Current and Future Trends in Technology

Raphael Lopez

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IBM Developer

SKILLS NETWORK

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  - Top 10 Web Frames Worked With
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  - Top 10 Databases Desired Next Year
  - Popular Platforms Desired Next Year
  - Top 10 Web Frames Desired Next Year
- Demographics
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  - Respondents by Age
  - Respondents by Gender Classified by Education Level

INTRODUCTION

- Analysis of current and future trends relating to programming languages and database management systems (DBMS).
- What are the currently popular programming languages and database management systems?
- Which programming languages and database management systems are more likely to be more popular in the near future?
- A short look into the Demographics in the fields linked to programming languages and database management systems.

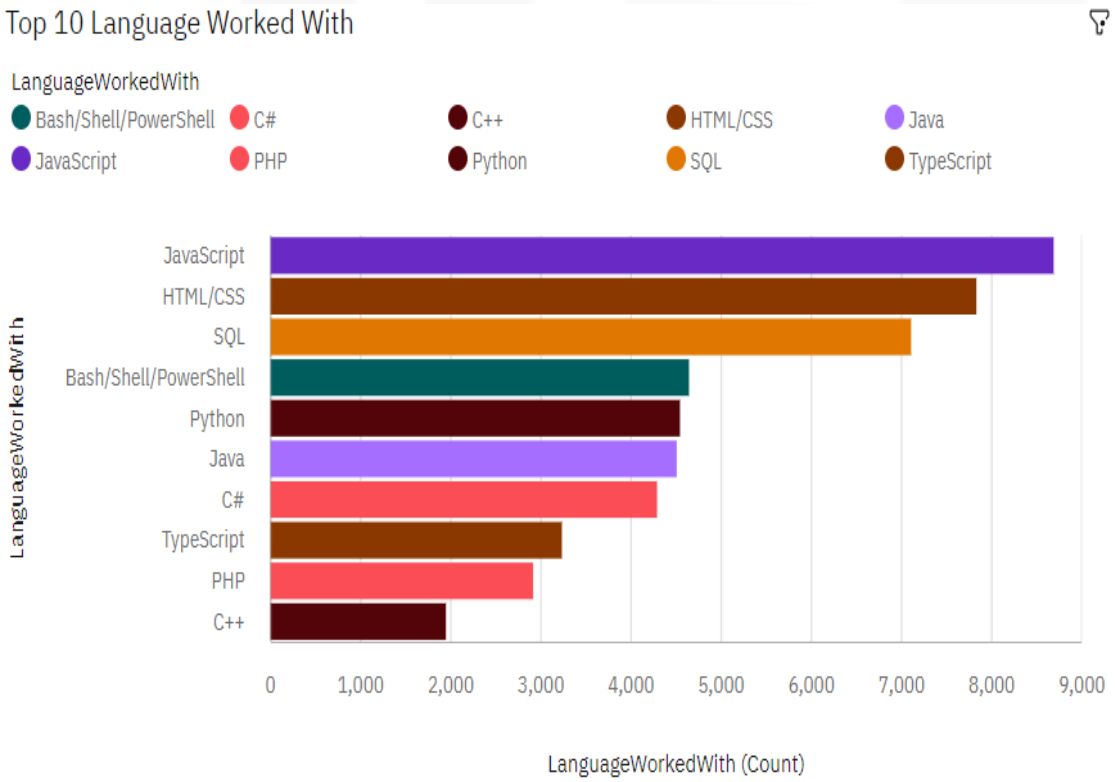
METHODOLOGY

- Gathering Data
  - Relevant data was gathered using a mixture of API, Python library "requests", and surveys from publicly available data.
- Data Cleaning
  - Removed duplicates, Found missing values then inputted proper data, then normalized the dataset using python libraries called pandas and NumPy.
- Analysis
  - Analyzed the dataset by looking at Data distribution, Outliers, and Correlations.
- Data Visualization
  - Visualized the analyzed dataset using Cognos Dashboard.

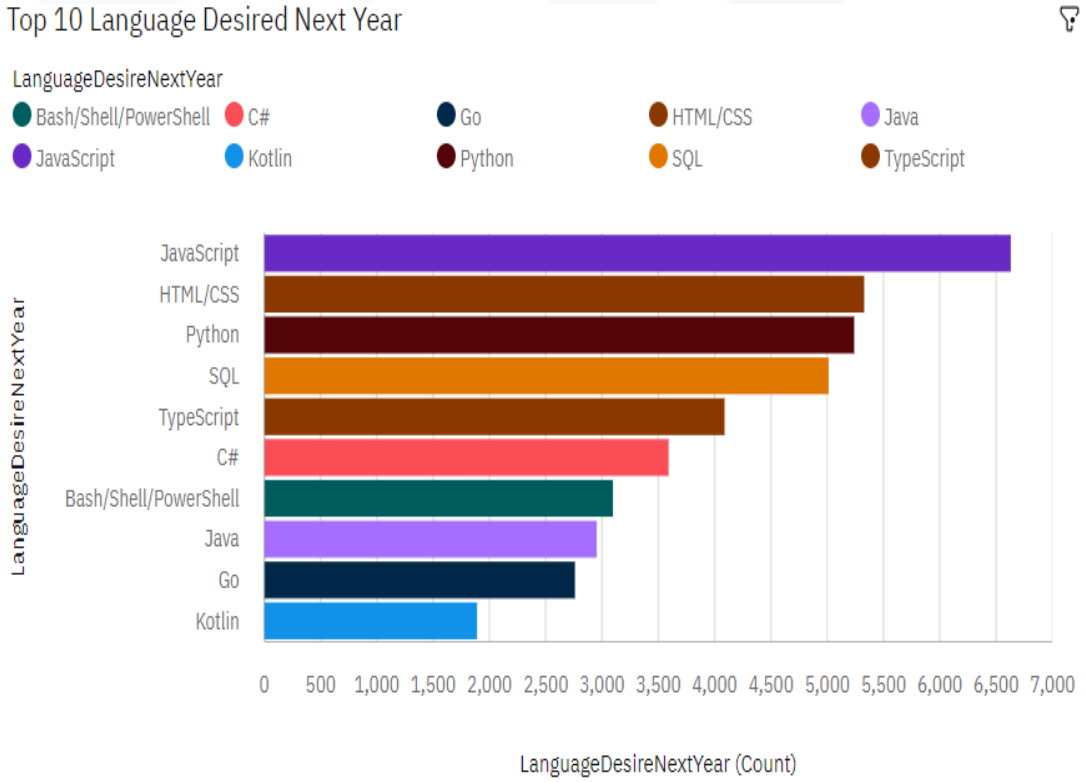
RESULTS

PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



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PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

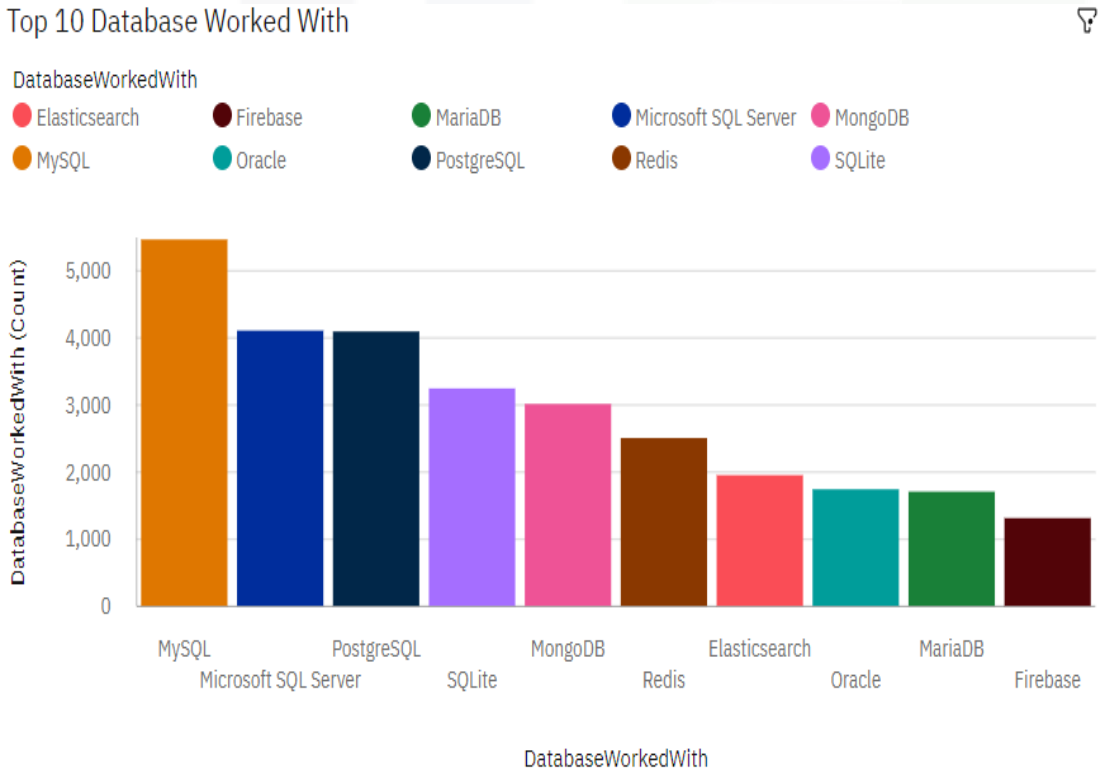
- JavaScript is the most popular language, Followed by HTML/CSS, and SQL.
- Java, C# and Bash/Shell/PowerShell currently have some demand.
- Python and TypeScript are gaining popularity and might surpass the top languages in the future.

Implications

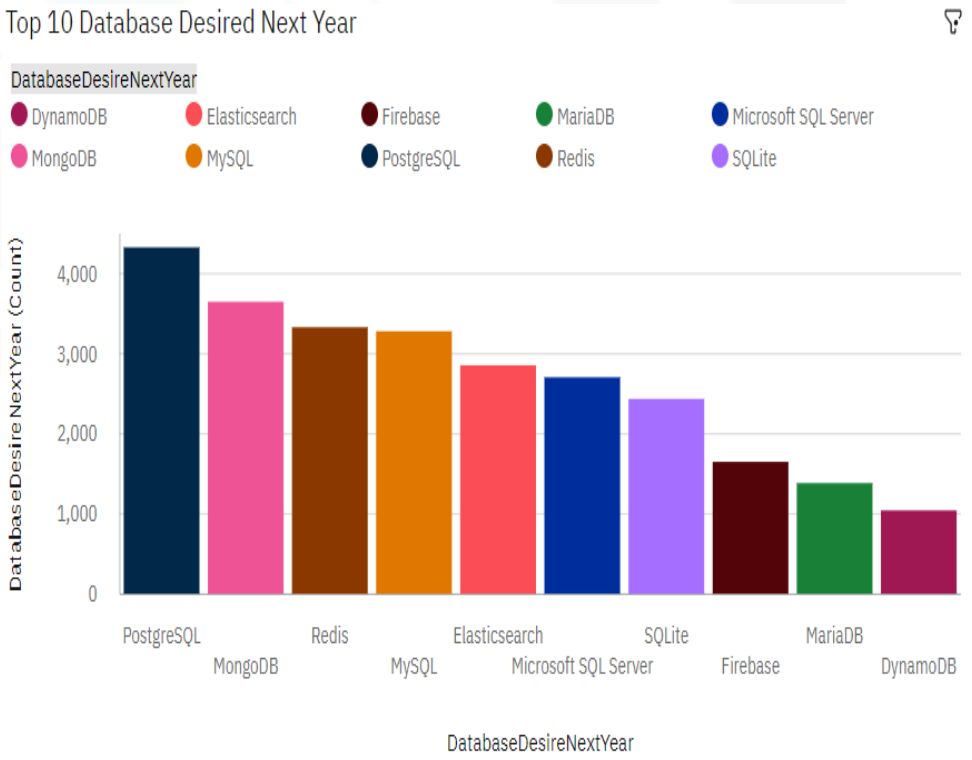
- JavaScript and HTML/CSS and SQL have high demand in the future. It would be wise to learn these.
- Java, C# and BASH/Shell/PowerShell preferences are declining.
- Python and TypeScript will probably be very popular in the near future. It would be highly advisable to focus on these languages.

DATABASE TRENDS

Current Year



Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- Currently MySQL is the most popular database.
- The top 3 most popular languages desired are PostgreSQL, MongoDB, and Redis.
- Microsoft SQL Server and SQLite is currently very popular but will be overtaken in the near future.

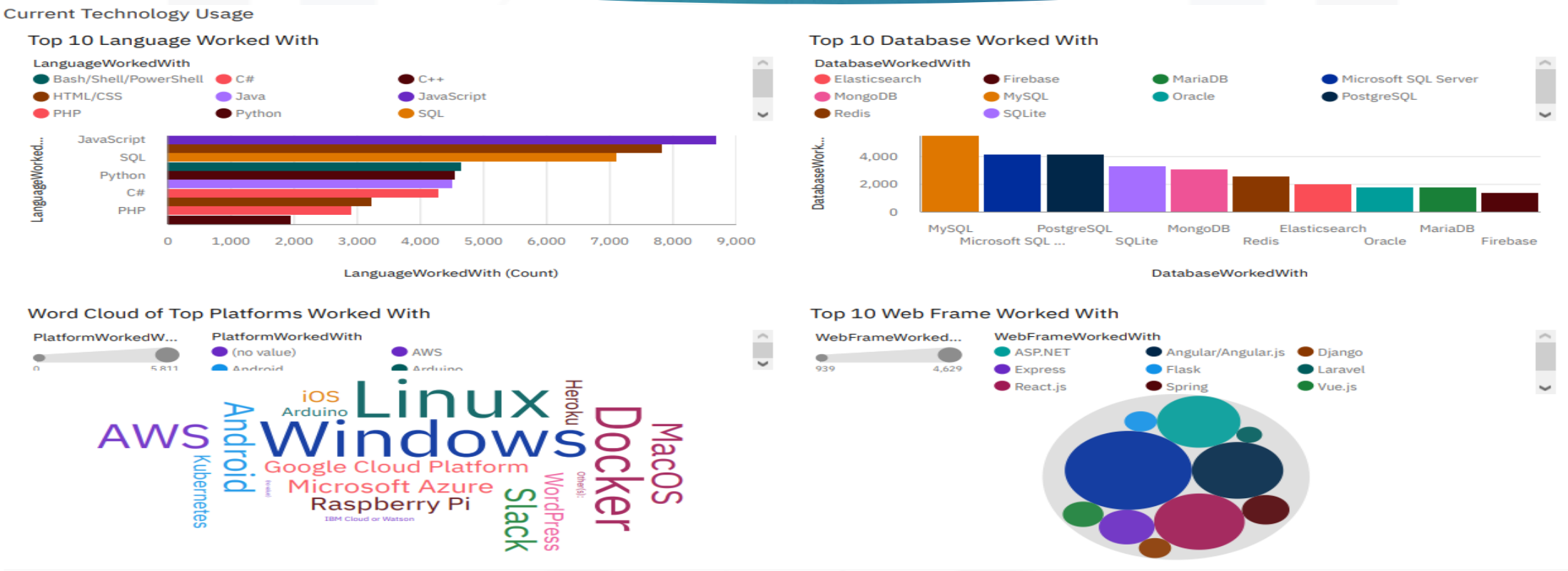
Implications

- My SQL is still and will probably continue to be relevant in the near future.
- It would be highly advisable to learn PostgreSQL, MongoDB, and Redis as they are likely to take over the top spot for databases.
- Based on the trends, Microsoft SQL Server and SQLite will probably be on the lower list of popular databases in the future.

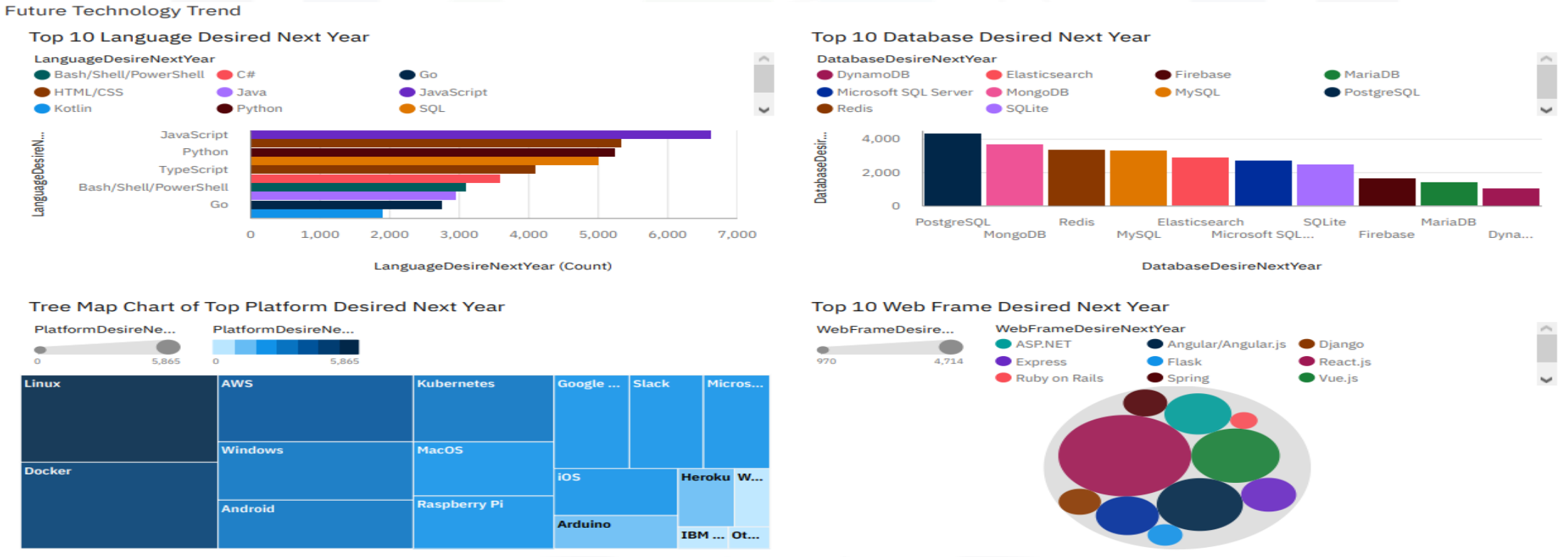
DASHBOARD

https://github.com/Rimvader/IBM-Data-Analyst-Capstone/blob/214e0a23be67a6b9a619ac84bebf5b33e2a97f21/IBM_Capstone_Dashboard.pdf

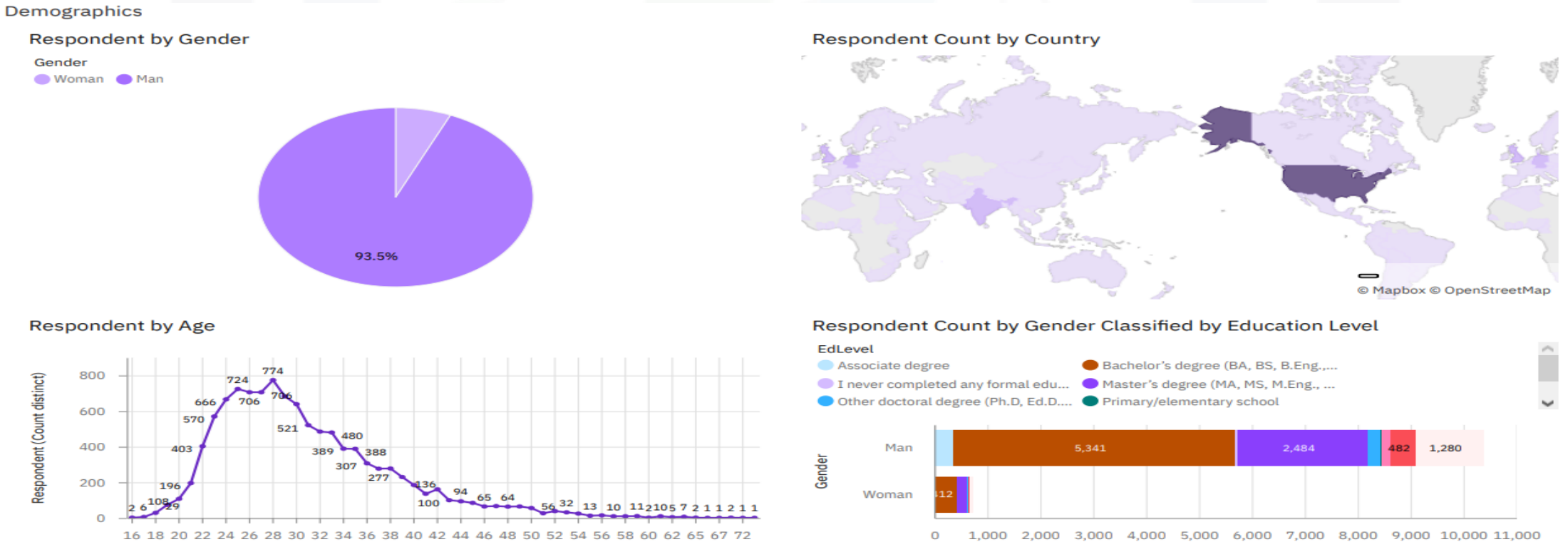
Current Technology Usage



Future Technology Trend



Demographics



DISCUSSION

By taking a deep look into the data gathered it would seem that the trends are going in favor of big data and advanced programming languages.

The study also shows that programming-related fields are highly dominated by males.

OVERALL FINDINGS & IMPLICATIONS

Findings

- In the near future, advanced programming languages are most likely to be dominant.
- Big Data and Non-Relational Database Management System is on the up trend.

Implications

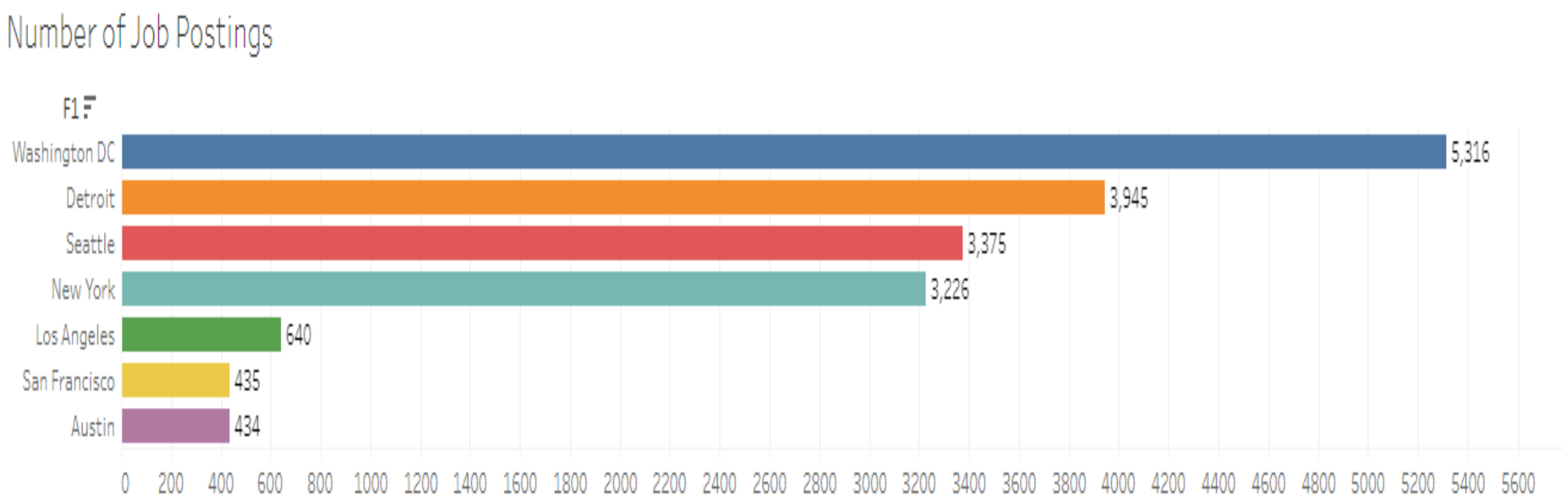
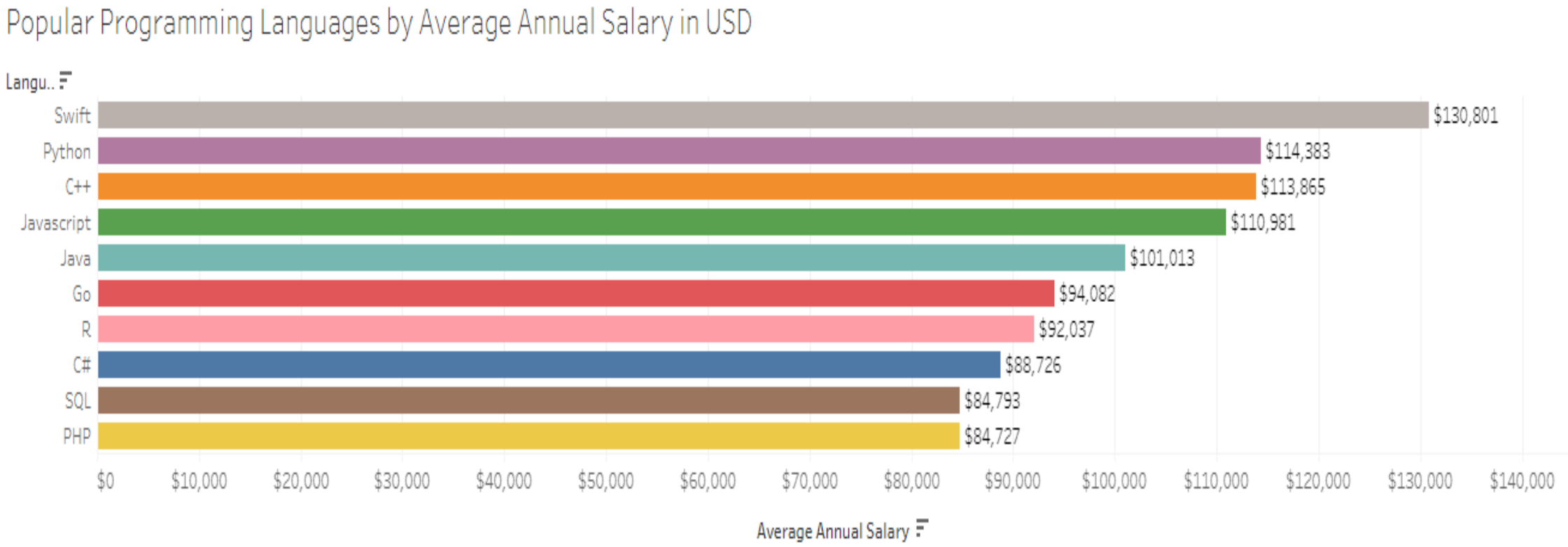
- In the near future, it would be harder to find employees that are using currently popular programming languages and Database Management Systems.

CONCLUSION

- The current tech-related fields are dominated by younger males mostly based in the United States.
- As time goes by the trend is heading in favor of advanced programming languages and non-relational database management systems.
- If companies disregard the trend it might make it harder for them to find staff with knowledge of currently popular programming languages and database management systems in the near future.

APPENDIX

JOB POSTINGS



POPULAR LANGUAGES