Final assignment

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OUTLINE

- Executive Summary
- Introduction
- Methodology
- Results
  - Visualization – Charts
  - Dashboard
- Discussion
  - Findings & Implications
- Conclusion
- Appendix

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EXECUTIVE SUMMARY

- Data collection

- Data wrangling
    - Handling duplicates
    - Handling Missing values
    - Normalizing data

- Exploratory Data Analysis

- Data visualization

- Building dashboard

INTRODUCTION

- Preparing data sets

- Analysis of current technologies

- Analysis of future technologies

- Study the impact of demographic data

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METHODOLOGY

- Upload datasets to Cognos
- Create 4 panel dashboard to describe Current Technology Usage
- Create 4 panel dashboard to describe Future Technology Trend
- Create 4 panel dashboard to describe the impact of demographic data.
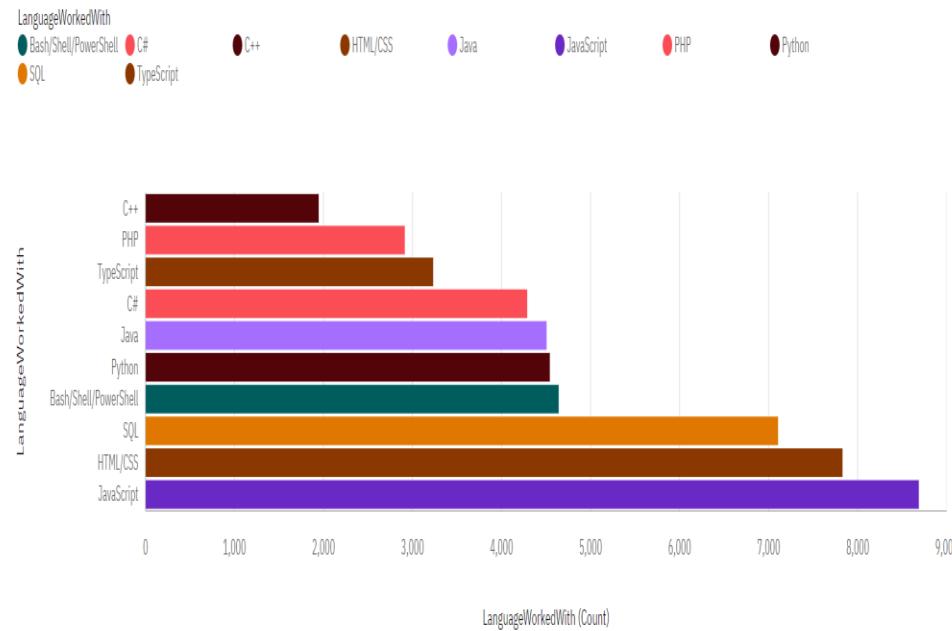
RESULTS

- The programming language most used at the time of data collection was JavaScript

- The most commonly used database at the time of data collection is MySQL

- The most commonly used development platform at the time of data collection was Windows

- The most widely used web framework at the time of data collection was React js.

- The most widely used programming language in the future is JavaScript

- The most widely used database in the future is PostgreSQL

- The most widely used development platform in the future is Linux

- The most widely used web framework in the future is React js.

- Men made up the majority of survey participants that collected the data set.

- Most of the entries were from Europe and North America.

- Most of the participants were young people between 22 and 32 years old.

- Most of the participants hold a bachelor's degree.

PROGRAMMING LANGUAGE TRENDS
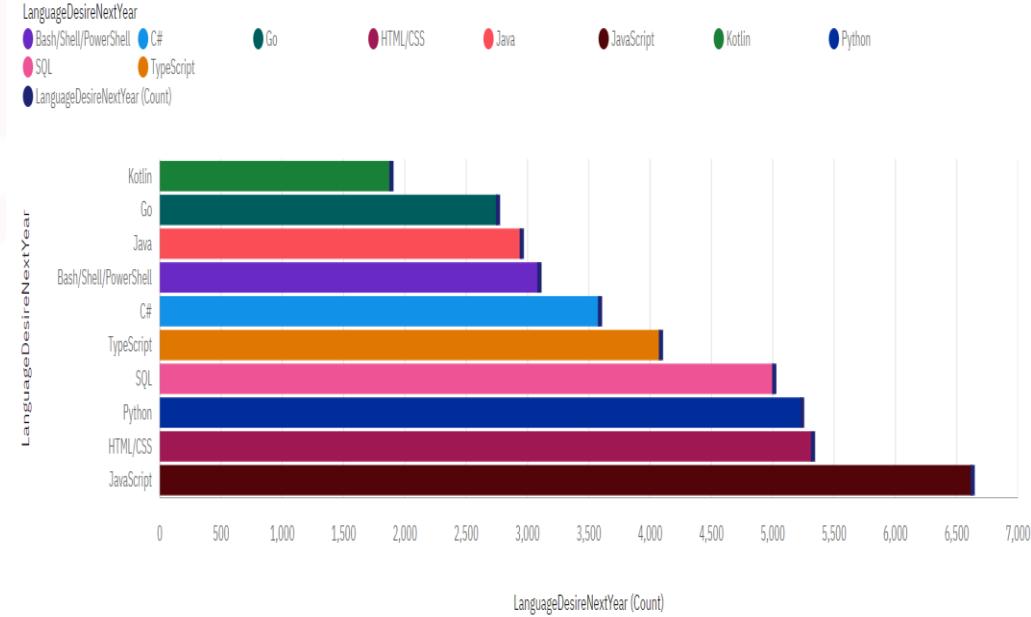
Current Year

Next Year

PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings
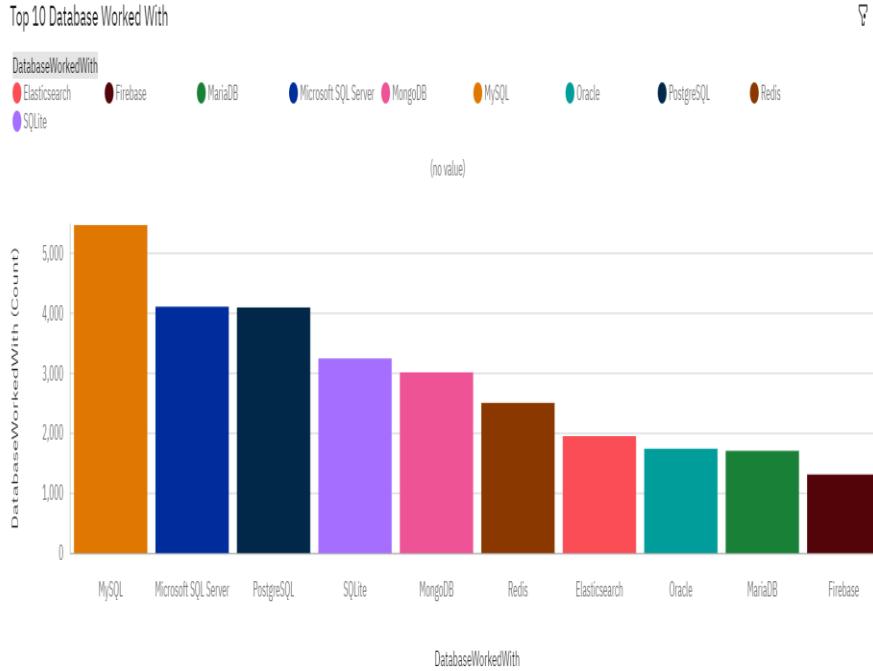
- Web development languages will maintain their advanced position among other languages.

- New languages like Kotlin will increase in use.

- Most other languages, such as Python and Typescript, will maintain their position

## Implications
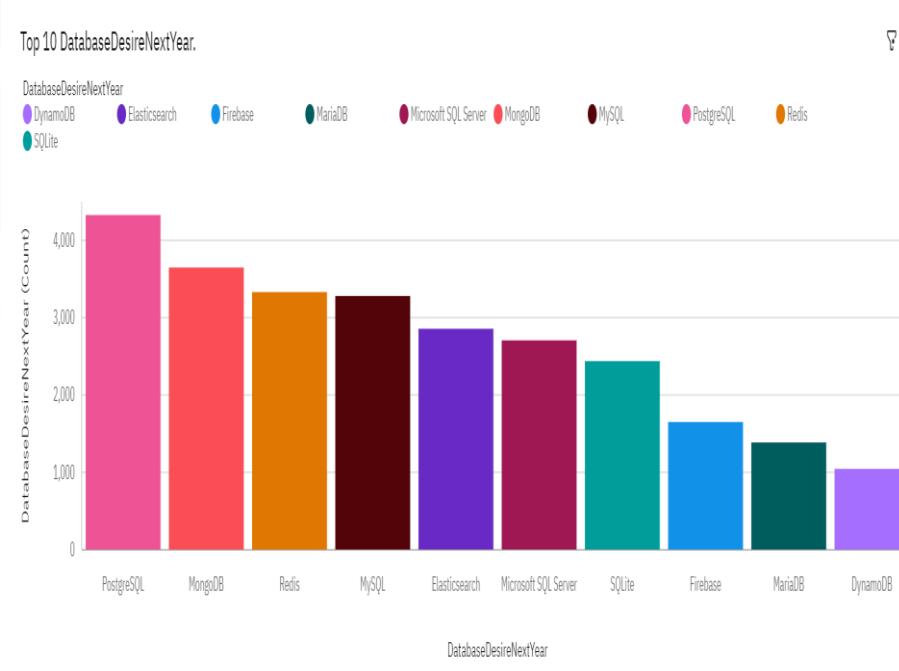
- The use of C++ will decline, as will PHP

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DATABASE TRENDS

Current Year

Next Year

DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- The use of PostgreSQL databases will increase

- The use of Mongo DB databases will increase.

Implications
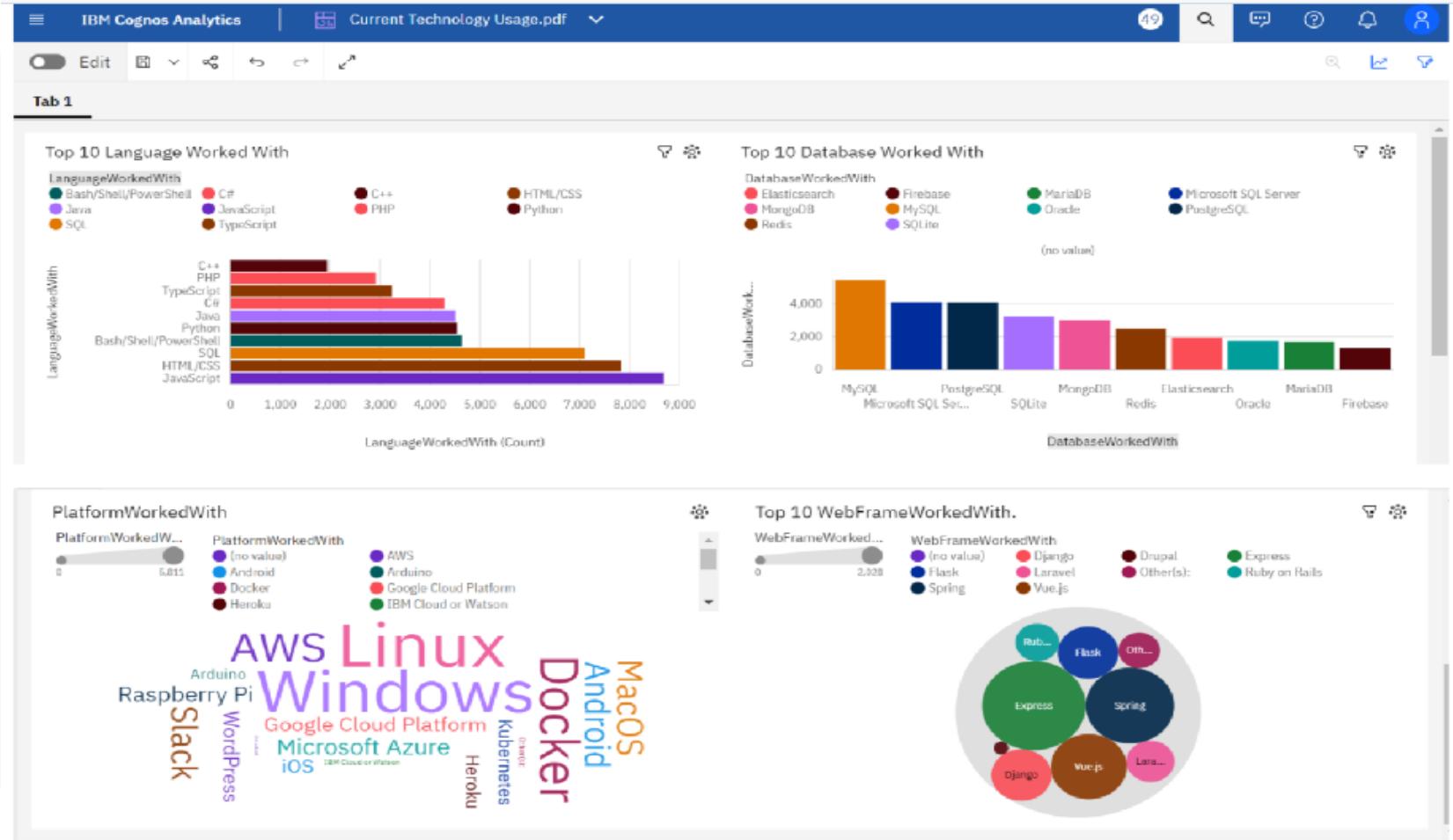
- The use of MySQL databases is declining.

- The use of Microsoft SQL databases is declining.

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DASHBOARD

https://github.com/mazensomran/IBM-Data-Analyst-Capstone-Project/blob/main/Cagnos%20Analytics%20Project.pdf

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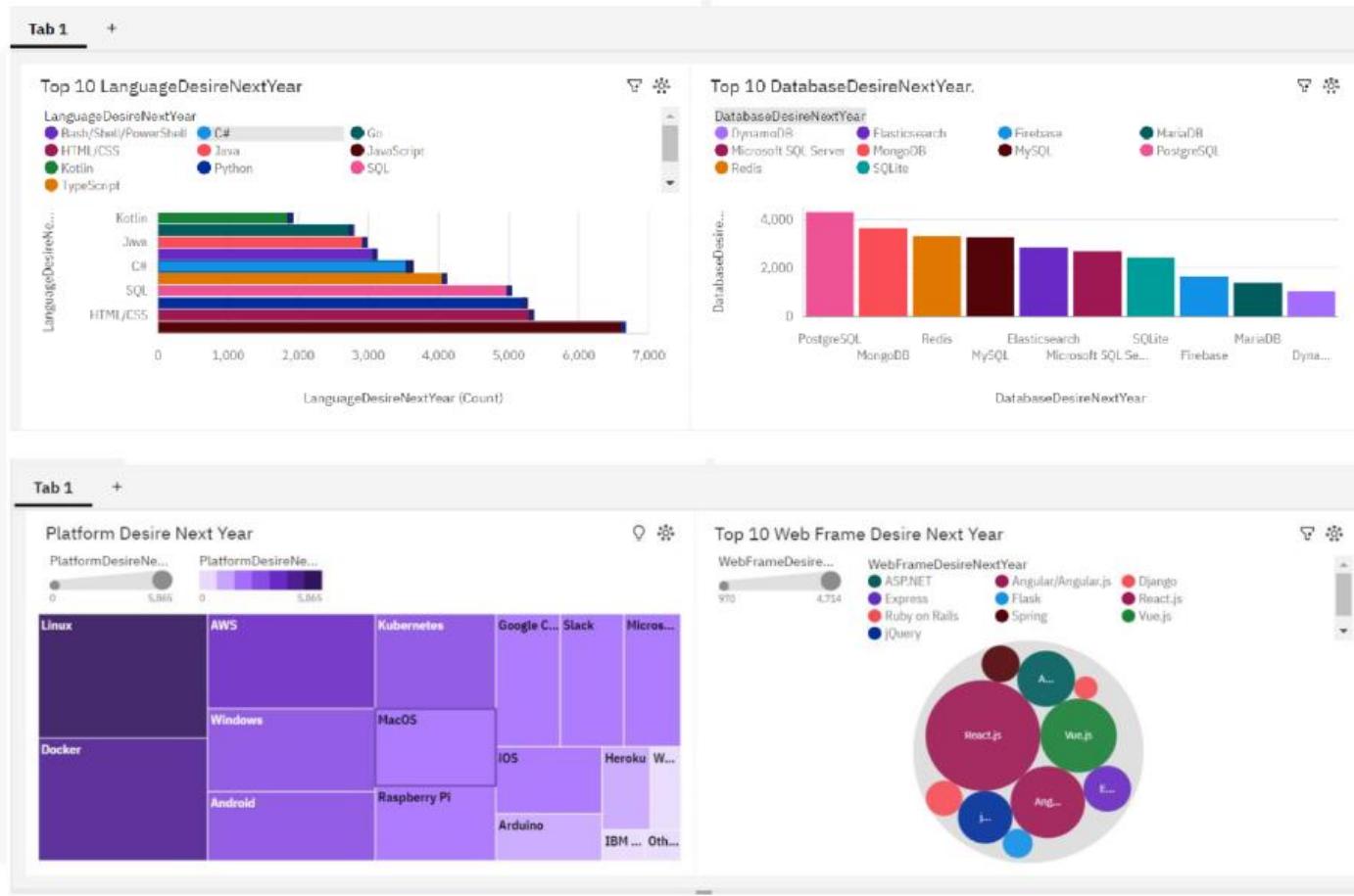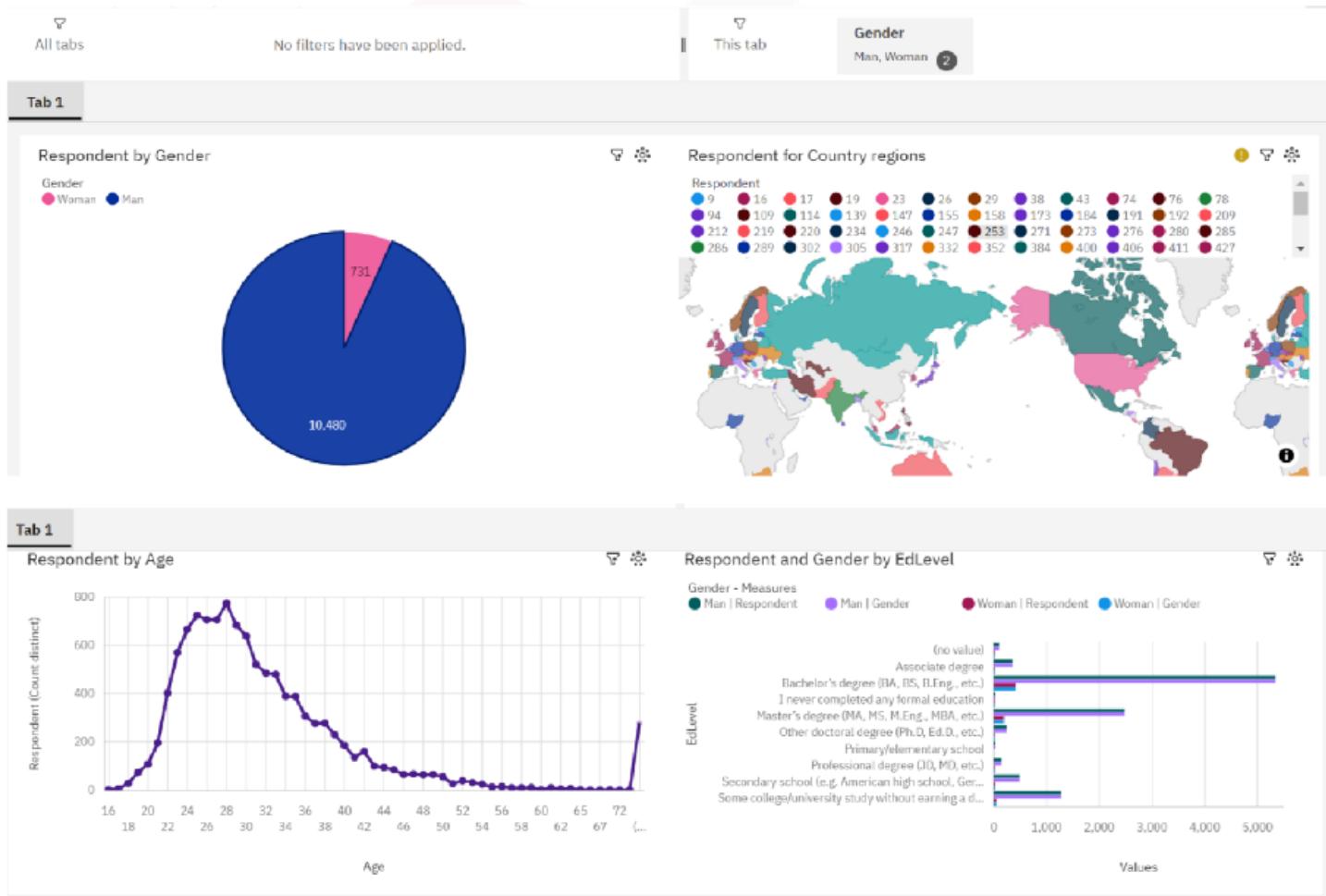
DASHBOARD TAB 1

DASHBOARD TAB 2

DASHBOARD TAB 3

DISCUSSION

- In the future, most users will deal with programming languages related to the development of web services and data science.

- Most recruiters are men, and most workers are concentrated in Europe and North America.

- Young people represent the largest portion of software workers.

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OVERALL FINDINGS & IMPLICATIONS

Findings

- Some programming languages, such as Python and JavaScript, are pioneering languages and will continue to be used in the future.

Implications
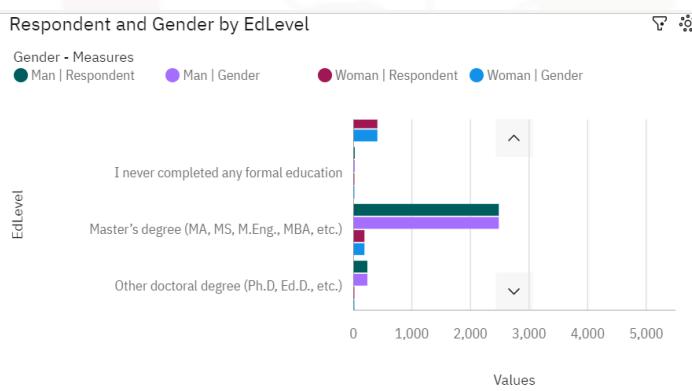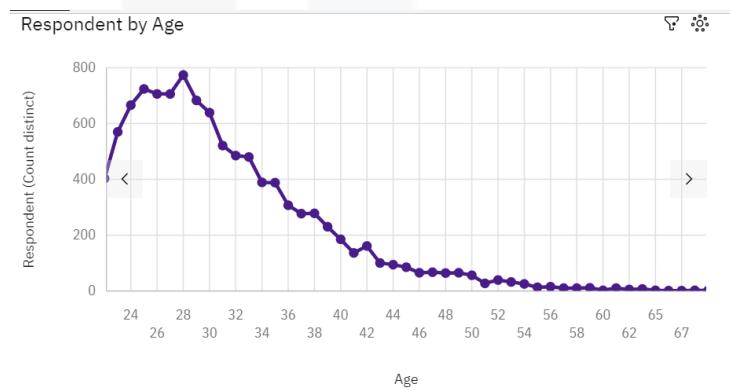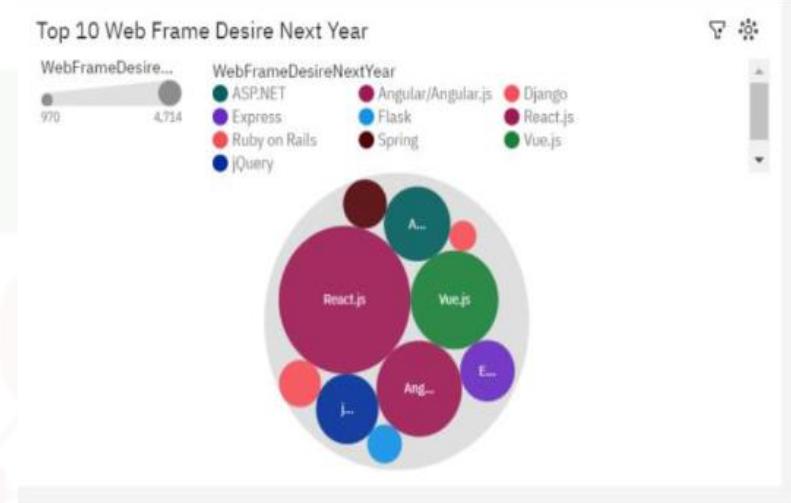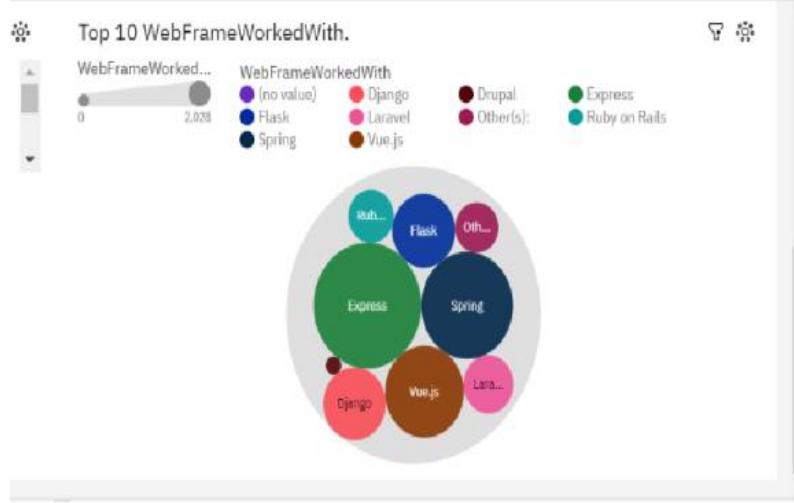
- Other languages, such as C++ and PHP, will decline in use at the expense of new, easier languages such as Kotlin.

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CONCLUSION

- Studying software trends is useful to give a glimpse into where businesses are headed in software.

- Dashboards provide concise and useful results for users.

APPENDIX

JOB POSTINGS

In Module 1 you have collected the job posting data using Job API in a file named "job-postings.xlsx". Present that data using a bar chart here. Order the bar chart in the descending order of the number 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.