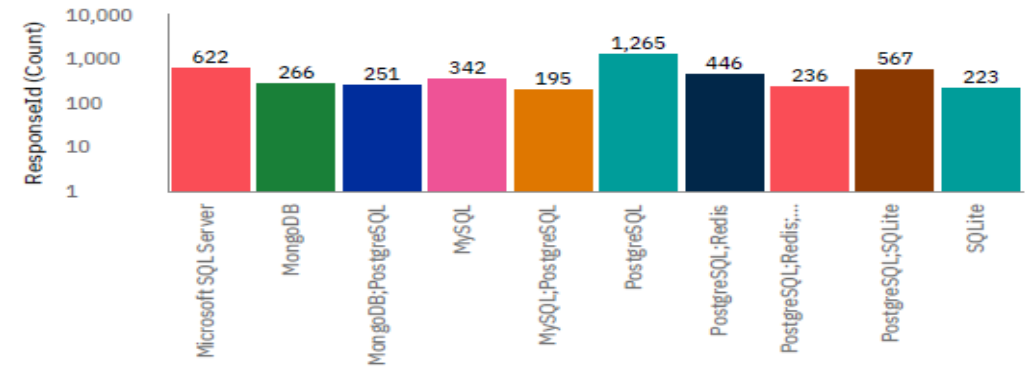
FUTURE TECHNOLOGY TREND

Future Technology Trend

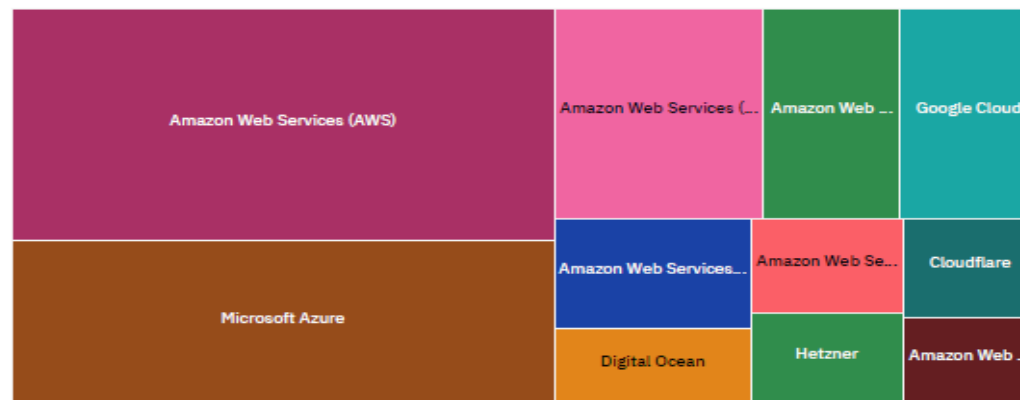
Top 10 Languages



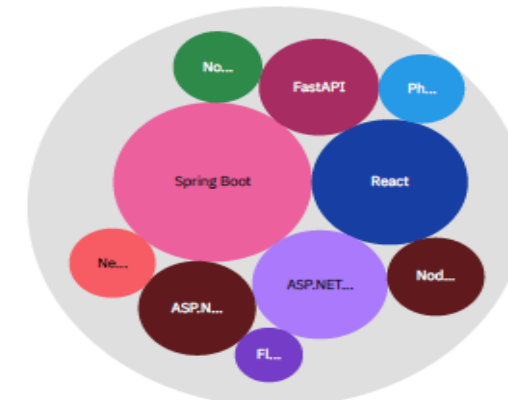
Top 10 Databases



Top 10 Platforms



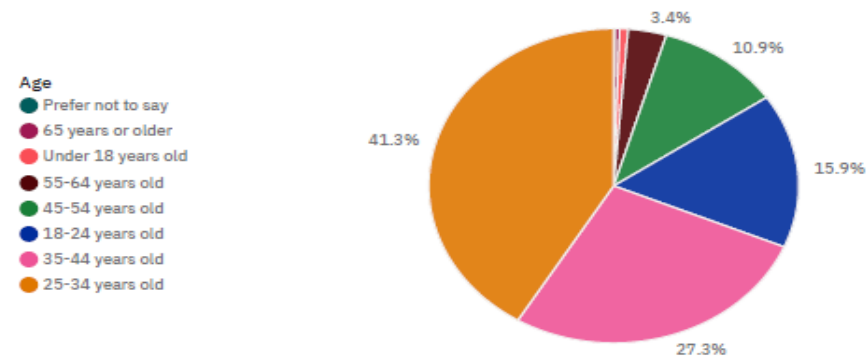
Top 10 Webframe



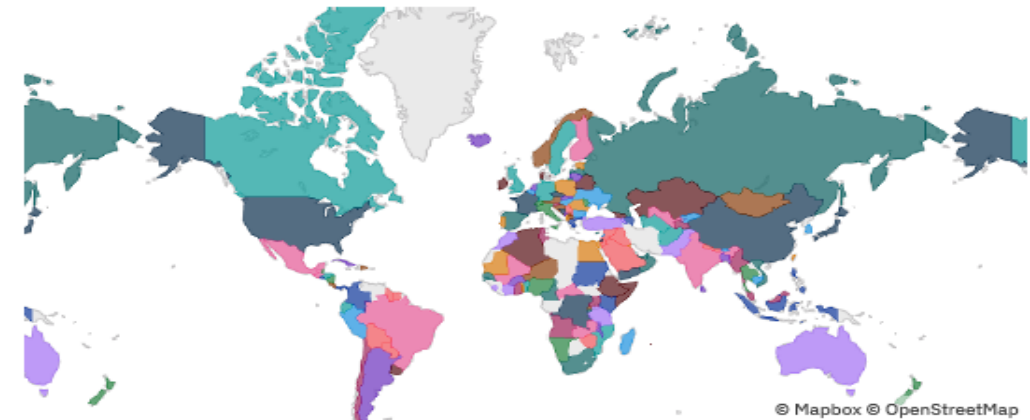
DEMOGRAPHICS

Demographics

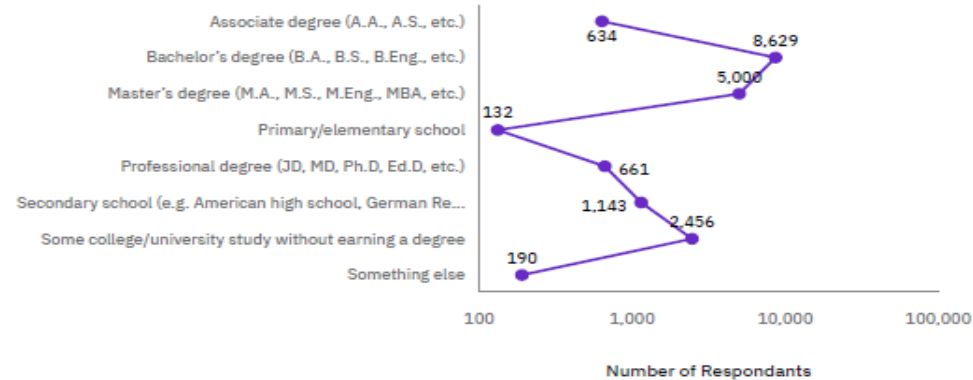
Respondent distribution by Age



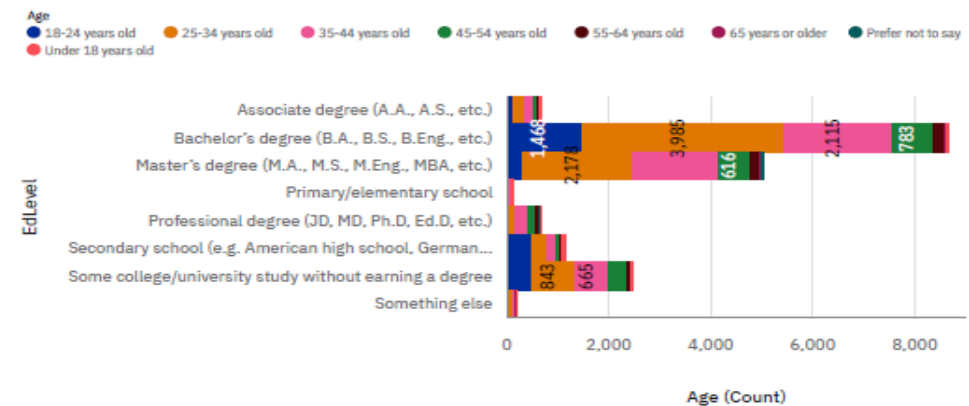
Respondant distribution by country



Response distribution by Education Level



Respondent Count by Age, classified by Education Level



DISCUSSION



OVERALL FINDINGS & IMPLICATIONS

Findings

- JavaScript widely used and TypeScript getting popular.
- Over 40% are between the age of 25-34.
- Developers mostly located in developed countries.

Implications

- JavaScript and TypeScript web frames gaining followers.
- Global polarization of developers location and age
- 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.



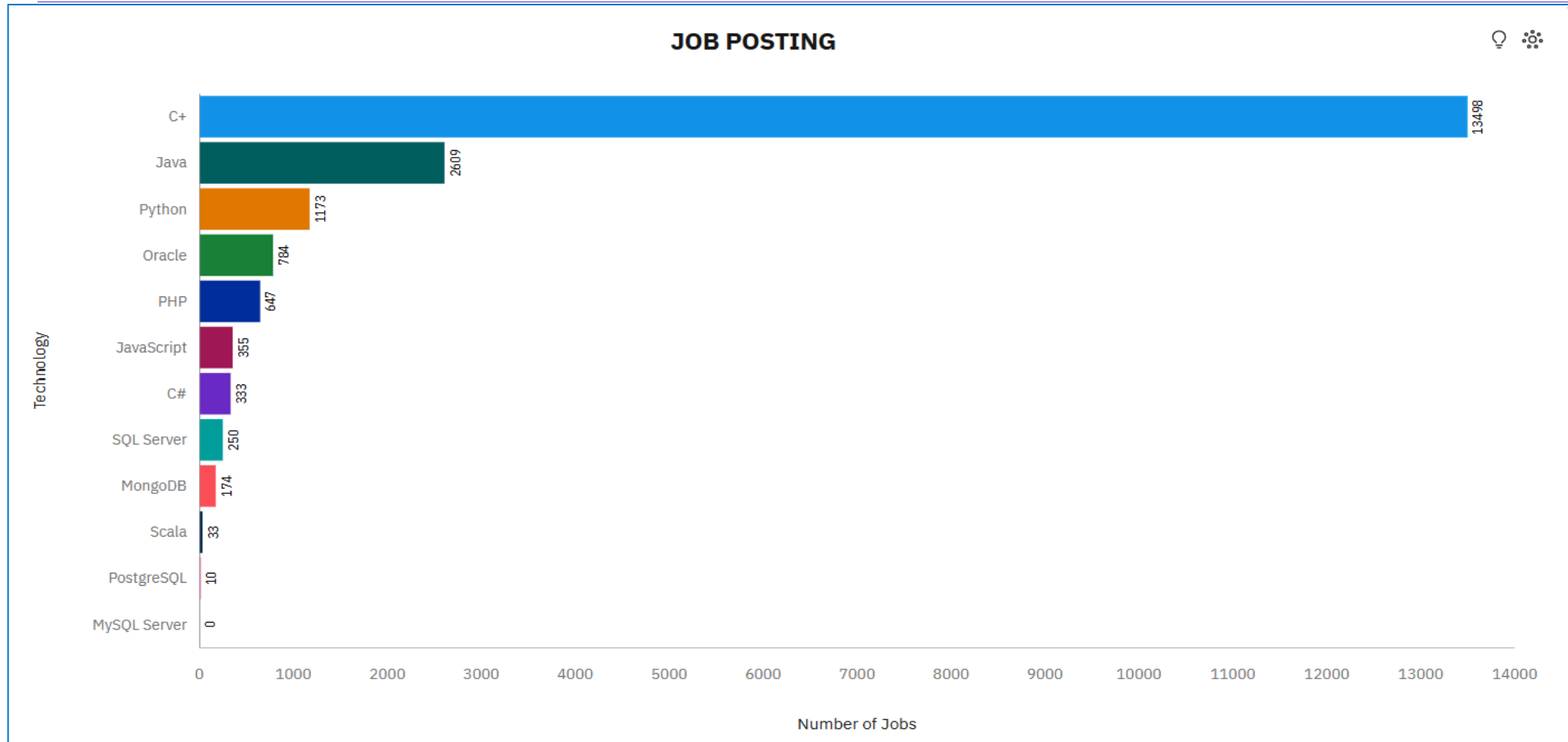
APPENDIX



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



JOB POSTINGS



POPULAR LANGUAGES

