IBM Data Analyst Capstone Project

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August 2, 2023

Outline

Executive Summary

- Top 10 Current Languages

- Top 10 Current Databases

- Top 10 Current Platforms

- Top 10 Current Web Frames

- Top 10 Languages Desired For Next Year

- Top 10 Databases Desired For Next Year

- Top 10 Platforms Desired For Next Year

- Top 10 Web Frames Desired For Next Year

- Demographic information

Introduction

- In 2019, nearly 90,000 developers told Stack Overflow via Developer Survey results in how they learn, which tools they're using and what they want to learn

- Data set used: Stack Overflow csv files for current technological trends, future technological trends, and demographic information.

- Stack Overflow is one of the largest question/answer websites for programmers and developers globally with over 20 million registered users. Is open sourced and collaborative. (https://en.wikipedia.org/wiki/Stack_Overflow)

Methodology

- The Survey was conducted and completed from January 23 to February 14

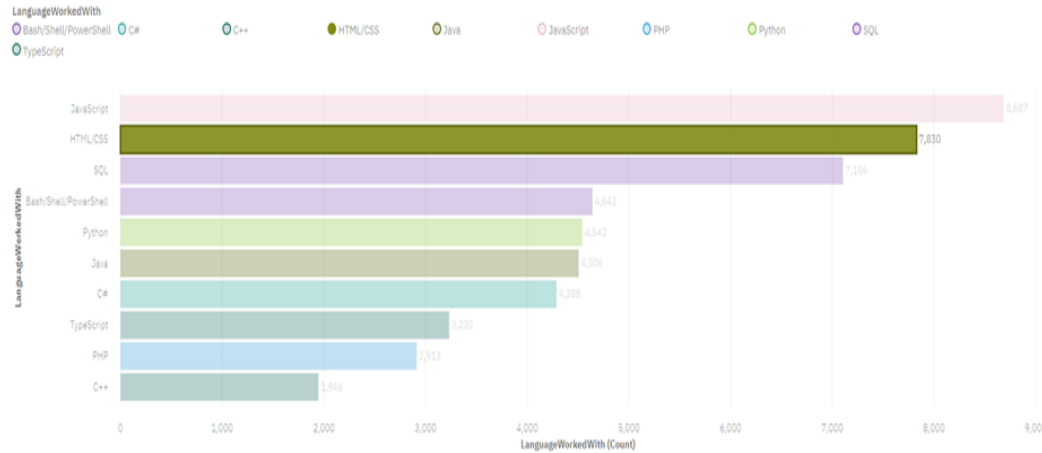- The median time spent for qualified responses was 23.3 minutes

- Survey wasn't accessible to the entire world for that period. Some nations were blocked by the third-party software due to U.S. trade/export sanctions
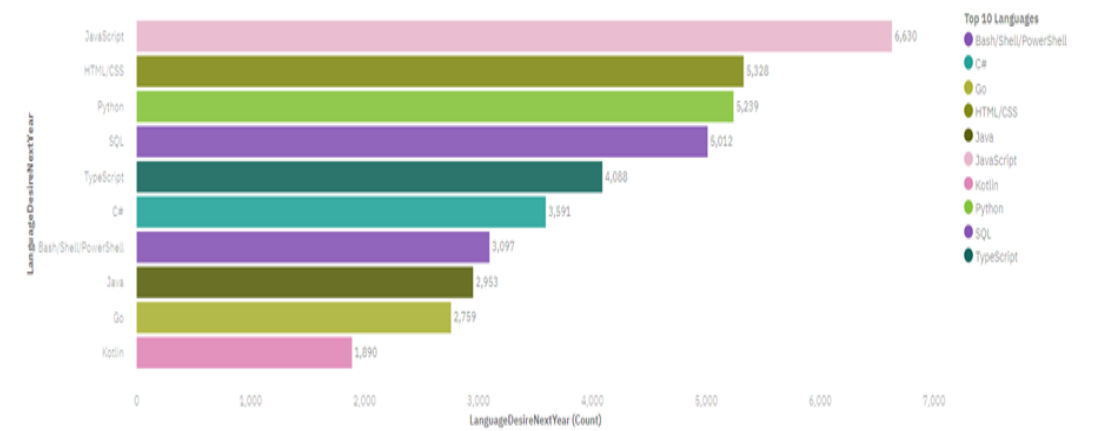
- Qualified Responses Worldwide
  - Europe 36,073 (40.58%)
  - North America 25,526 (28.72%)
  - Asia 18,273 (20.56%); primarily India
  - Total respondents globally: 88883 (100%)
  - Source: https://insights.stackoverflow.com/survey/2019?utm_source=so-owned&utm_medium=blog&utm_campaign=dev-survey-2019&utm_content=launch-blog&_ga=2.31581502.1289012540.1690984343-18137164.1690813435#key-results
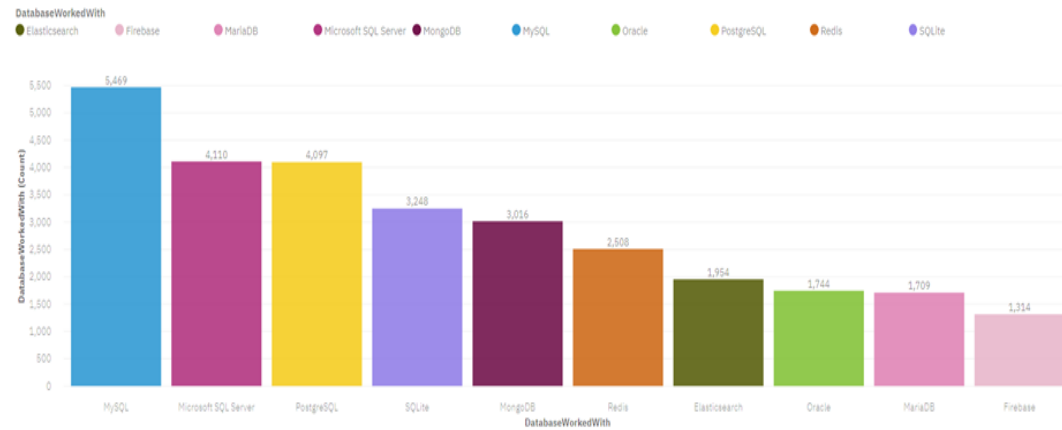
RESULTS
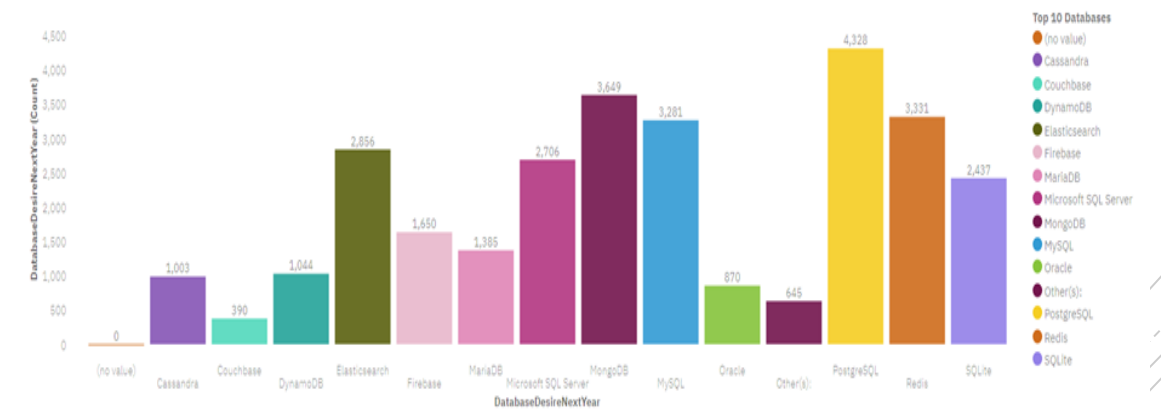

Top 10 Languages Worked With

Top 10 Languages Desired Next Year
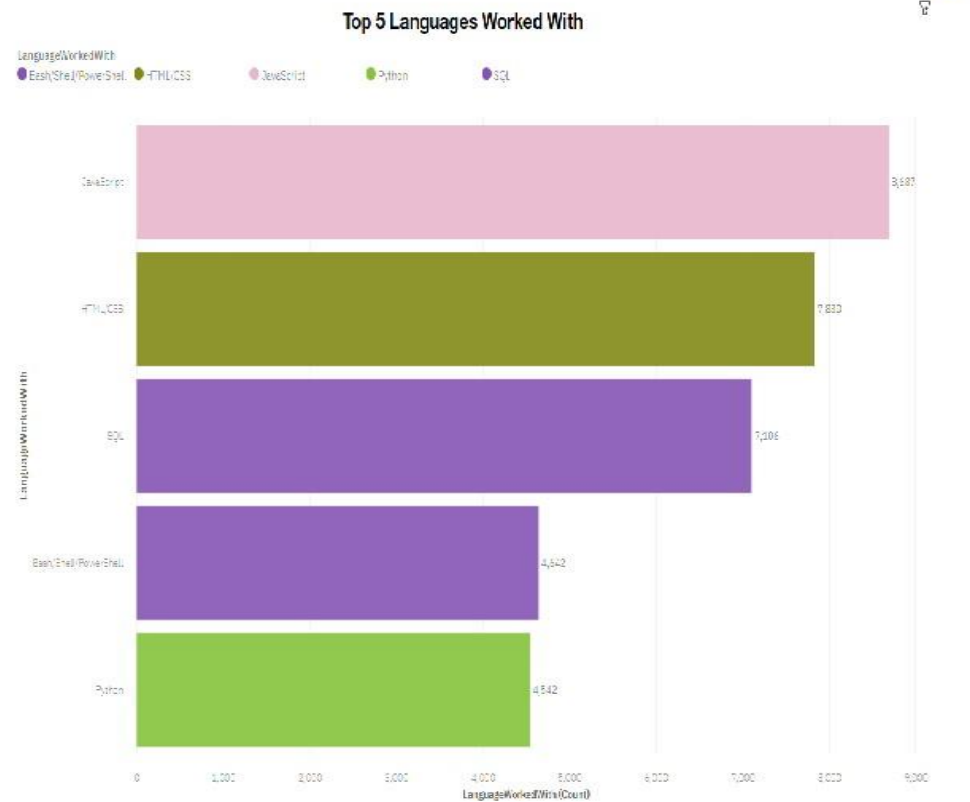

Top 10 Databases Worked with

Top 10 Databases Desired Next Year.

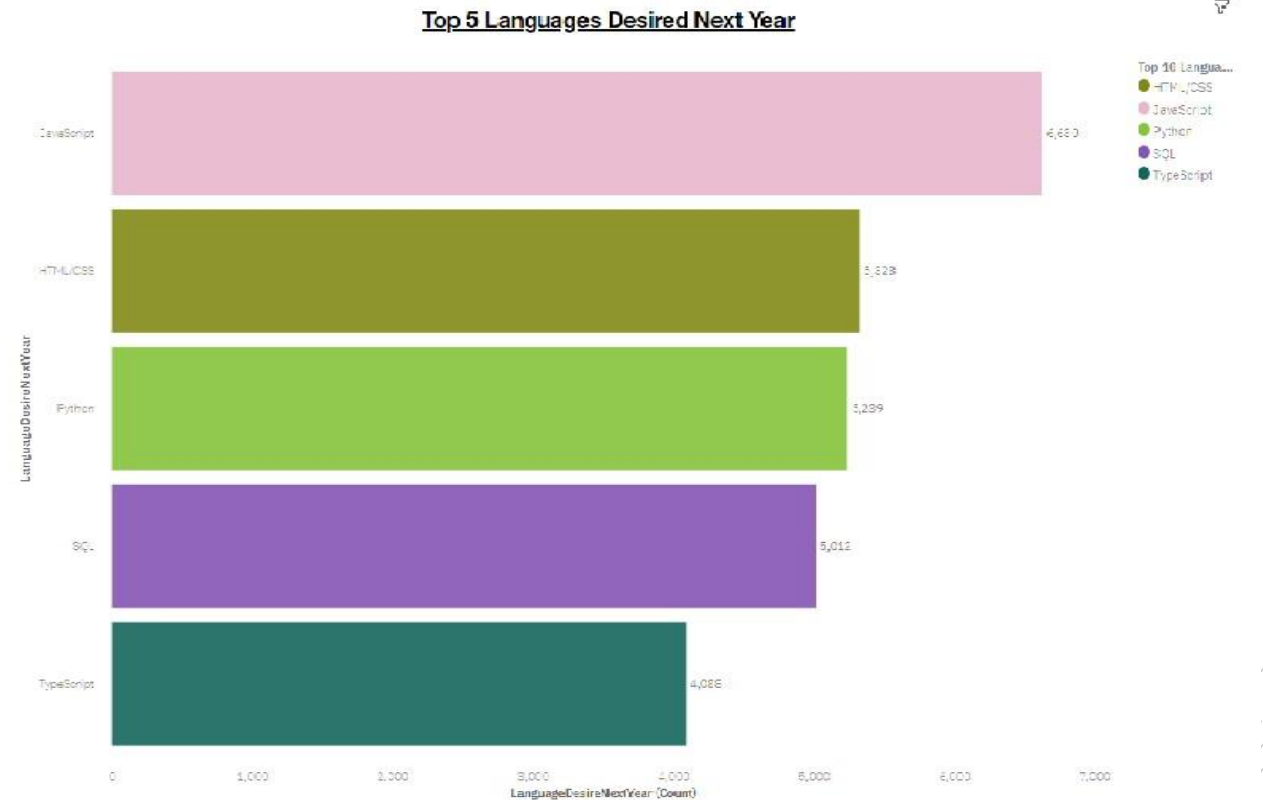# Programming Language Trends

Current Year

Next Year

PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript is both the #1 current language learned and future language desired to be learned.

- HTTP and CSS are promising both in the present and future (# 2)

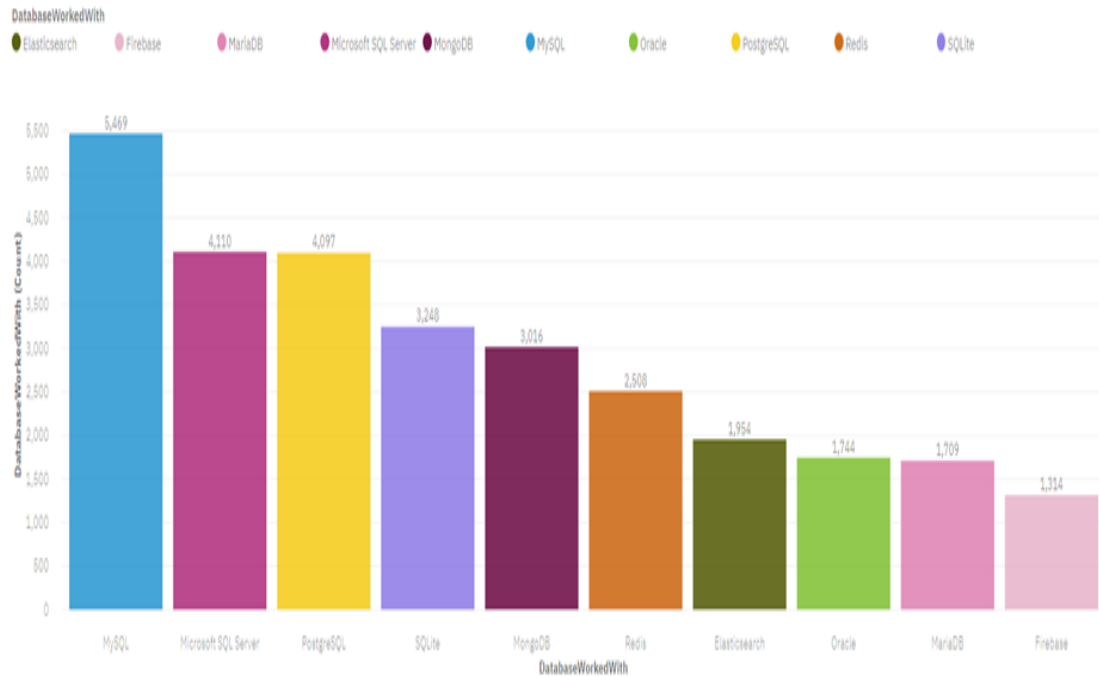- Python and Typescript are more desirable languages in the future

Implications

- Go and Kotlin are increasing in future popularity

- PHP and C++ are declining as a useful programming language in the future.

- Bash and Java are decreasing as desirable programming languages.
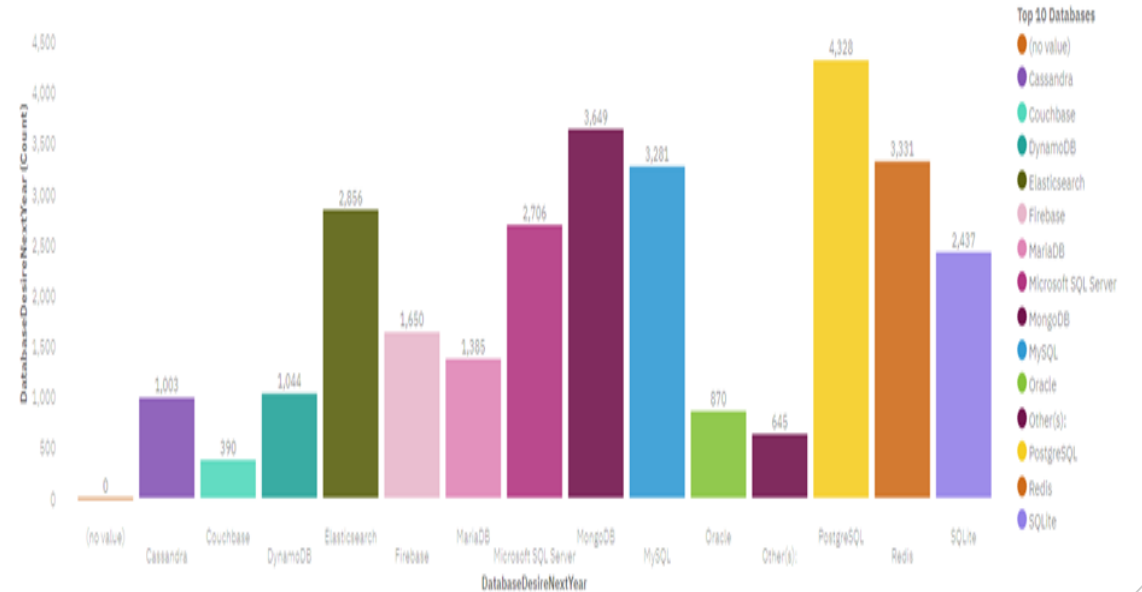
DATABASE TRENDS

Current Year

Next Year

DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL is the consensus #1 database currently

- MongoDB(#2), PostgreSQL(#3), and Microsoft SQL Server (#4) are very close

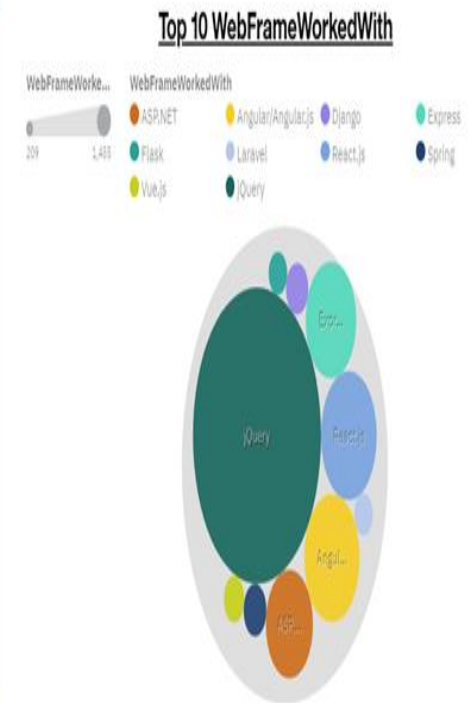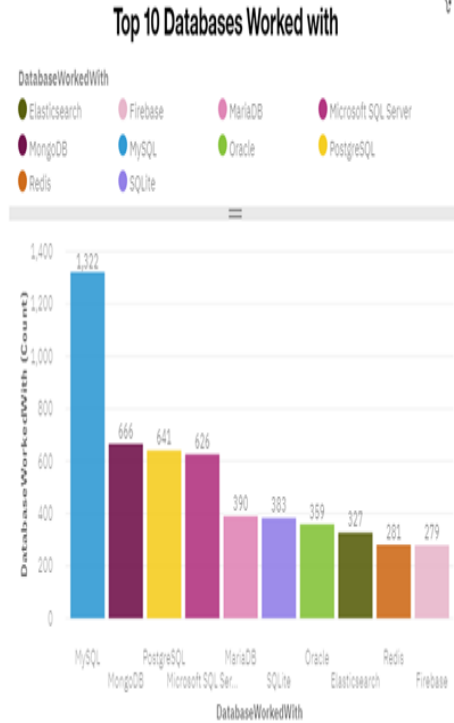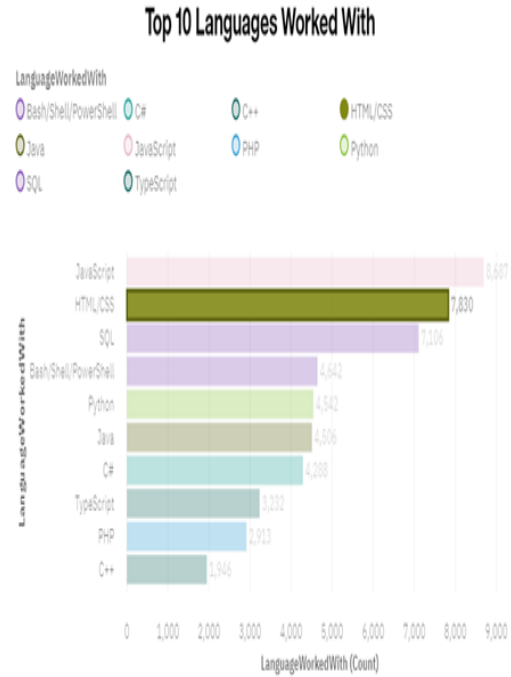- PostgreSQL and MongoDB are the most highly desired databases to use and learn

Implications

- MySQL is decreasing in desirability

- Redis is increasing in future desirability.

- Elasticsearch is rising in popularity

DASHBOARD

https://dataplatform.cloud.ibm.com/dashboards/62640123-c56b-483b-bf0c-7385adb98ade/view/6328e27d7def0b927ee1eae407997e077e652c0fe3bb850a81d77b495e602797f06b1b98c82c195adf180337a7ee445ac9
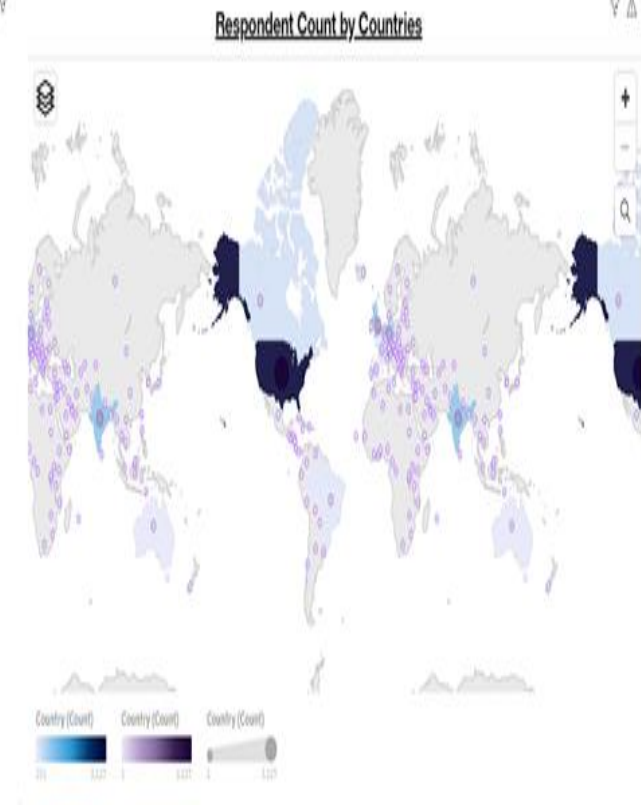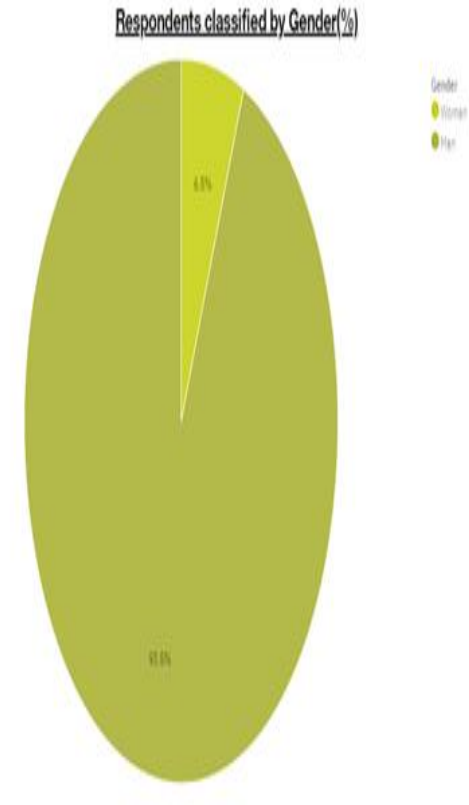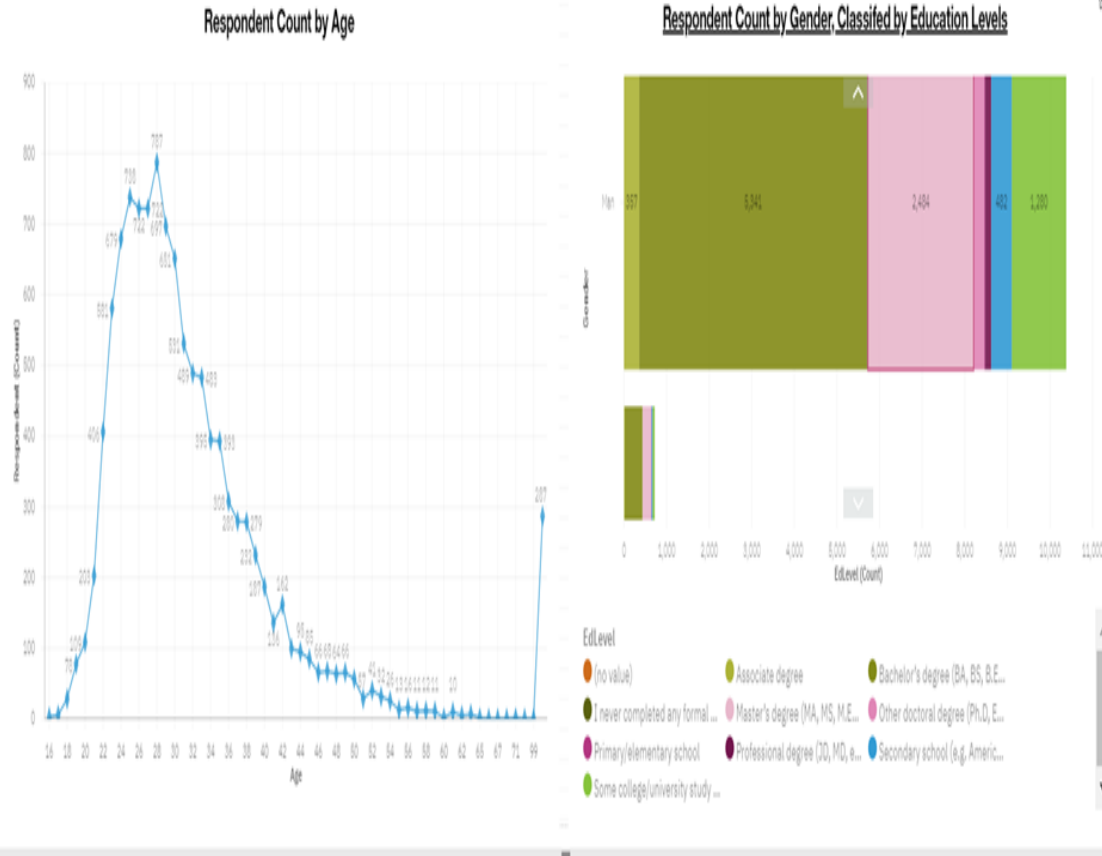
DASHBOARD TAB 1

Screenshot of dashboard tab 1 goes here

DASHBOARD TAB 2

Screenshot of dashboard tab 2 goes here

DASHBOARD TAB 3

Screenshot of dashboard tab 3 goes here

Overall Findings

- Majority of the respondents were men and had bachelor degrees and master degrees.

- Majority of the respondents were from North America.

- Majority of the respondents were young adults between 20 to 40 years of age.

Overall Implications

- Go and Kotlin are becoming increasingly important langua to learn

- PostgreSQL is the database to learn in the future.

- More respondents would like to learn about Linux, Docker and Aws as part of their future Platforms

DISCUSSION

- IBM Cognos was used to visualize the data.

- Stack Overflow website used.

- 3 CSV files were used.

- Excel was incorporated to clean and normalize the data.

- Duplicates and missing values were removed according to the business objectives.
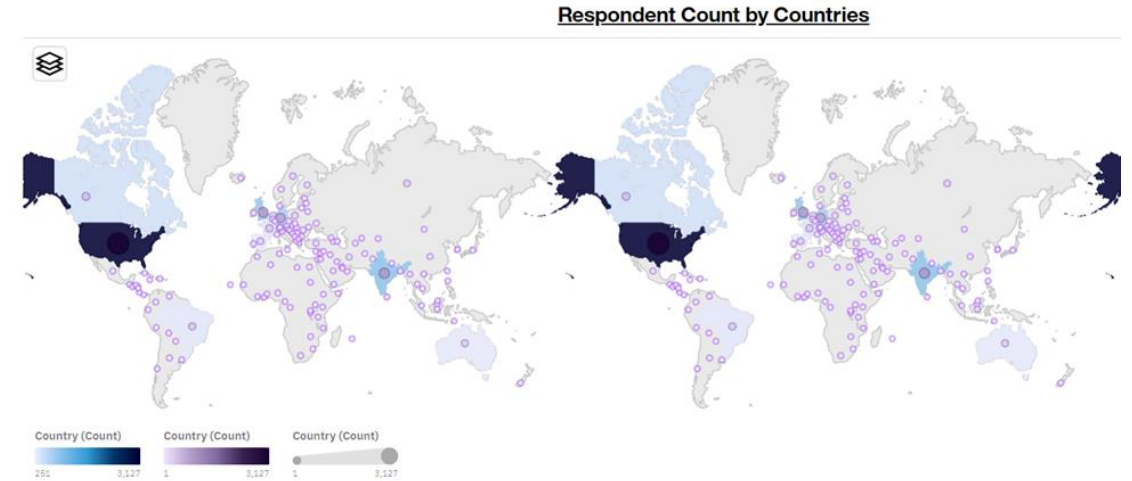
CONCLUSION

- JavaScript still remains the current and the future programming language to learn.

- More respondents are still using Windows as a platform but are looking for alternatives.

- React.Js and Vue.Js are being looked at as future WebFrame choices over JQuery

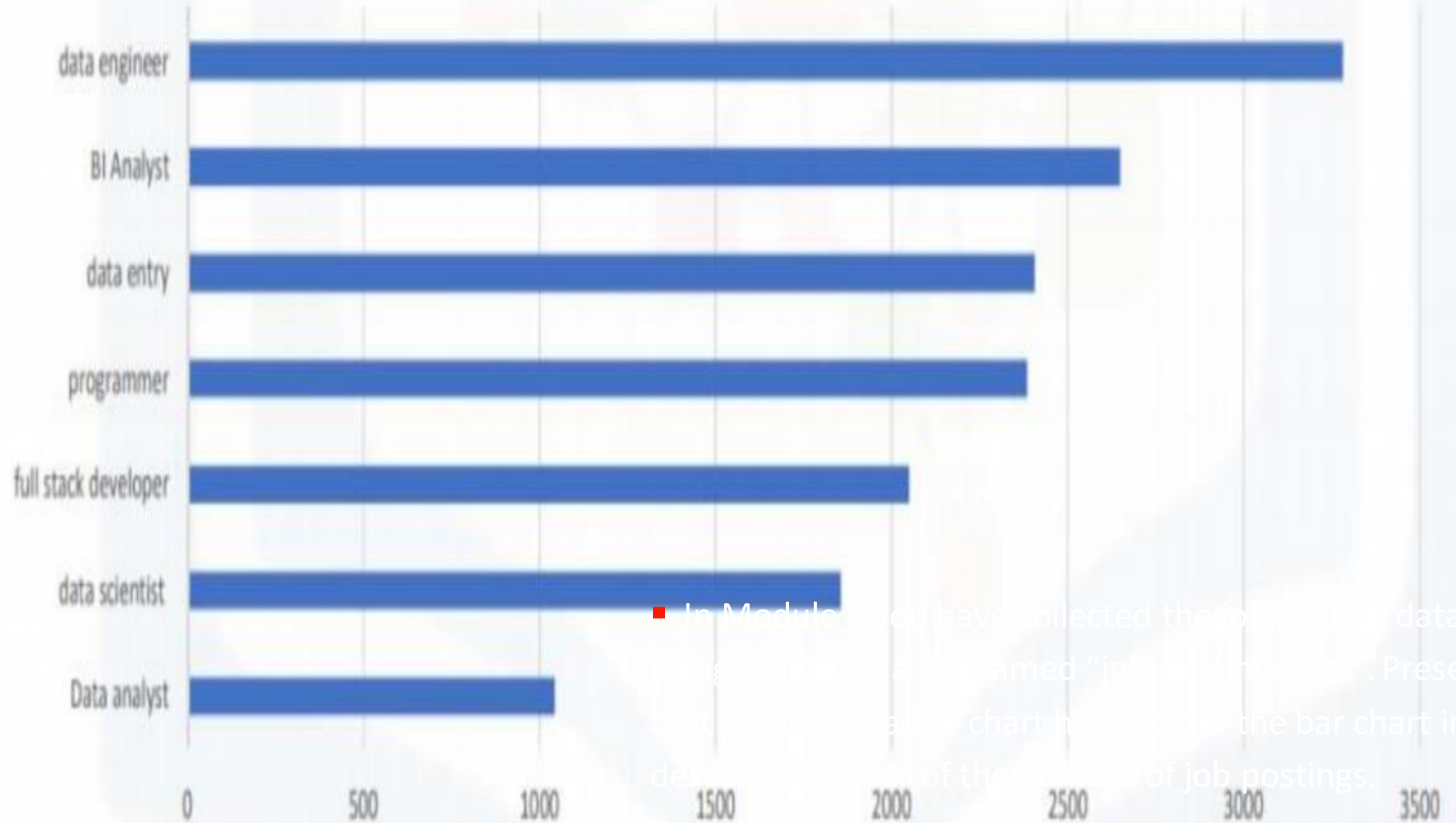- Women and non-western countries are neglected in the survey.

Recommendations

- Include more respondents from Latin America, Africa, and Asian nations outside of India.

- Look into China and incorporate them into the survey more.

- Women and those with less formal degrees need to be researched further into these studies.

- Platforms, databases, languages, webframes are migrating towards open-source and SASS (software as a service).
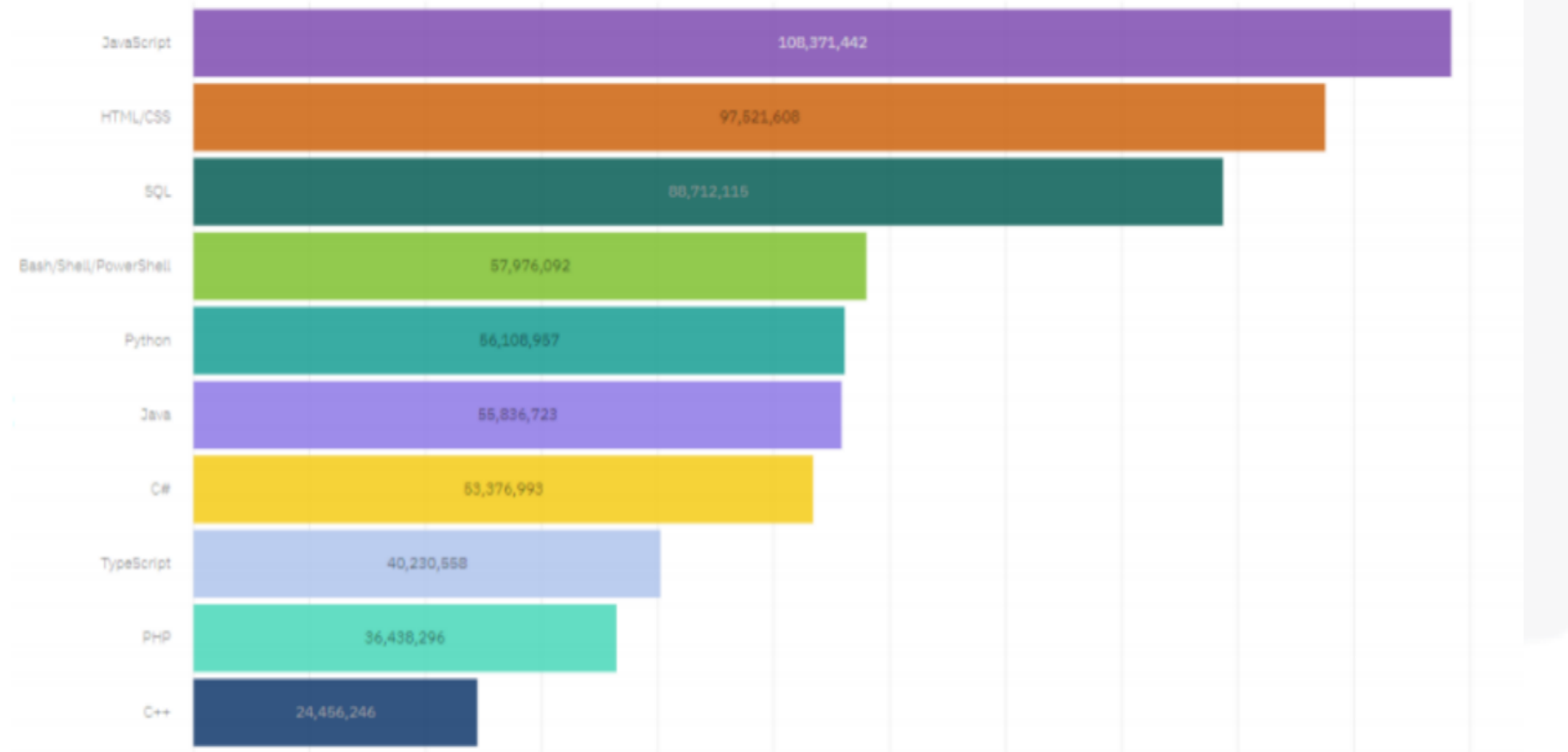
APPENDIX

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

job posting

- In Module, we have collected the job posting data ... ig ... amed "jo ... . Present ... t ... a ... chart h ... the bar chart in t... de... of th... of job postings

POPULAR LANGUAGES

- In Module 1 you have collected the job postings data using web scraping in a file named "popular-languages.csv". Present that data using a bar chart here. Order the bar chart in the descending order of salary

- .

Any Questions?