DATA ON TECHNOLOGIES: STACK OVERFLOW SURVEY 2019

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IBM Developer

SKILLS NETWORK

OUTLINE

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EXECUTIVE SUMMARY

- **Introduction**
  - This project aimed to identify and analyze the top programming skills in demand within the IT industry.
- **Methodology**
  - Data Collection
  - Data Analysis
  - Data Visualisation
- **Key Findings**
  - Top programming languages in demand this year: **JavaScript and HTML/CSS.**
  - Top database skills in demand this year: **MySQL and Microsoft SQL Server.**
  - Popular platforms this year: **Windows and Linux.**
  - Popular web frames this year**: jQuery and Angular/Angular.js.**

- Top programming languages in desire next year: **JavaScript and HTML/CSS.**
- Top database skills in demand desire next year: **PostgreSQL and MongoDB.**
- Popular platforms desire next year**: Linux and Docker.**
- Popular web frames desire next year: **React.js and Angular/Angular.js.**

Conclusion

- Findings will help the organization align its skill development initiatives with industry trends, enhancing its position in the competitive IT market.

INTRODUCTION

- Stack Overflow’s Developer Survey is the largest and most comprehensive survey of people who code around the world.
- The results don't represent everyone in the developer community evenly.
- 90,000 developers took the 20-minute survey in 2019 year.
- The insights shed light on the evolving landscape of programming languages, web frameworks, and the demographics of developer.

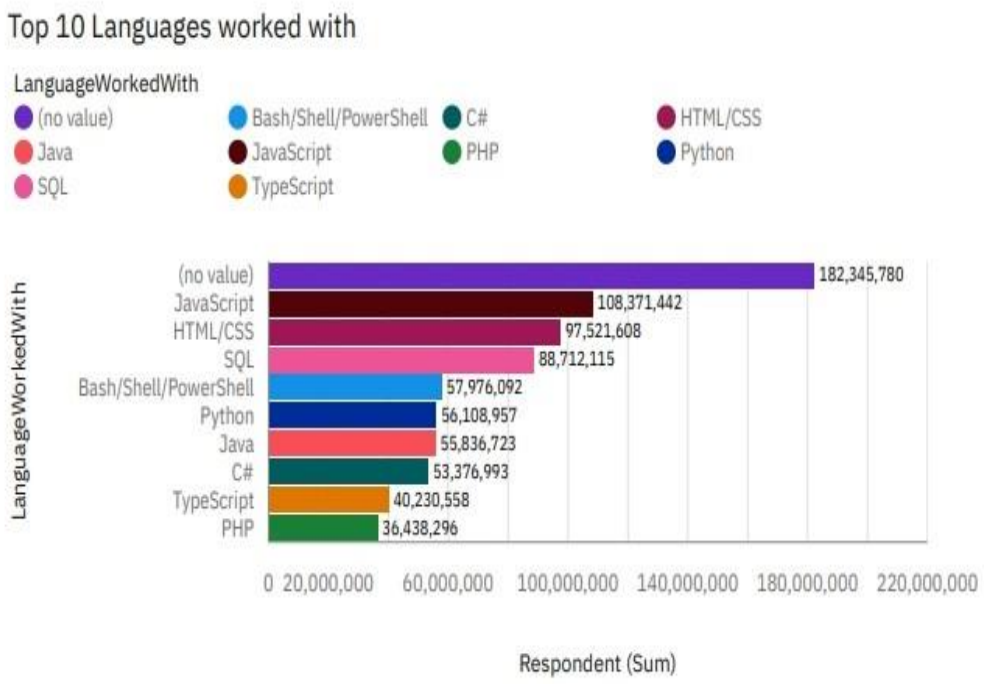
METHODOLOGY

- A Stack Overflows 2019 survey dataset is used, and it involves responses from around 90,000 developers from 179 countries.
- Familiarization with this dataset was achieved by completing IBM hands-on lab which involve topics like Web Scraping, Dataset Exploration, Data Wrangling, Exploratory Data Analysis, and Data Visualization.
- Data Visualization and Analysis was done using IBM Cognos Analytics.
- In the end the findings were presented.

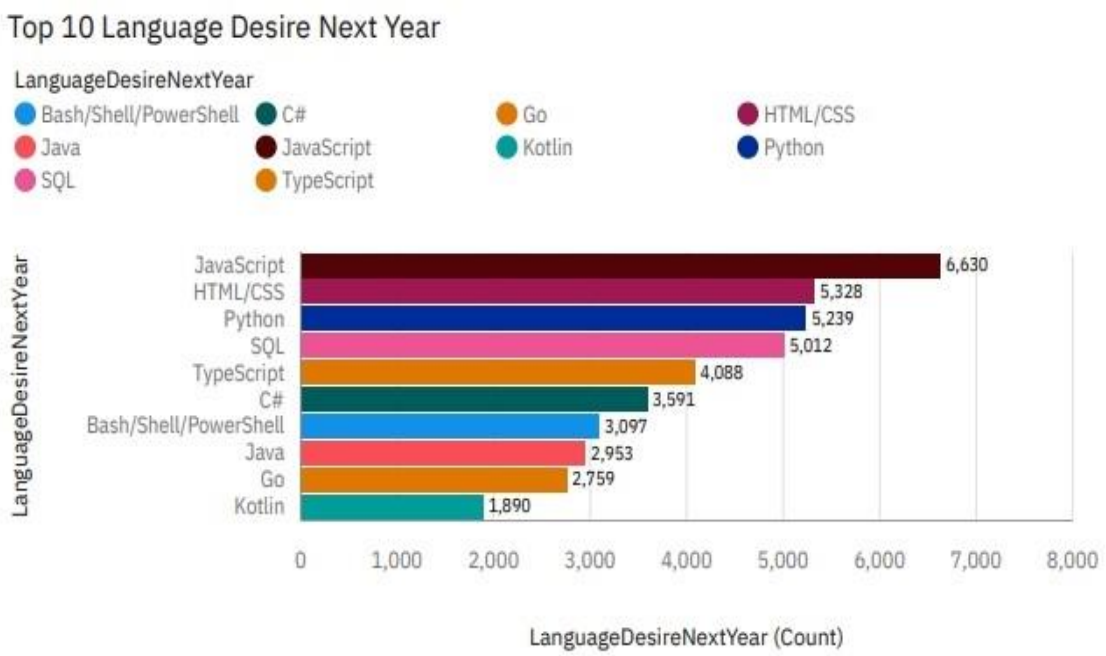
RESULTS

PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

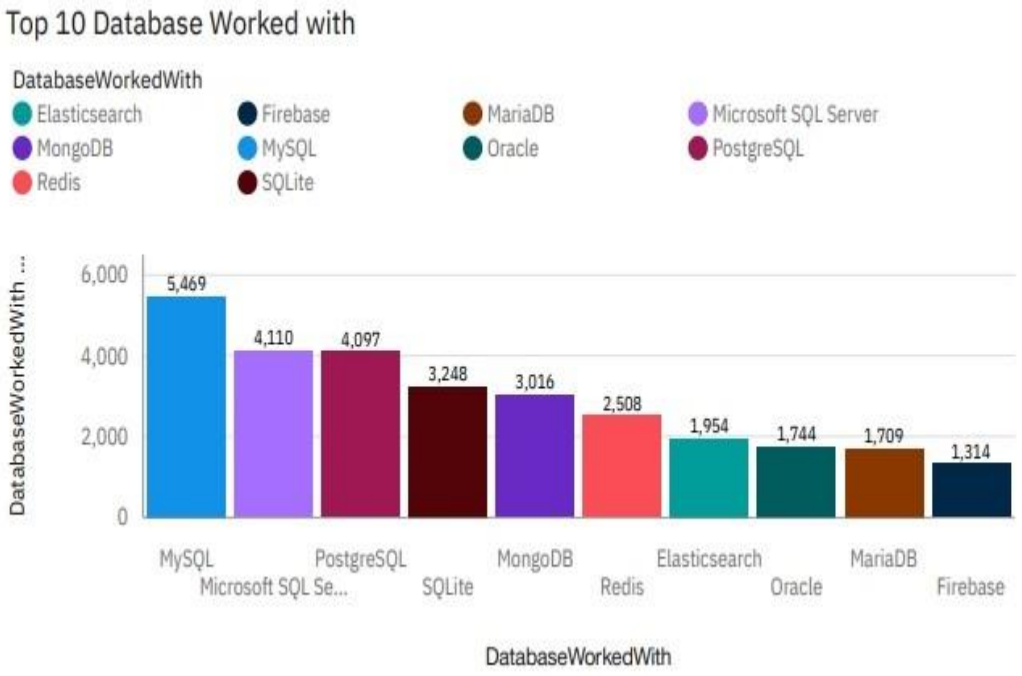
- JavaScript, HTML/CSS, and SQL are very popular this year.
- SQL will still be in demand next year.
- Python becoming popular next year.

Implications

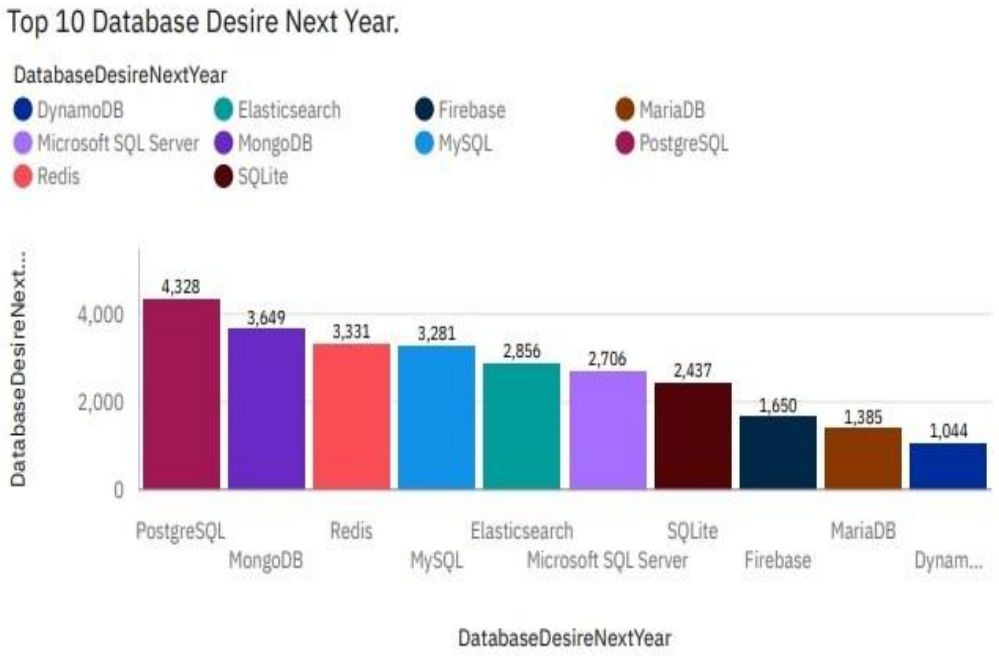
- Web Development is still in very high demand.
- SQL will still be required in tech companies for querying data.
- Many developers from across various domains will use Python in future, because of its ease of use and versatility.

DATABASE TRENDS

Current Year



Next Year



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DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL leads as the most used DBMS this year.
- MongoDB and Redis are an upcoming favourites.
- MySQL edges out next year.

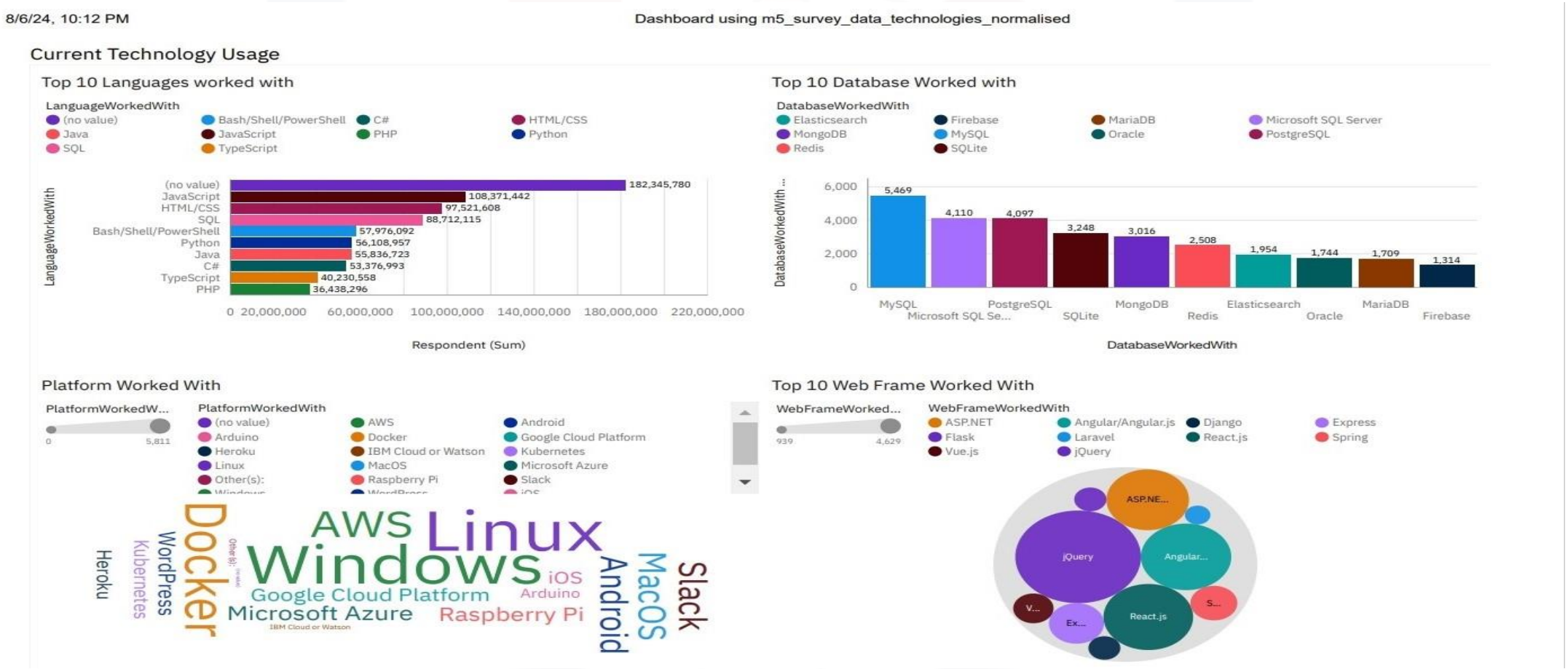
Implications

- Popularity of MySQL, PostgreSQL, and Microsoft SQL Server, shows the importance of relational databases in various applications.
- NoSQL databases are impactful for storing non-relational data in future.
- The diverse range of use of database systems show us the importance of selecting the right tool for the job, considering factors such as data structure, scalability, and performance requirements.

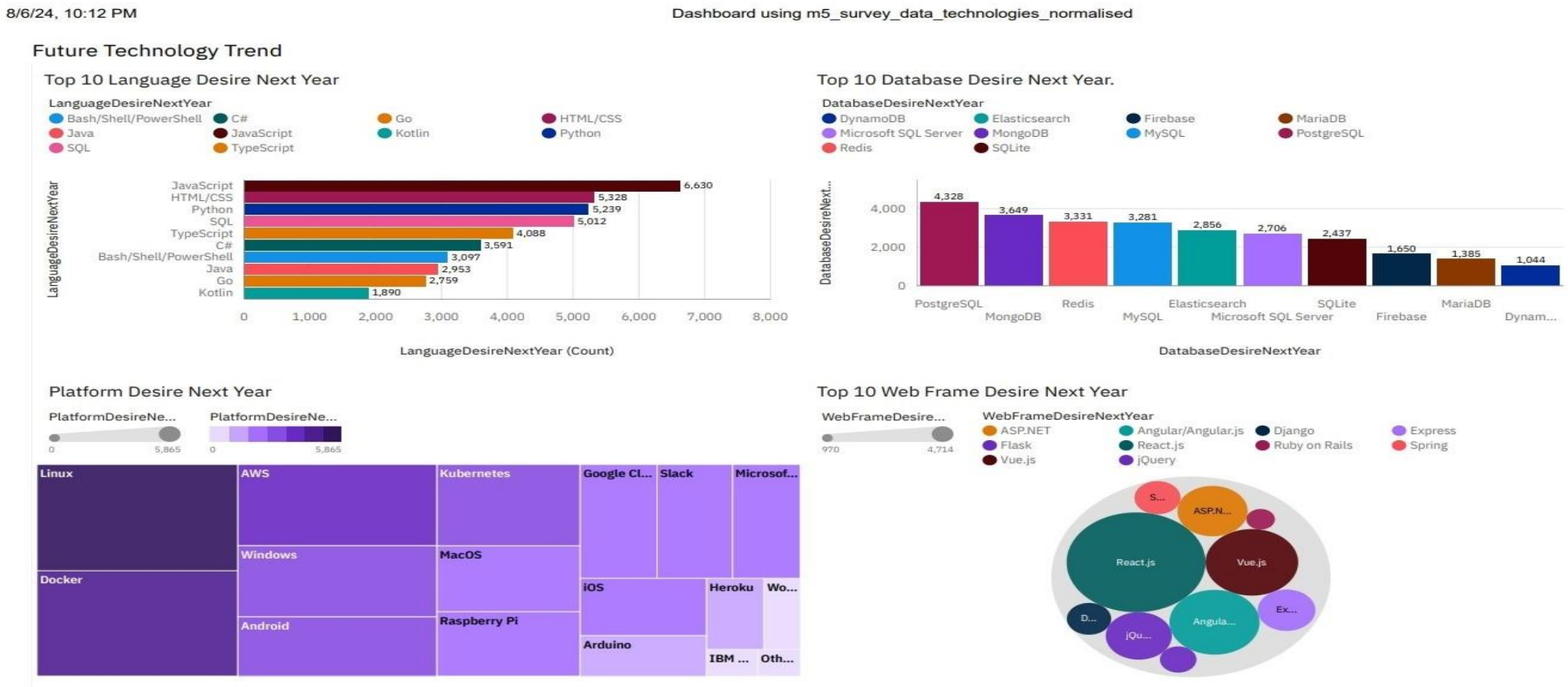
DASHBOARD

https://github.com/Skitij-Kumar/Data-Analyst-Capstone-Project-/tree/main/5th%20task%2C%20dashboards

DASHBOARD TAB 1



DASHBOARD TAB 2



DASHBOARD TAB 3

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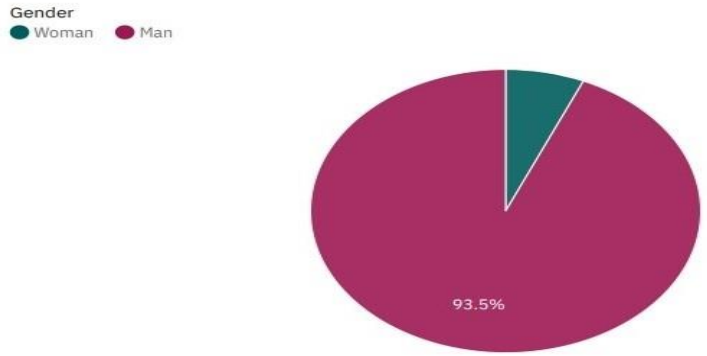
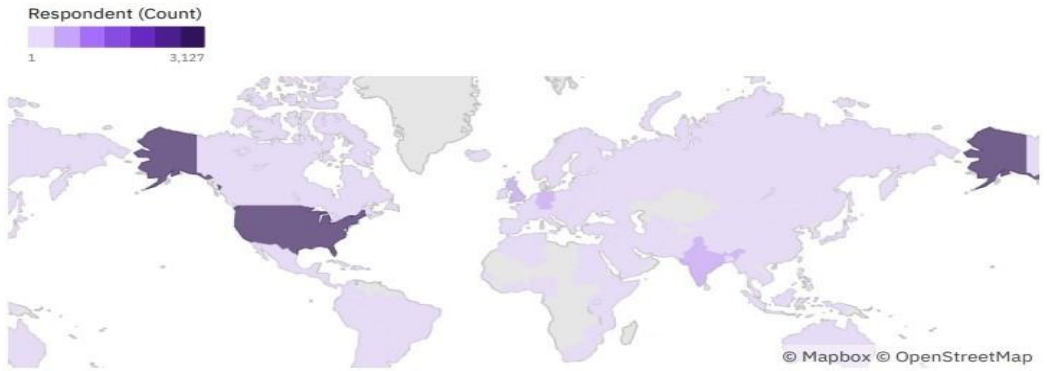
Demographic Dashboard made using m5_survey_data_demographics

Demographics

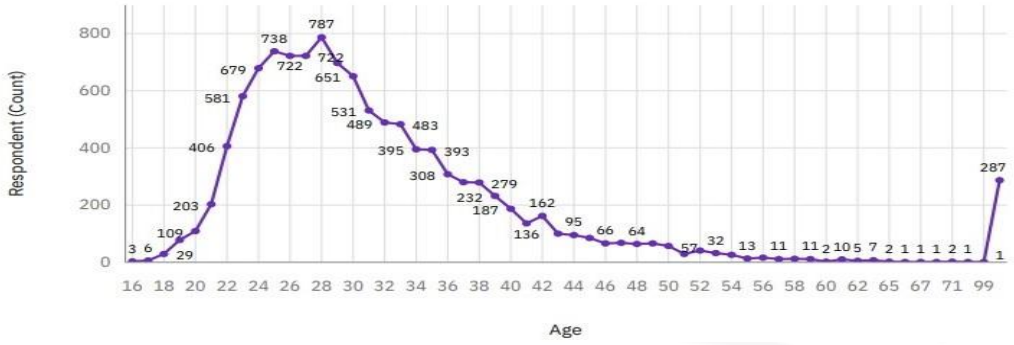
Respondent classified by Gender



Respondent Count for Countries



Respondent Count by Age



Respondent Count by Gender, classified by Formal Education Level

DISCUSSION

- Analysis revealed that JavaScript and HTML/CSS languages are used more than others.
- MySQL database is widely used by developers, which implies that these skills should be prioritized in training.
- It highlights that Web Development is in huge demand.
- Less female participation in technology field.

OVERALL FINDINGS & IMPLICATIONS

Findings

- Platforms like AWS and Docker are growing.
- There is a gender gap in tech jobs.
- Programming languages and databases are changing rapidly each year.

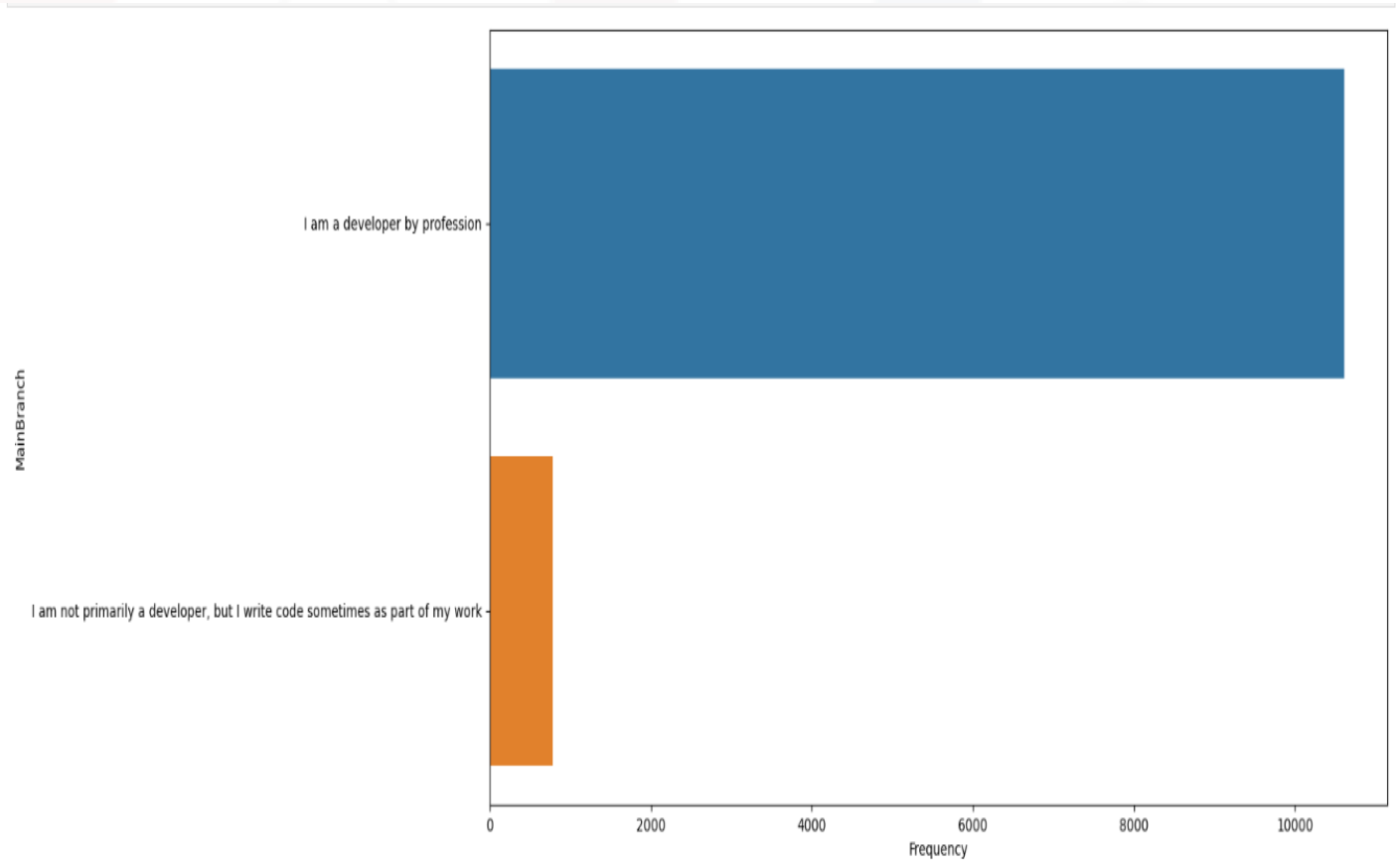
Implication

- It implies that there will be increased in use of cloud services in future.
- It suggests that job hiring practices may be unfair.
- It concludes that companies need to keep pace with fast changes and be flexible.

CONCLUSION

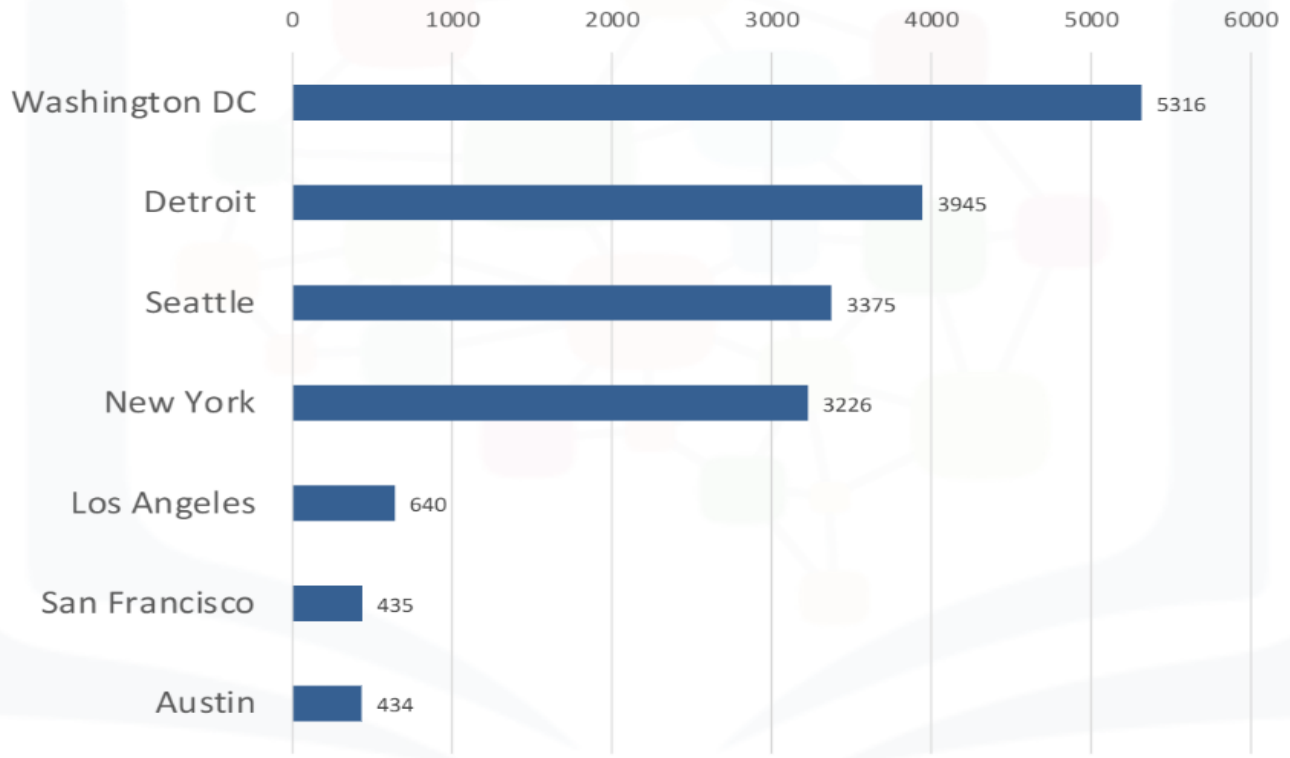
- Comparison between technology trends of this current and next year.
- Our findings show significant diversity in programming languages and platforms used each year.
- In the future cloud services will be used more.
- Actions to be taken to decrease the gender gap in the tech field.

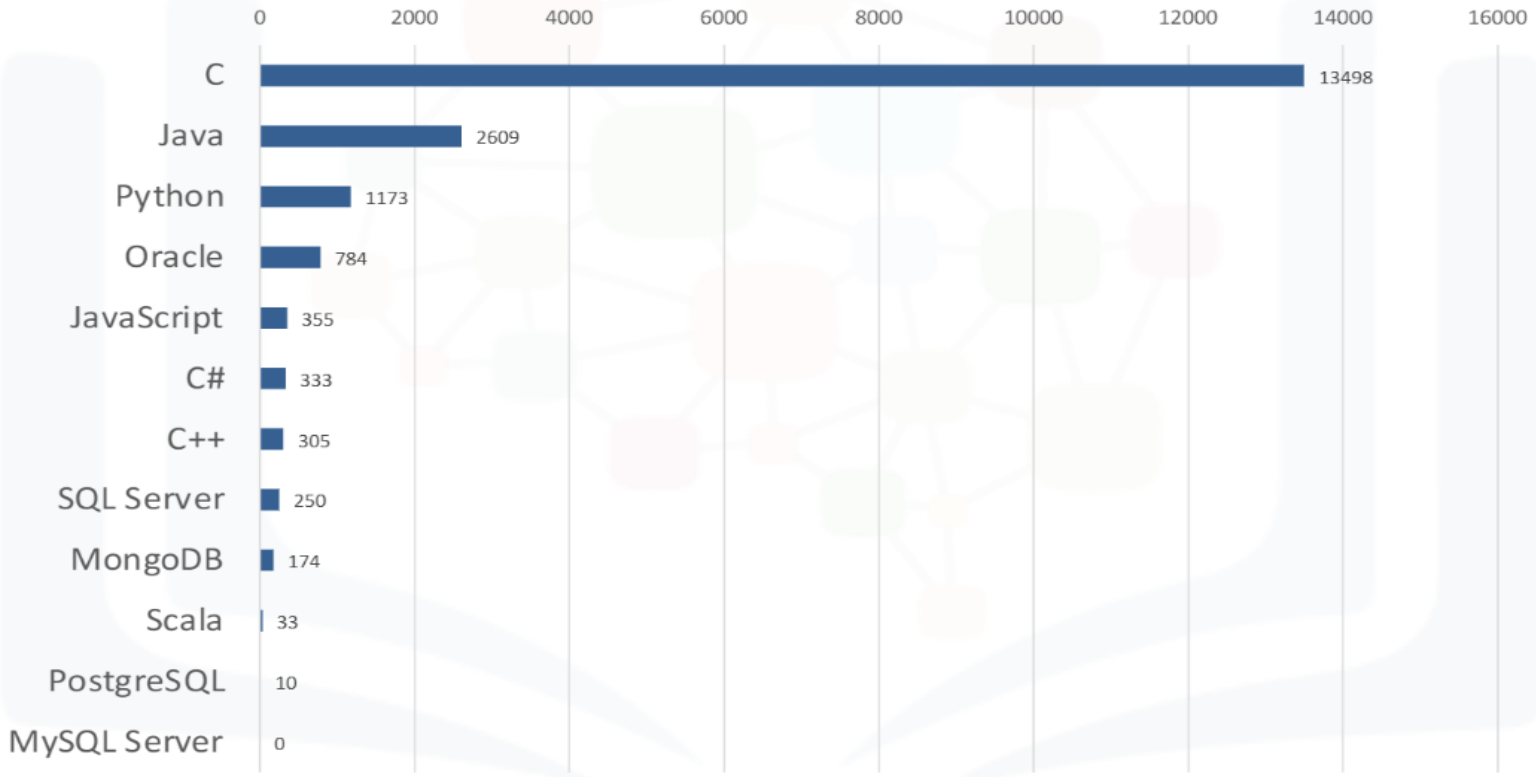
APPENDIX


I am a developer by profession
I am not primarily a developer, but I write code sometimes as part of my work
MainBranch
0
2000
4000
6000
8000
10000
Frequency

JOB POSTINGS

A- JOB POSTINGS CHART



POPULAR LANGUAGES

B- POPULAR LANGUAGES CHART