Analysis on IT Trends

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OUTLINE

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EXECUTIVE SUMMARY

- Showing the most used programming languages and database softwares

- Analyzing Job Openings in IT
  - Comparing openings to languages being used
  - Highlighting IT jobs in need

- Lack of Tech in countries

- Highlighting Genders of people in IT positions

INTRODUCTION

- Highlighting trends in IT development
- Questions to answer:

  - What are the top programming languages in demand?

  - What are the top databases being used?

  - Best IDE's to use for IT projects

- Information for:
  - IT Recruiters
 - People aspiring to be in IT

METHODOLOGY
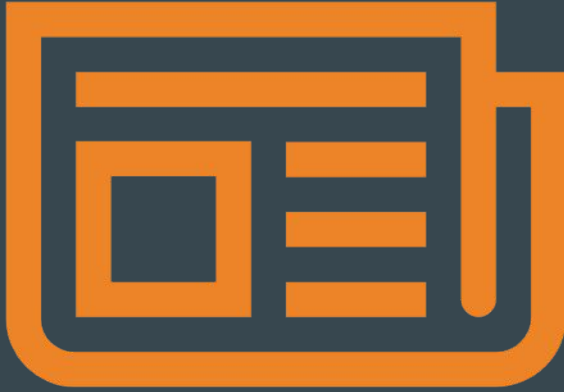
- Collecting Data from various sources:
  - Stack Overflow Developer 2019 Survey
  - Job postings from various websites
  - IT annual salary database
- Cleaning the data
  - SQL, Python
- Analyzing the Data
  - Pandas
- Visualizing the Data
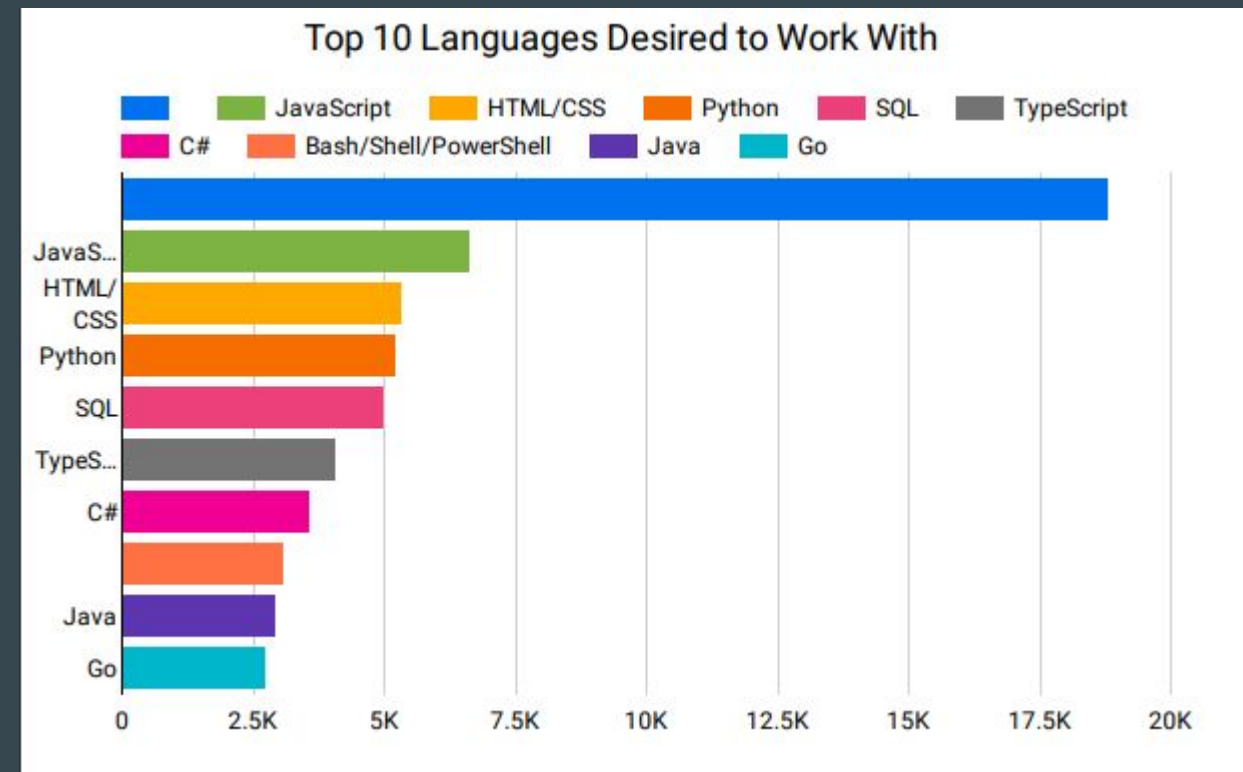 - Matplotlib, Seaborn
- Presenting the Data

RESULTS

SEE CHARTS IN UPCOMING SLIDES

PROGRAMMING LANGUAGE TRENDS

Current Year
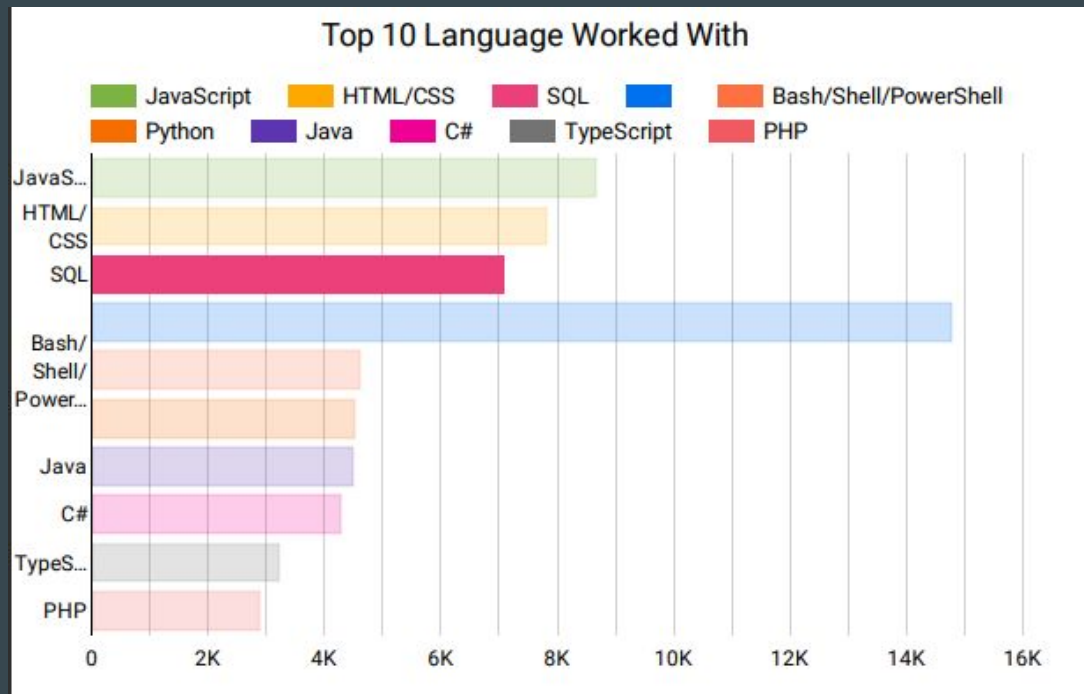
Next Year

PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS
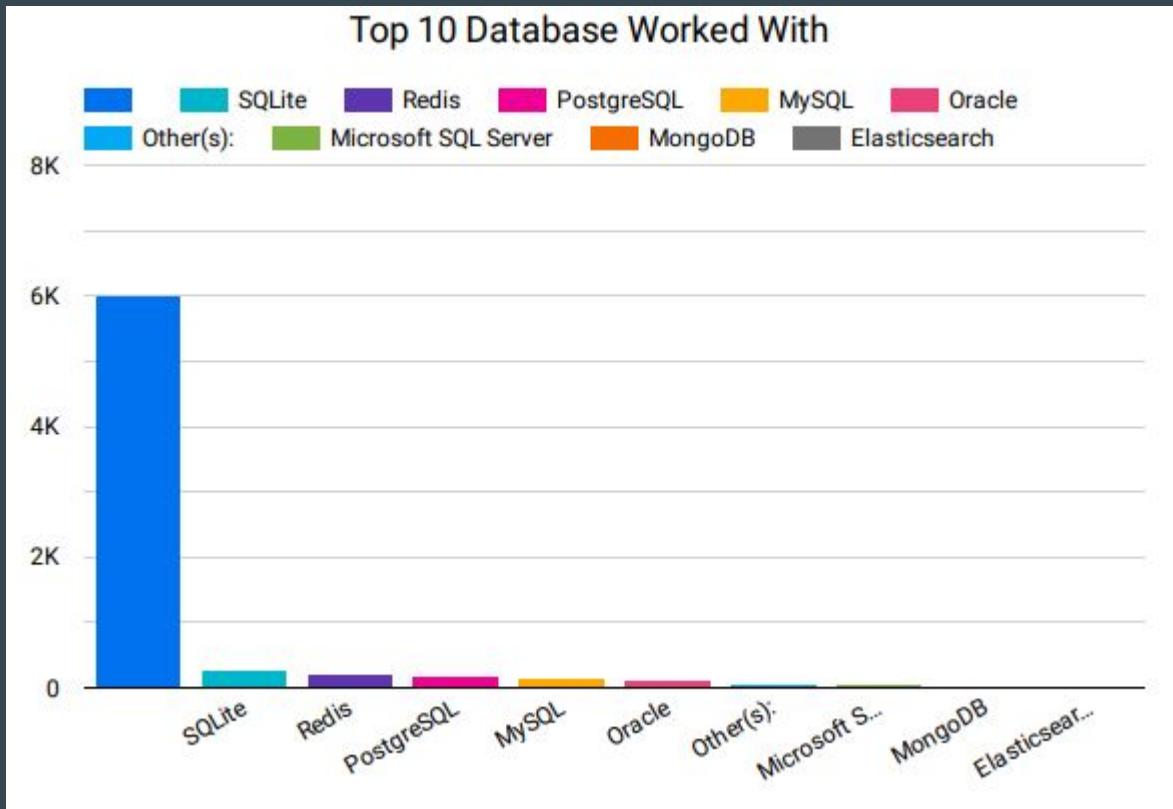
Findings

- Top 3 include: HTML/CSS, SQL, and JavaScript
- Top 3 vastly outweigh the other languages
- People lack knowledge of alternative programming languages
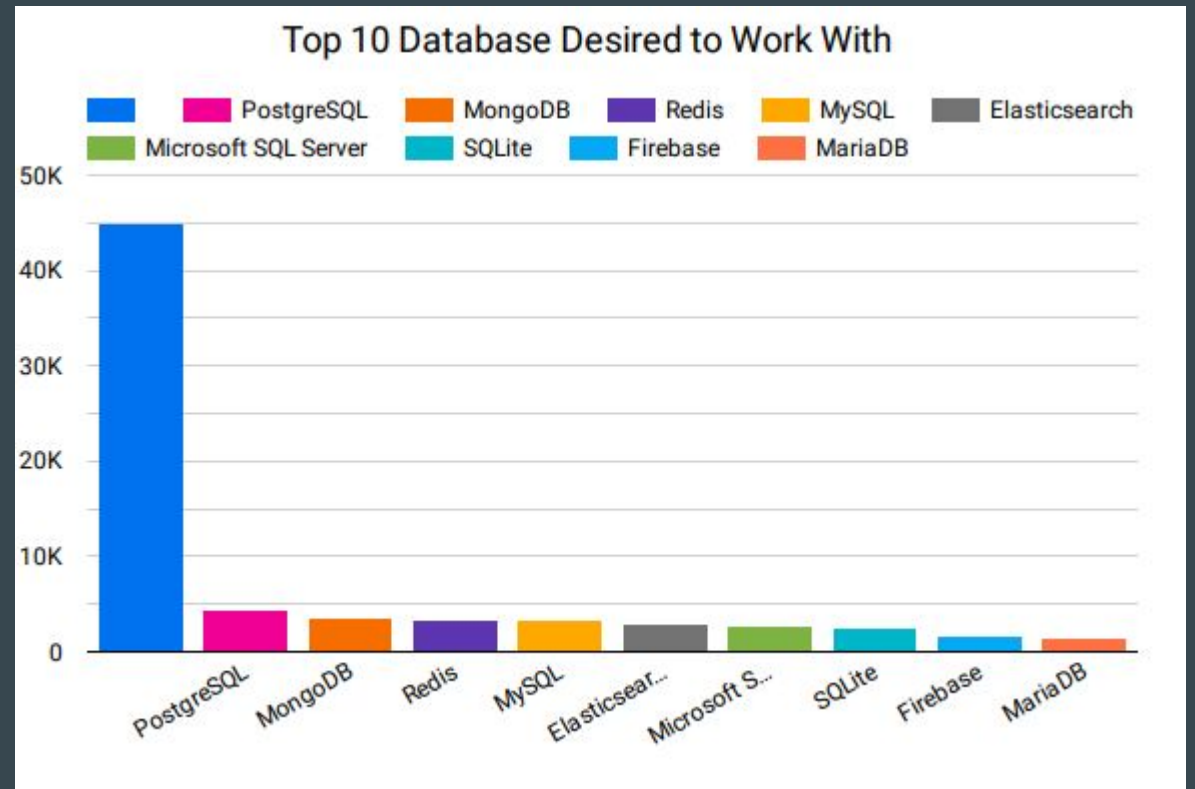
Implications

- Development in HTML will be used for a long time due to the internet
- SQL is the best language for data mining and will continue to grow
- Python is starting to rise the ranks due to its versatility, look out for it to be top 3 in the future.

DATABASE TRENDS

Current Year

Next Year

Top 10 Database Worked With

Top 10 Database Desired to Work With

DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- Top 3 include: SQLite, Redis, PostgreSQL

- SQL dominates database usage

- Redis is an up and coming database

Implications

- Open source databases are in high demand due to its flexibility for companies

- More people want to work in databases compared to the amount of people using them

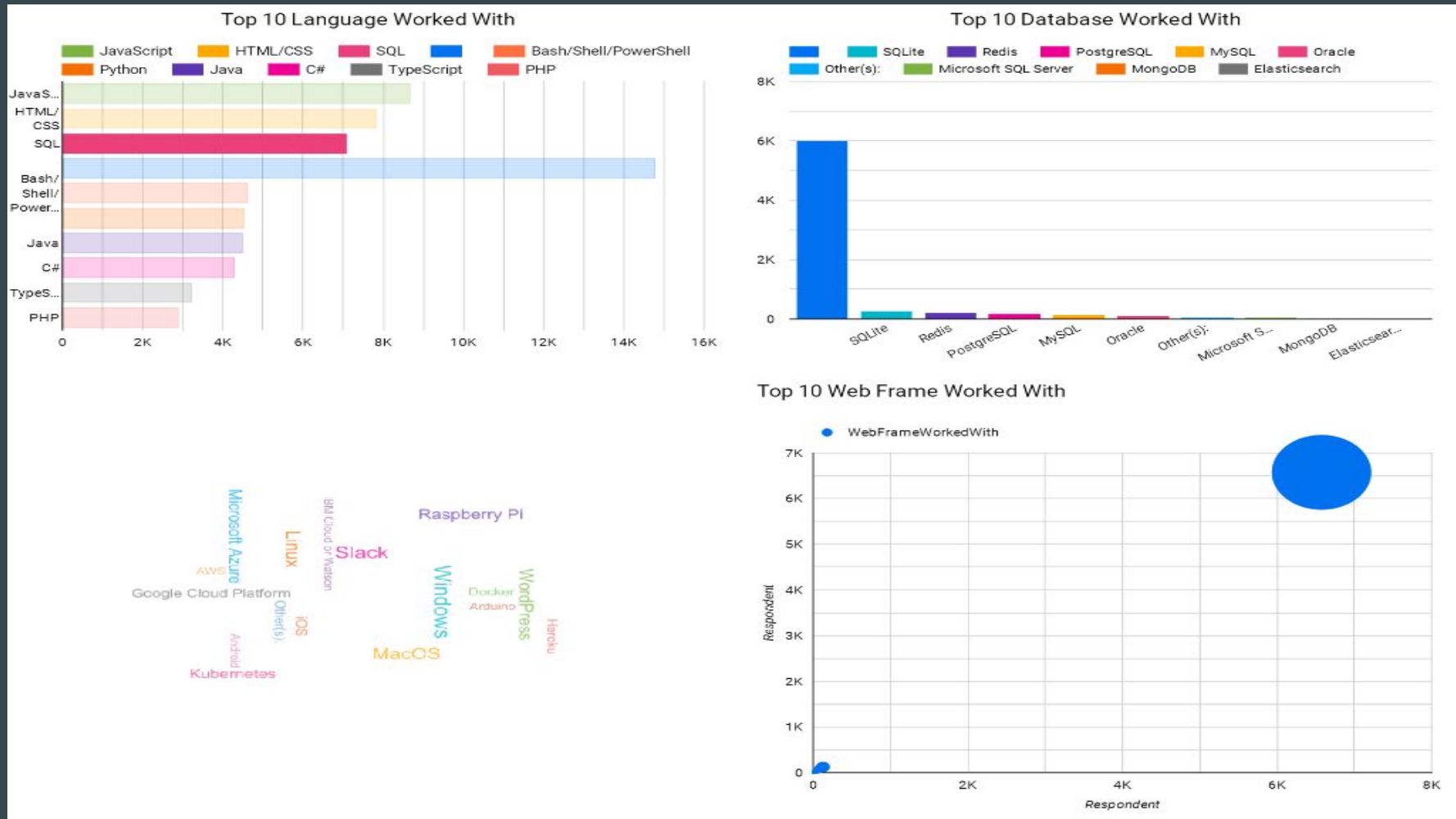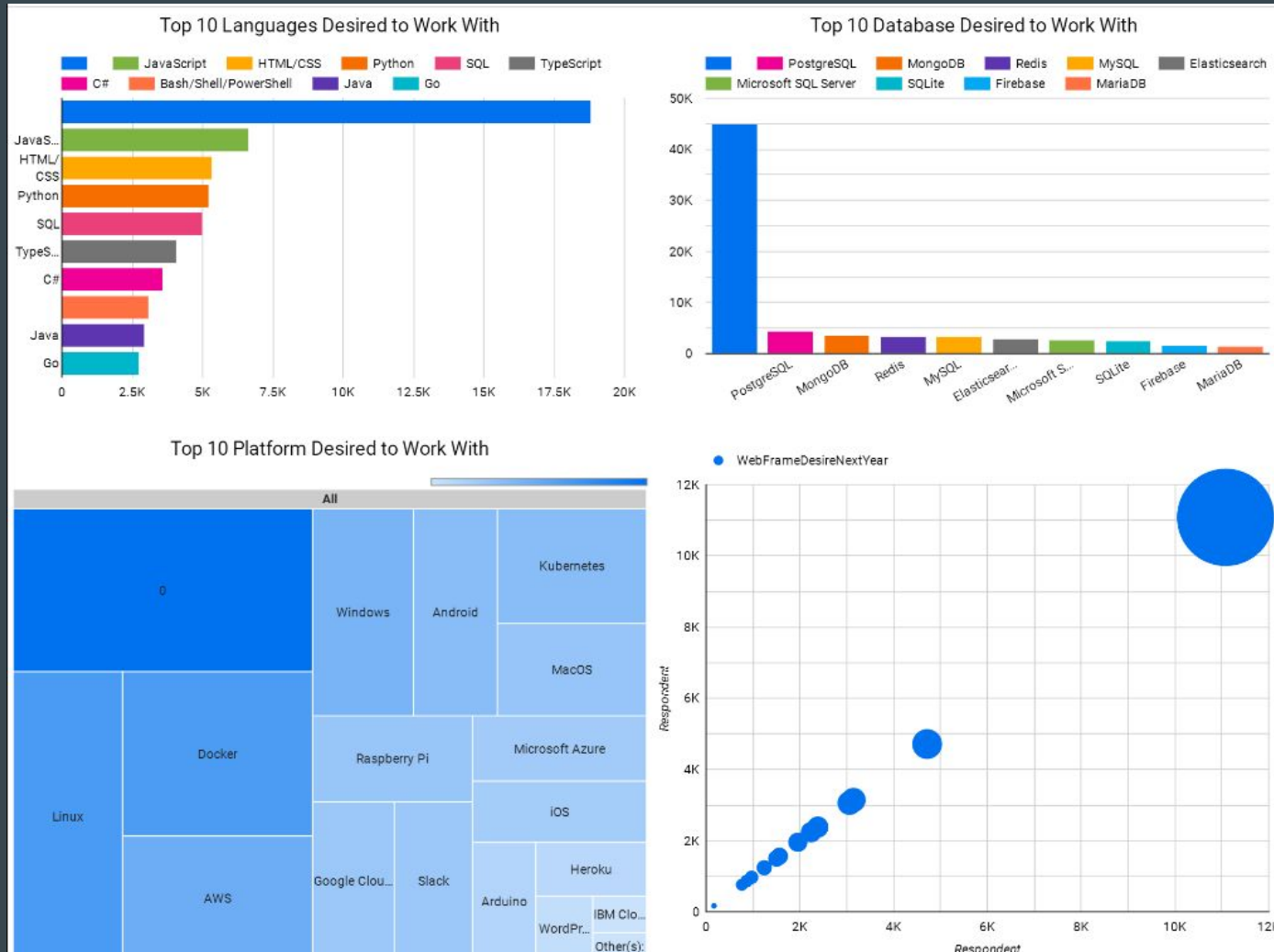- Expect PostgreSQL to make a jump in usage in the next year

DASHBOARD

Github Link to Dashboard:
https://github.com/sloanhoward23/IBMCertCapstoneProject/blob/main/IBM_Final_Project_Dashboard.pdf
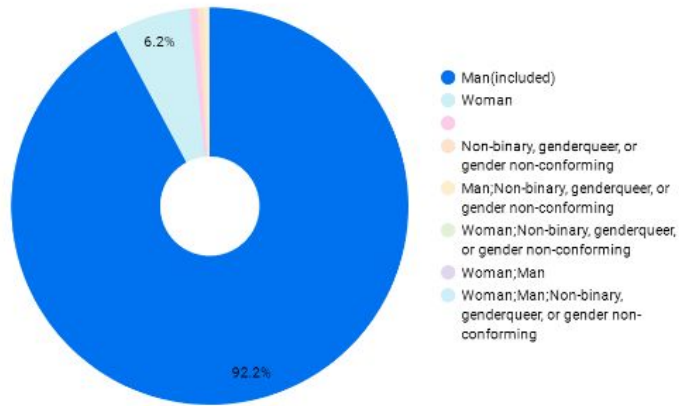
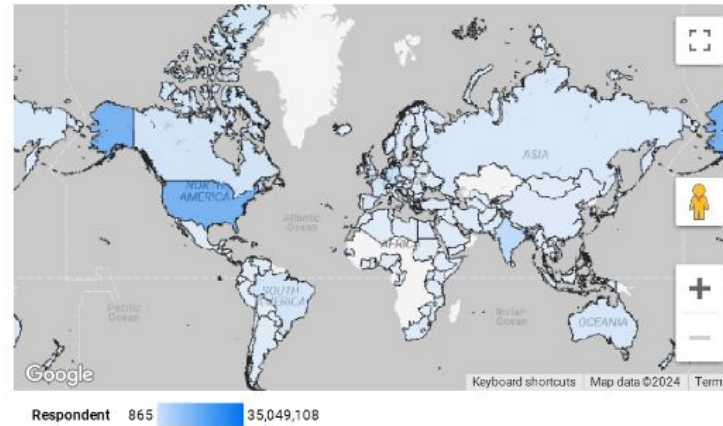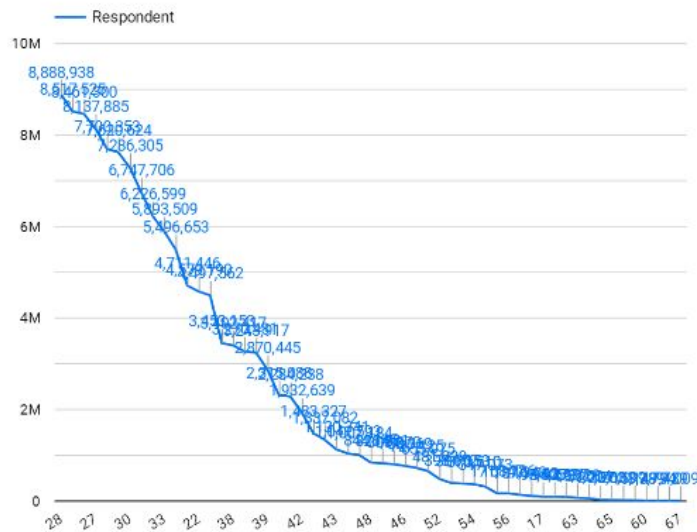# DASHBOARD TAB 1

DASHBOARD TAB 2

DASHBOARD TAB 3
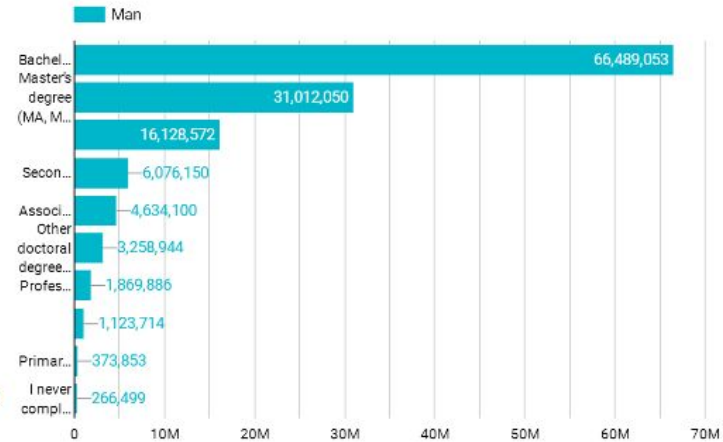
DISCUSSION

- Graphs show the trends for future use of programming languages and databases are growing!
- Need more female participation in IT
- There is a need for IT training in other countries outside the US
- There is an age and education discrimination that needs to be address with more training for people who cannot be educated thru the school system

OVERALL FINDINGS & IMPLICATIONS

Findings

- Results for IT technologies grow and change by year
- Mainly used in US, Europe, India, China
- Not a lot of females in IT

Implications

- Businesses will have more pressure to keep up technologically or else they will fall behind to competition
- Embrace IT as an occupation in countries that lack
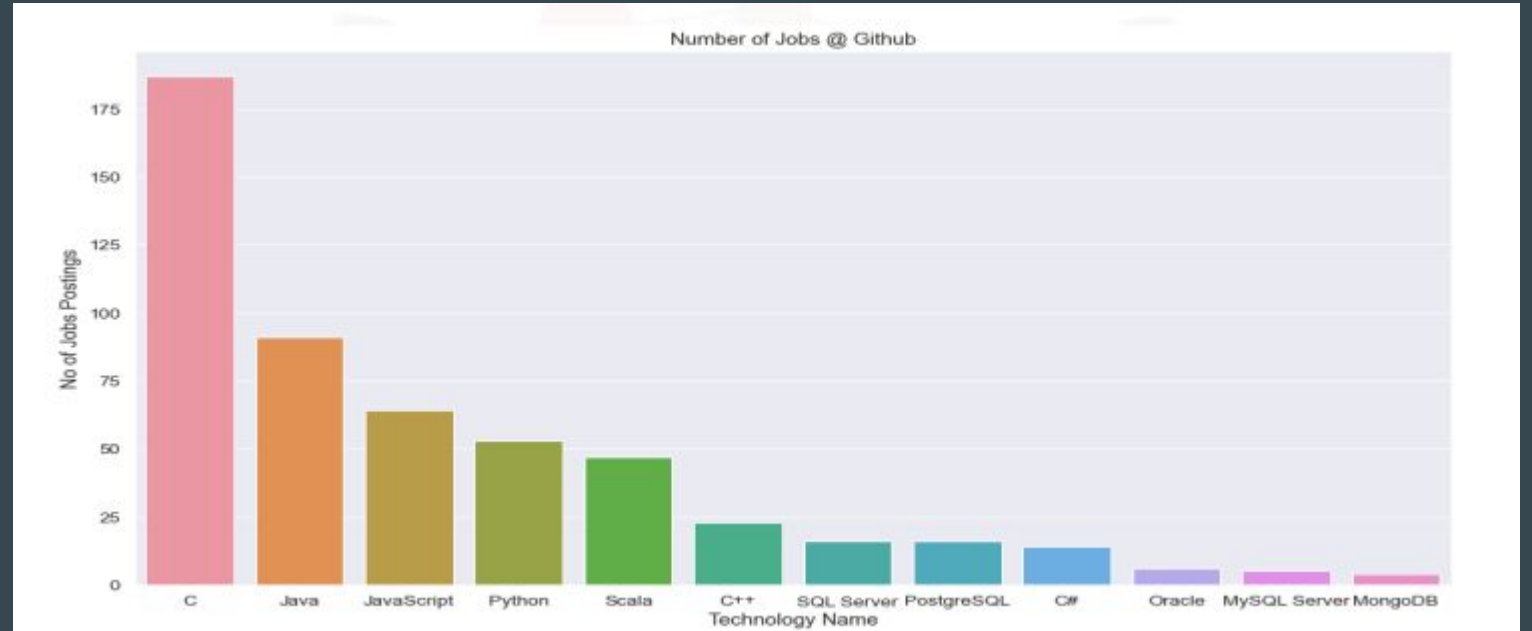- Open source and cloud databases will continue to grow

CONCLUSION

- Analyzed trends for IT programming languages and databases

- Overview of best languages and databases used

- Overview of up and coming languages and databases for next year

- What actions can be taken with this data

APPENDIX

- Job Postings

POPULAR LANGUAGES