Data Analyst Capstone Project

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OUTLINE

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EXECUTIVE SUMMARY

- Programming Language Trends for the current year and next year were graphed and analyzed

- Database Trends for the current year and next year were graphed and analyzed

- The most popular webframes for the current year and next year were graphed and analyzed

- The most popular platforms for the current year and next year were graphed and analyzed

- The Respondent Count was analyzed by gender, age, location, and education level

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INTRODUCTION

- Data was collected and cleaned by professionals. The data was then input into excel spreadsheets in an organized format. The excel spreadsheet files were uploaded into IBM Cognos Dashboard. Specific parts of the data, such as LanguageWorkedWith, were graphed and analyzed using the tools in IBM Cognos Dashboard.   The focus of this analysis was to observe Programming Language Trends, Database Trends, the most popular webframes, the most popular platforms, and how the respondent count differed based upon gender, age, location, and education level.

METHODOLOGY

- Datasets were uploaded into IBM Cognos Dashboard

- IBM Cognos Dashboard tools were used to compare data with different factors such as gender or location

- Graphs and charts were created using IBM Cognos Dashboard tools

- Analysis was performed through observation of the data in IBM Cognos Dashboard

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RESULTS

Observing Dashboard Tabs 1 and 2, the Top 5 computer languages during the current year were JavaScript, SQL, Python, C#, and PHP. The Top 5 computer languages for the next year were JavaScript, SQL, TypeScript, Kotlin, and C#. The top 5 databases for the current year were MySQL, Microsoft SQL, PostgreSQL, SQLite, and MongoDB. The top 5 databases for the next year were Redis, SQLite, PostgreSQL, MySQL, and Microsoft SQL. The most popular webframes worked with for the current year were jQuery, Angular, React.js, and ASP.NET. The most popular webframes worked with in the next year were Vue.js, React.js, and jQuery. The top 3 platforms desired for the next year were Linux, Docker, and AWS. The majority of the Respondent Count was male, ages 24-28, located from the United States, and holding a bachelors degree.
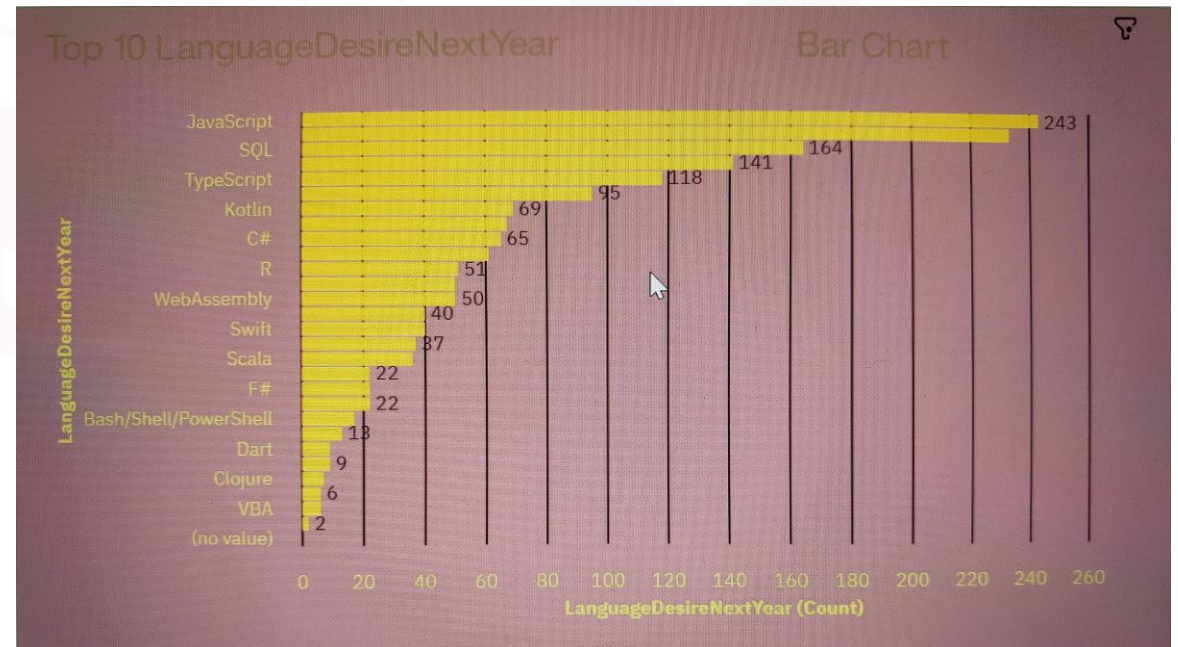
PROGRAMMING LANGUAGE TRENDS

Current Year
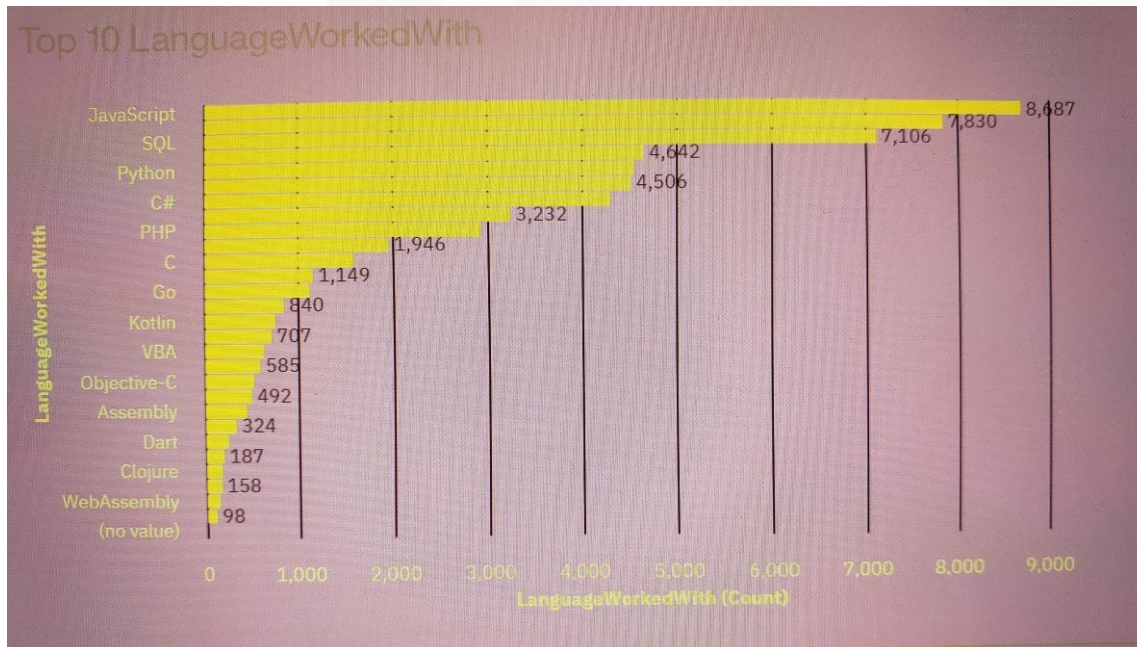
Next Year

PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

Current

- JavaScript 8,687
- SQL 7,830
- Python 4,642
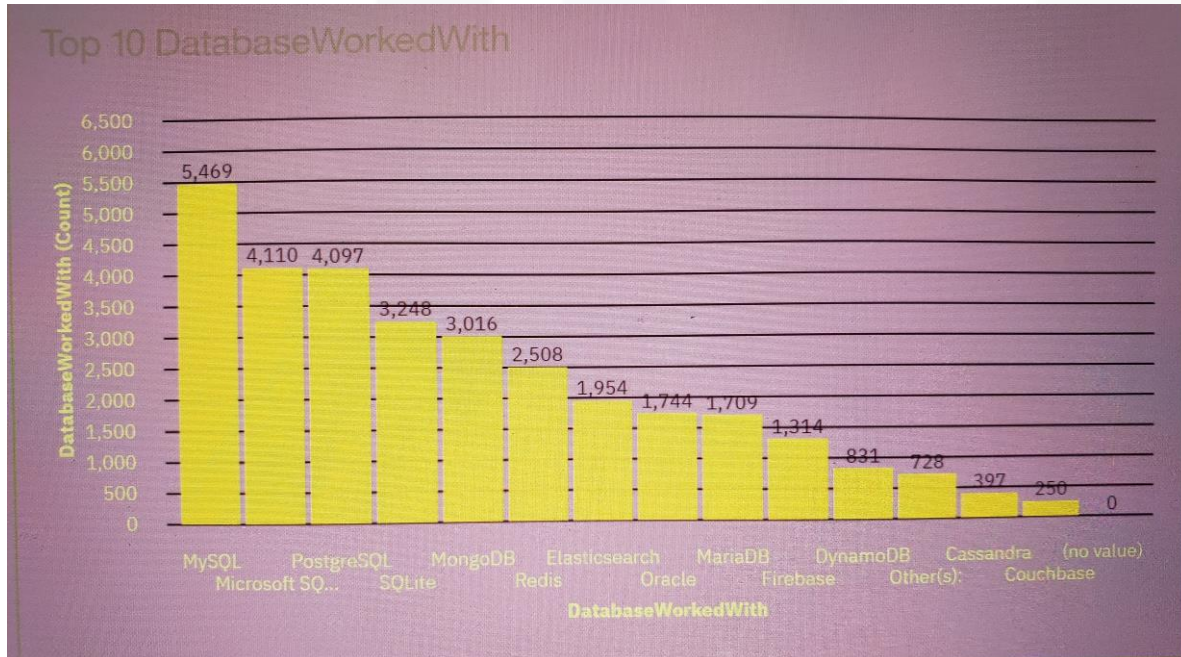
Next Year

JavaScript 243

SQL 164

TypeScript 141

Implications

- JavaScript will remain popular
- SQL will remain popular
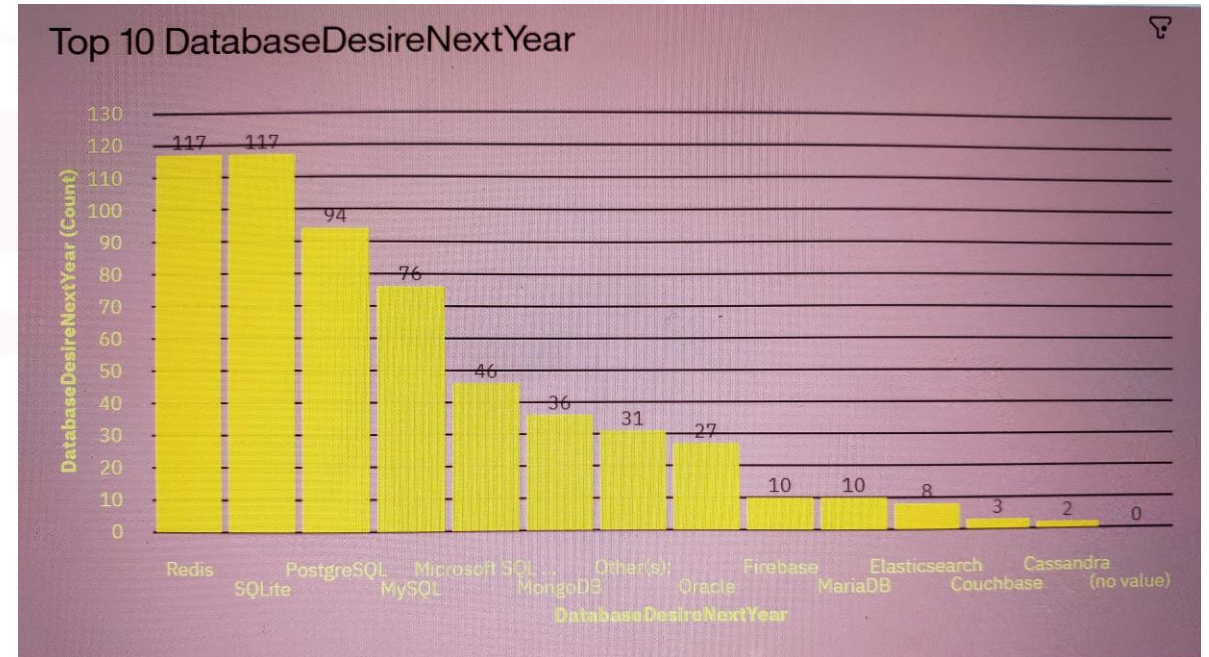- TypeScript will become more popular than Python

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DATABASE TRENDS

Current Year

Next Year

DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

Current Year	Next Year
• MySQL 5,469	Redis 117
• Microsoft SQL 4,110	SQLite 117
• PostgreSQL 4,097	PostgreSQL 94

Implications

- Redis is expected to gain more users than MySQL
- SQLite is expected to gain more users than Microsoft SQL
- PostgreSQL will remain popular

DASHBOARD

https://dataplatform.cloud.ibm.com/dashboards/426d4f0e-7bde-4656-8696-bf66db3dd509/view/5d3cfa3f3ab01cf115d2bde407c82e052b33710cbbbbd606d6d67b495c637197a8381a93c82f1a5fdb110360a7ee400fc1
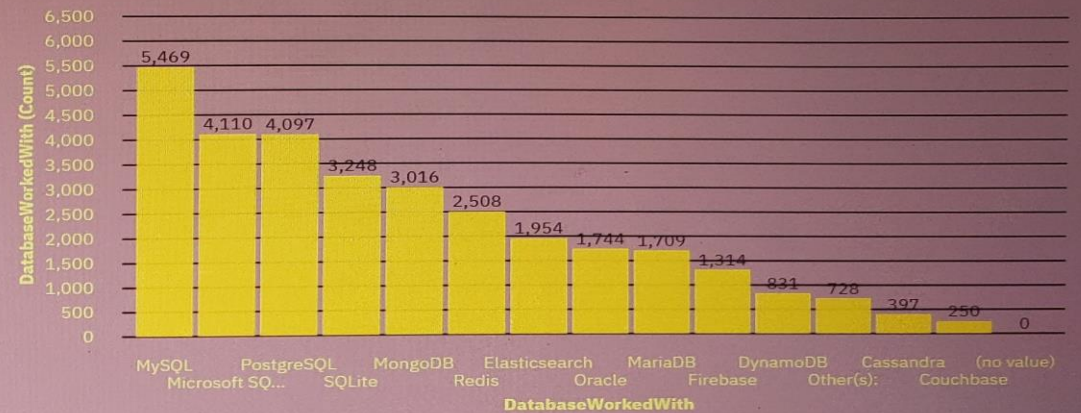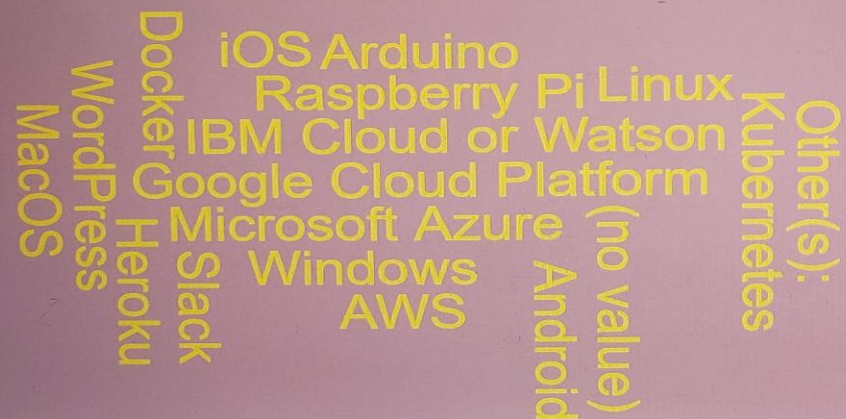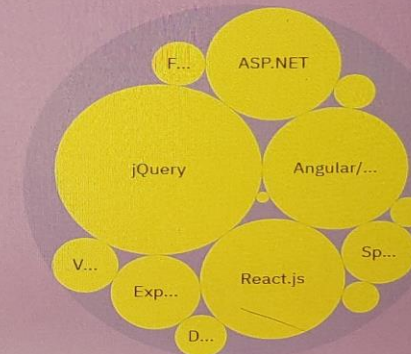
DASHBOARD TAB 1
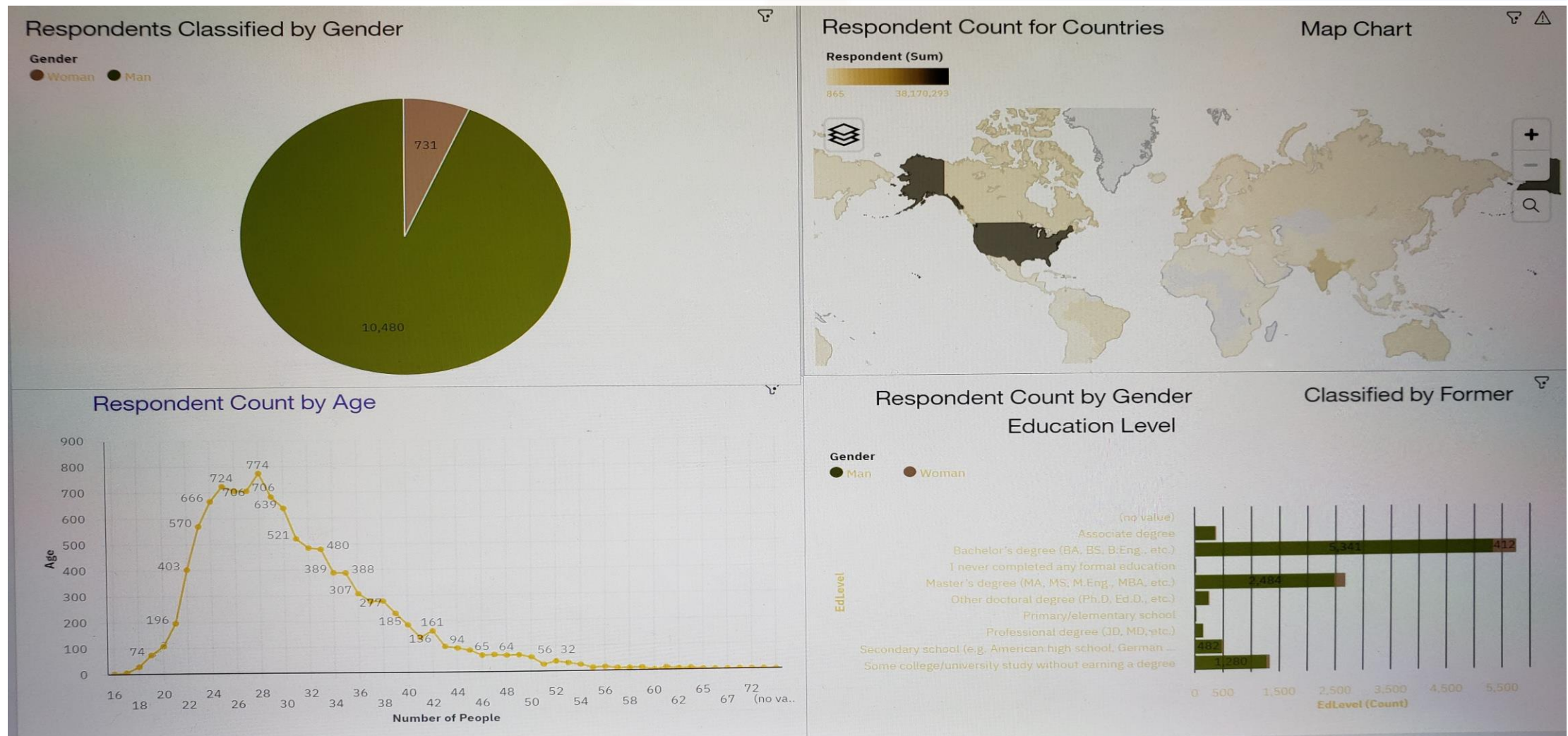
DASHBOARD TAB 2

DASHBOARD TAB 3

DISCUSSION

- Different trends can be observed while viewing the graphed data. Employees that hold higher than a bachelors degree may be needed to assist in training of other employees. More training in the usage of TypeScript along with JavaScript may be necessary. Switching from AWS to Docker may be a way to decrease costs if needed. The top 5 computer languages for the current year were JavaScript, SQL, Python, C#, and PHP. The top 5 computer languages to learn for next year are JavaScript, SQL, TypeScript, Kotlin, and C#.

OVERALL FINDINGS & IMPLICATIONS

Findings

- TypeScript is gaining popularity
- Docker has more users than AWS
- The majority of respondents only hold a bachelors degree

Implications

- TypeScript is another type of JavaScript used for developing websites. This can mean that the internet is continuing to grow.
- Docker may have cheaper services than AWS with the same tools and therefore is retaining more consumers.
- Limited amounts of people with experience in this field have earned higher than a bachelors. Extra skills needed may need to be taught by the higher educated employees when necessary.

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CONCLUSION

- Employees that hold higher than a bachelors degree may be needed to assist in training of other employees.

- More training in the usage of TypeScript along with JavaScript may be necessary.

- Switching from AWS to Docker may be a way to decrease costs if needed.

- The top 5 computer languages to learn for next year are JavaScript, SQL, TypeScript, Kotlin, and C#.
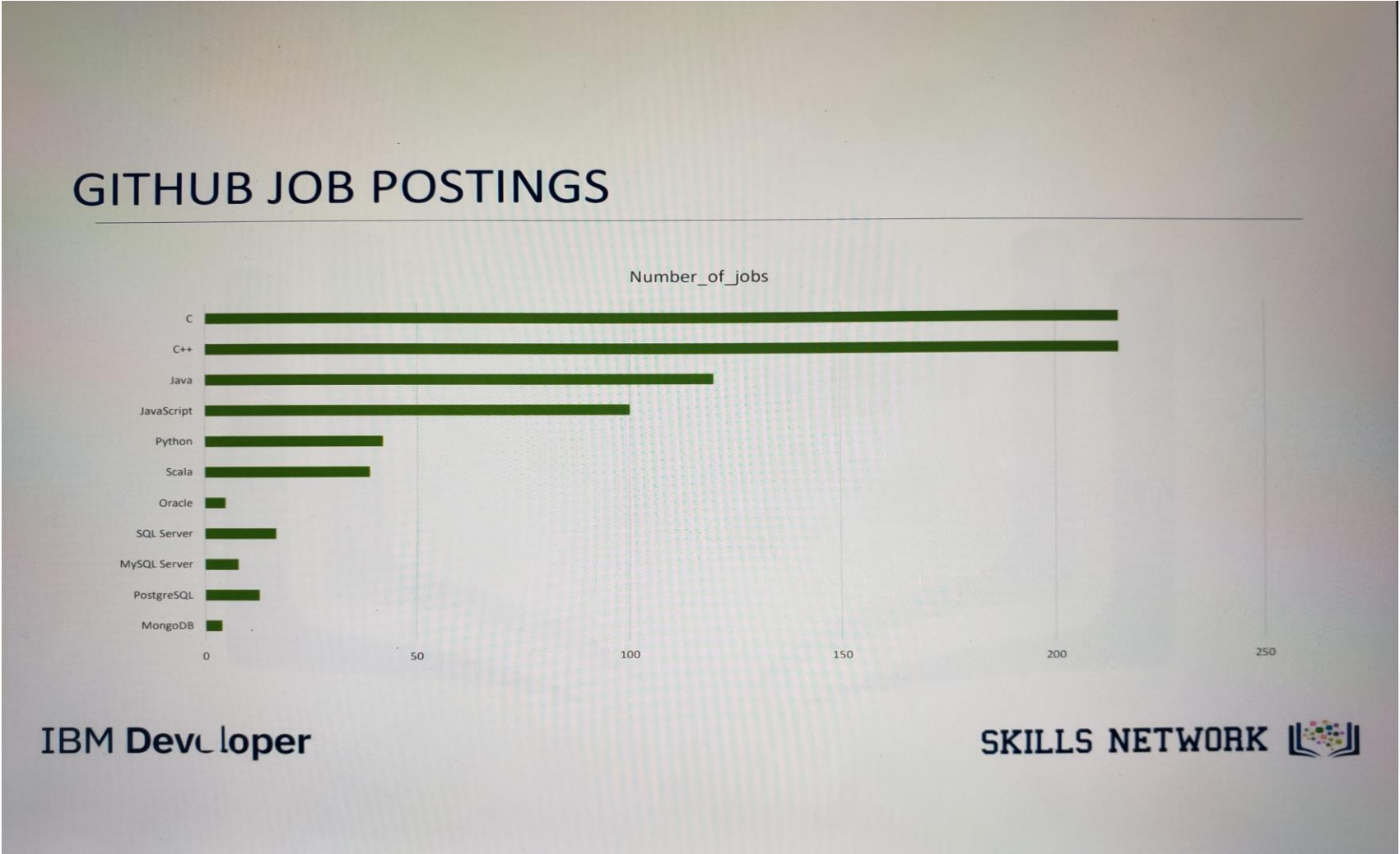
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APPENDIX

- Data for this research came from the Kaggle dataset https://www.kaggle.com/kyanyoga/sample-sales-data

GITHUB JOB POSTINGS

POPULAR LANGUAGES