IBM Data Analytics Capstone Project – Final Representation

Aravind

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OUTLINE

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

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SKILLS NETWORK

EXECUTIVE SUMMARY

- Trends in programming languages and databases

- Current Technology Usage
    - Top 10 Languages Worked with
    - Top 10 Database Worked with
    - Platform worked with Word-Cloud
    - Top 10 Web-frame Worked with

- Future Technology Trend
    - Top 10 Languages Desired Next Year
    - Top 10 Database Desired Next Year
    - Top 10 Web-frame Desired Next Year
    - Platform worked with Desired Next Year

- Demographics

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INTRODUCTION

- Analyzing the trends in software development

- Purpose :
  - Identify skill requirements for future
  - What are the top programming languages in demand?
  - What are the top database skills in demand?
  - What are the popular IDEs?

- Audience: Human Resource and IT Head

METHODOLOGY

- Collecting Data
  - Stack Overflow Developer 2019 Survey
  - GitHub Job Postings Using API and Web-scrapping.
  - Programming Languages Annual Salary Using API and Web-scrapping.

- Exploring Data
  - Finding Duplicates & Removing Duplicates.
  - Finding & Imputing Missing Value.
  - Normalizing Data.
  - Handling Outliers.
  - Correlation

- Visualization Data
  - Visualization Distribution, Relation, Composition & Comparison of data.
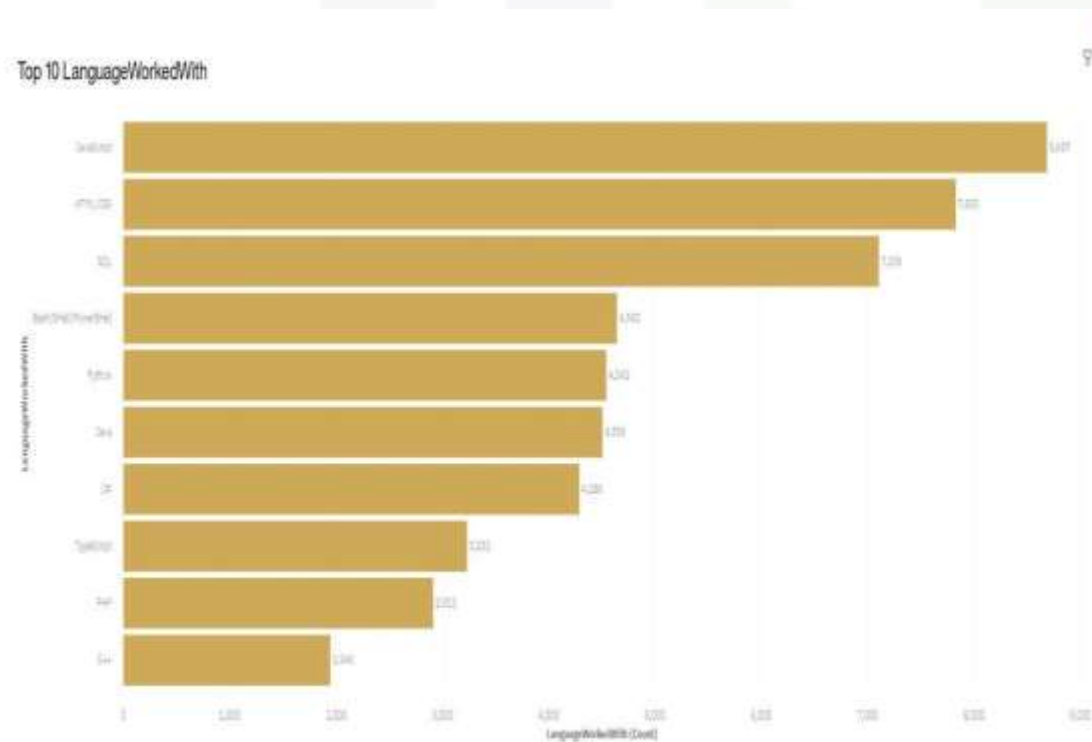 - Building Dashboard.

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RESULTS

The Results are based on these tables:

Out[77]:

	Table_Name
0	LanguageWorkedWith
1	LanguageDesireNextYear
2	DatabaseWorkedWith
3	DatabaseDesireNextYear
4	PlatformWorkedWith

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PROGRAMMING LANGUAGE TRENDS

Current Year
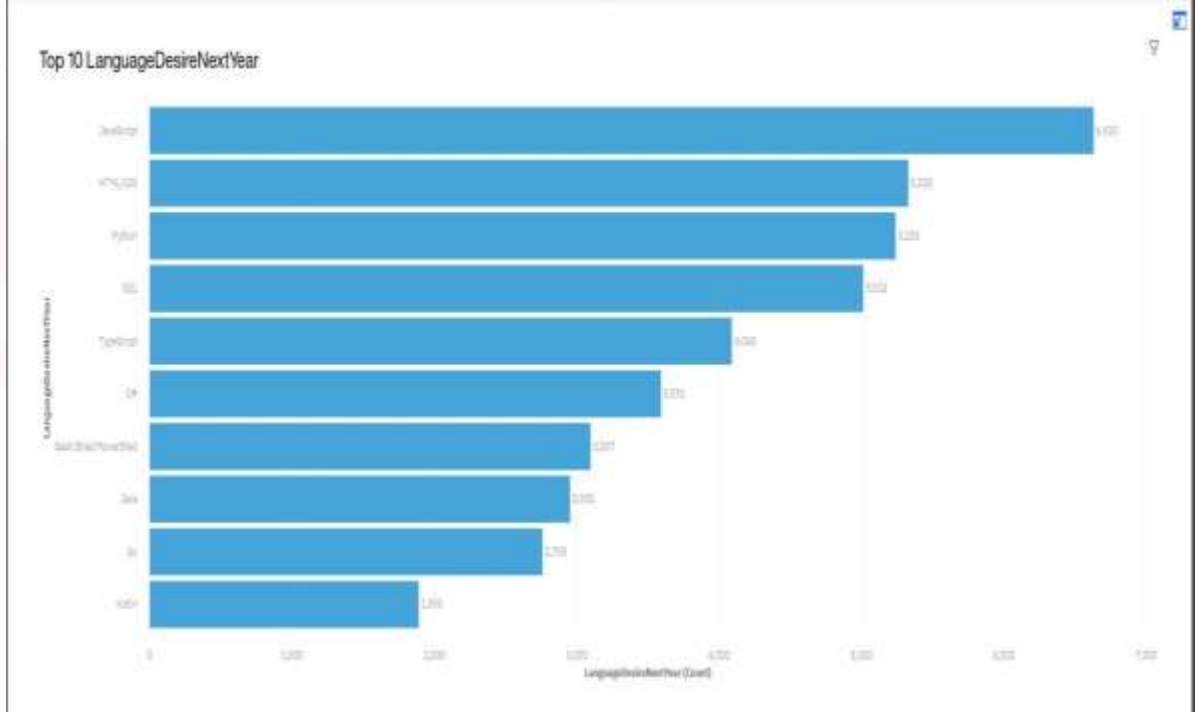
Next Year

PROGRAMMING LANGUAGE TRENDS – FINDINGS & IMPLICATIONS

Findings

- JavaScript, HTML/CSS, SQL are top 3 this year

- Web Assembly comes as least popular for current years and VBA appears least choice for next year

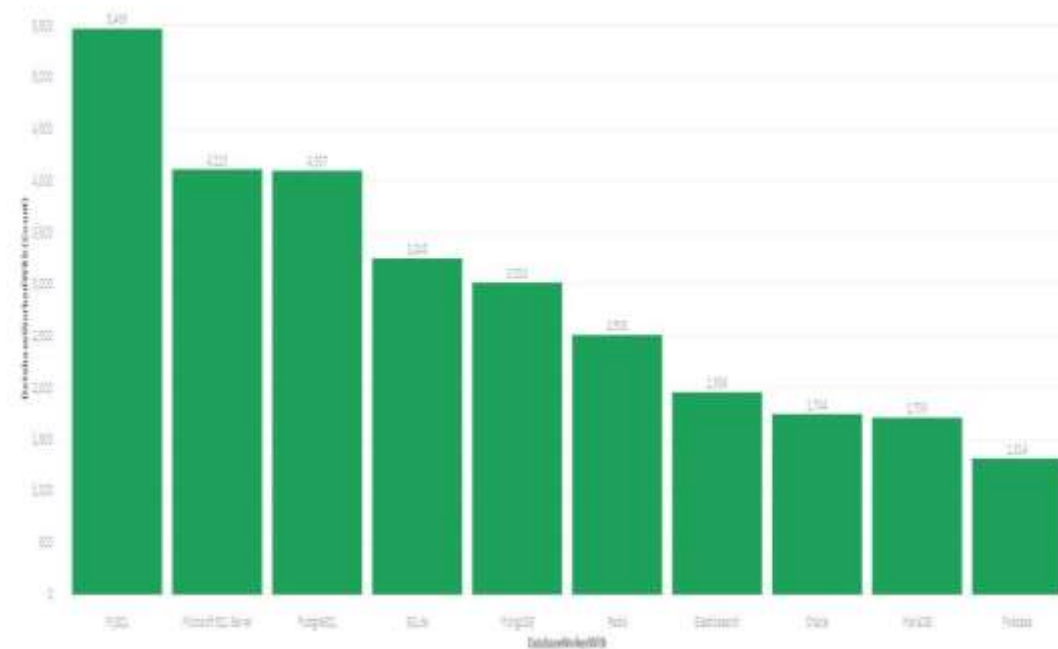- Python and Typescript becoming popular next yea

Implications

- Web Assembly and VBA has been replaced by other programming languages at most places.

- Java-script is becoming the new upcoming popular demanding programming language among users

- With AI and ML in rising demand, Python is best choice
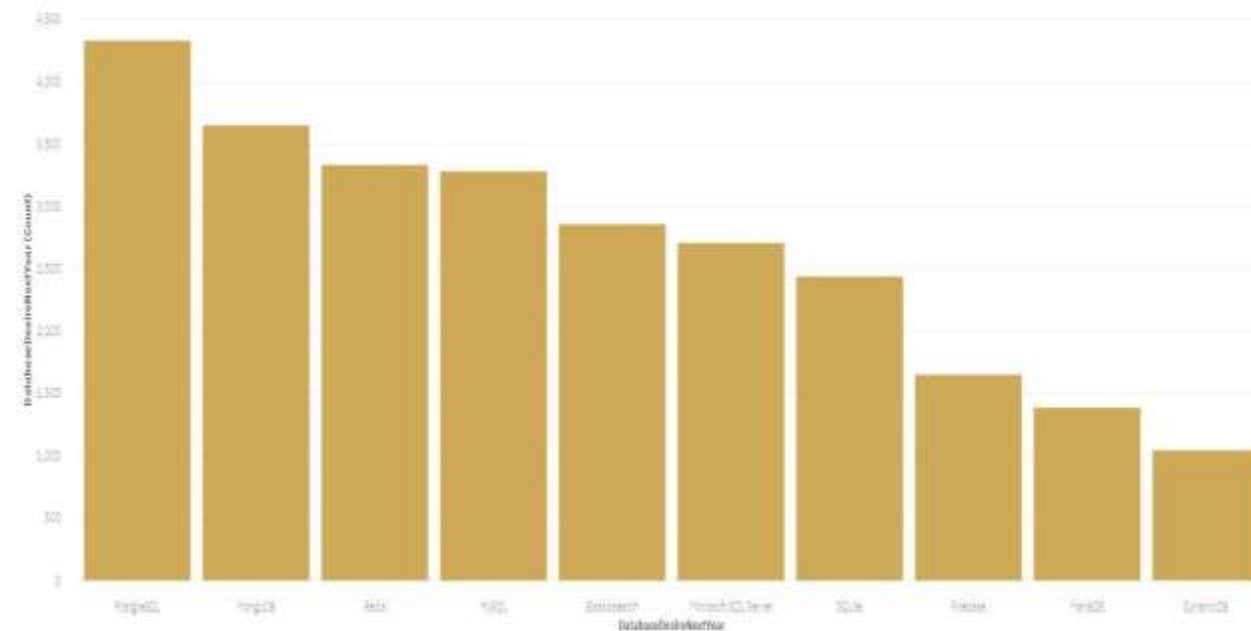
DATABASE TRENDS

Current Year

Next Year

DATABASE TRENDS – FINDINGS & IMPLICATIONS

Findings (insights)

- MySQL most popular Behind Microsoft SQL
- Elasticsearch, Redis & MongoDB comes out to show progressive trends in upcoming years whereas MySQL shows declining trend as compared to current-next years charts

Implications (What's comes Next)

- PostgreSQL is becoming the new upcoming popular desired database skills among users replacing MySQL
- Open-source databases are still preferable in companies
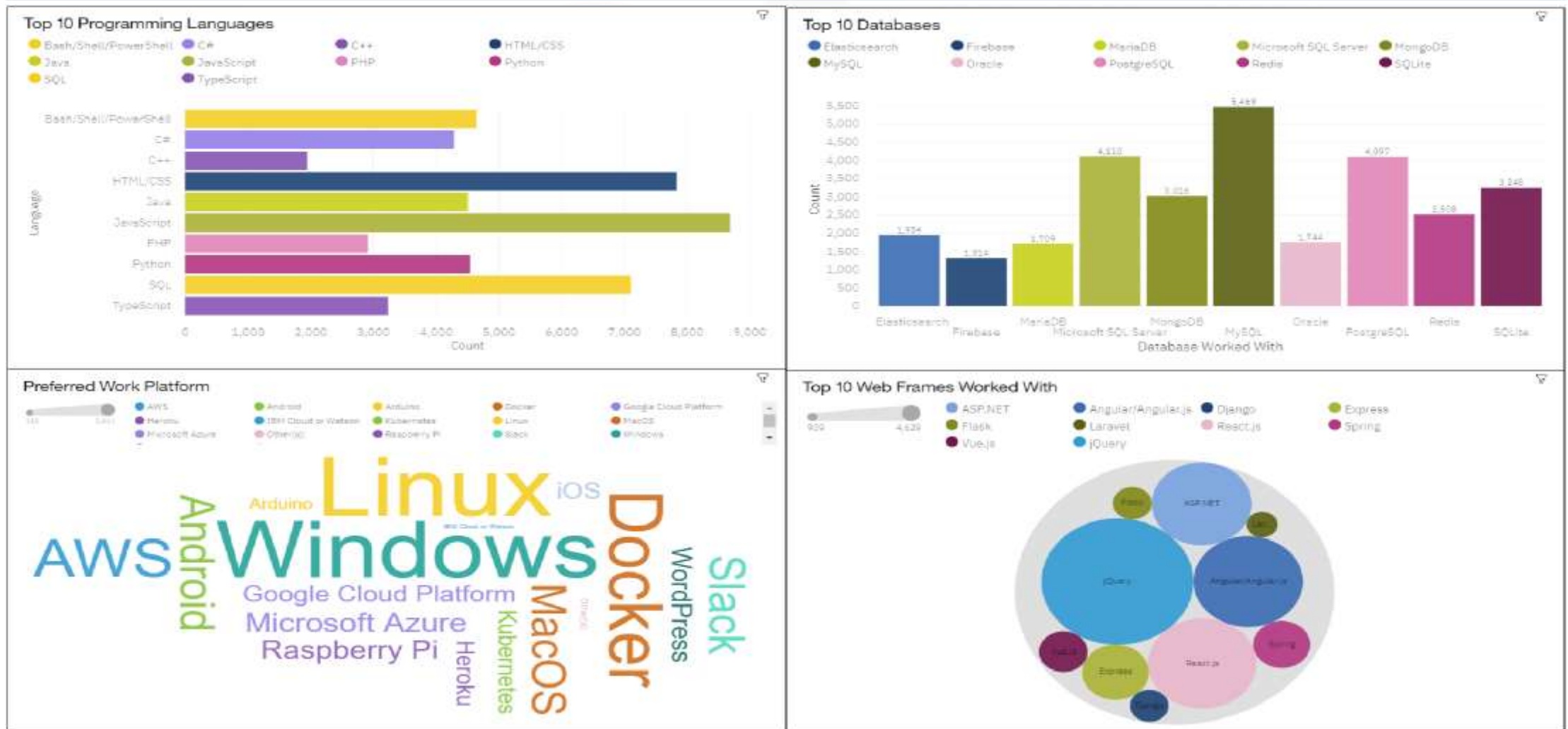- NoSQL databases will make an impact for storing non-relational data

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DASHBOARD

[DASHBOARD Link](#)

DASHBOARD TAB 1

DASHBOARD TAB 2

DASHBOARD TAB 3
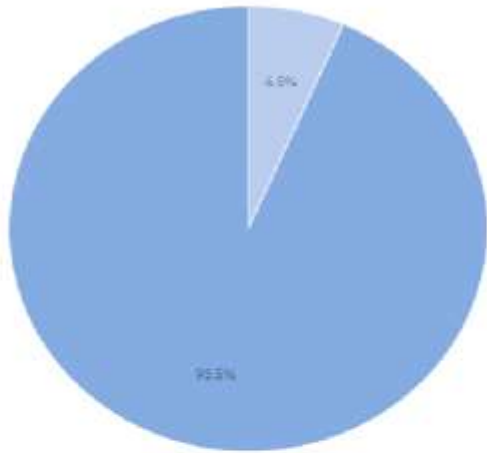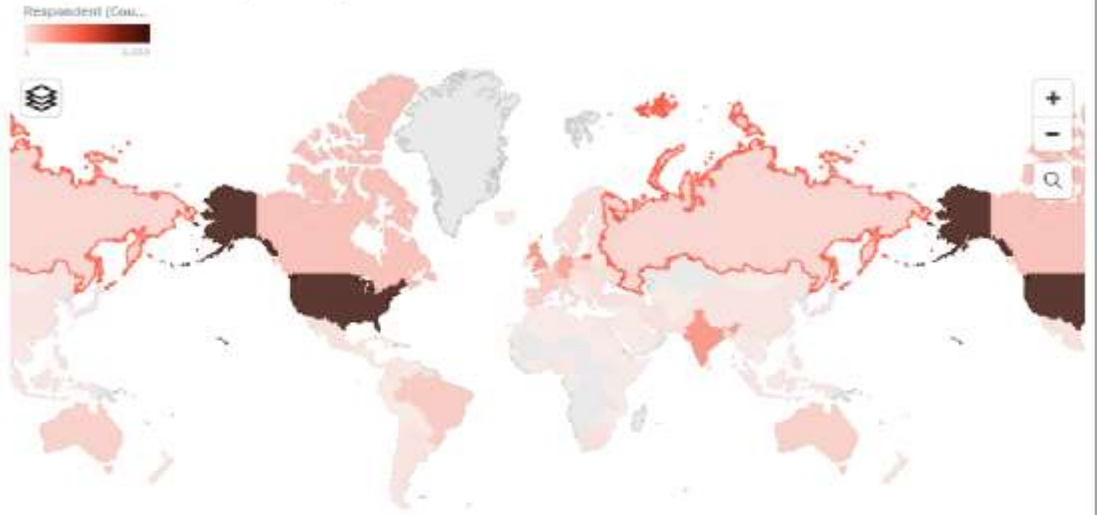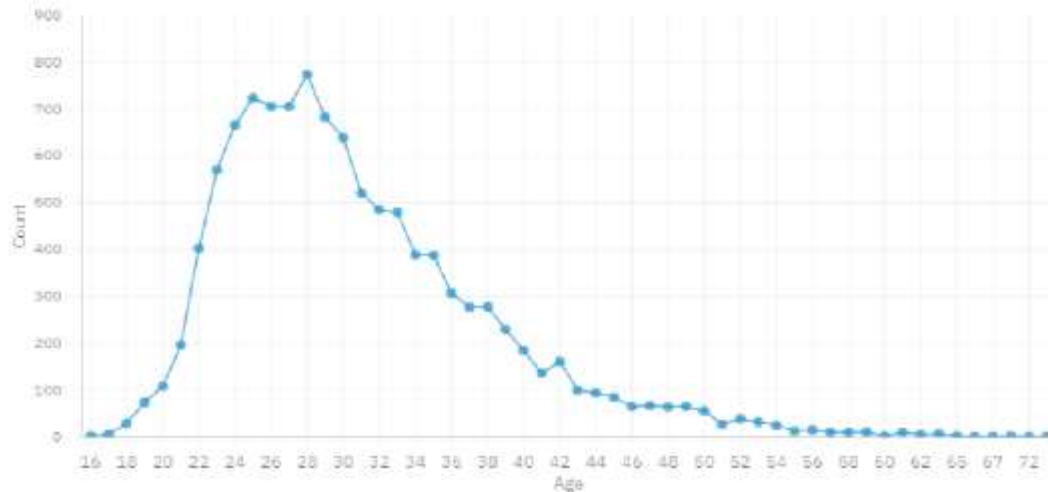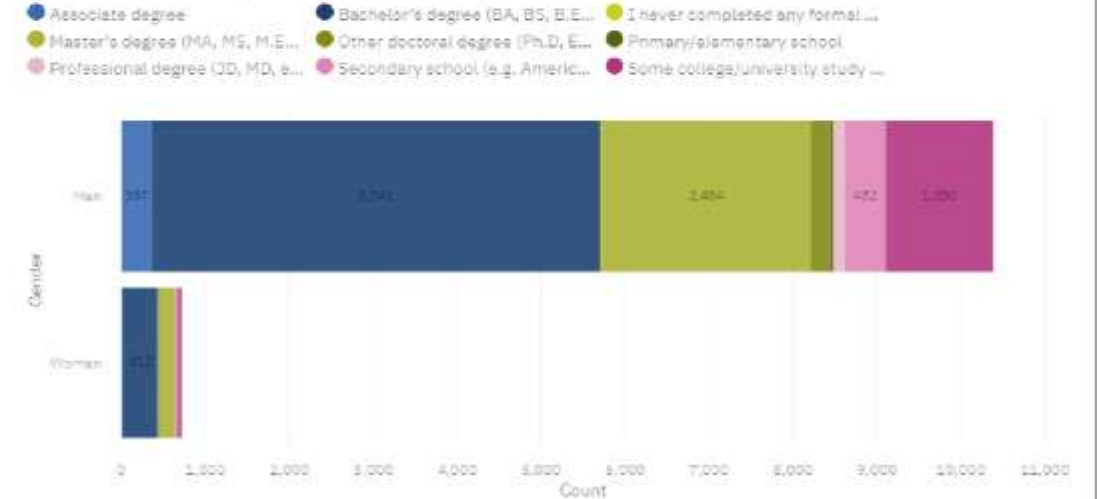
DISCUSSION

OVERALL FINDINGS & IMPLICATIONS

Findings

- Fast changing technology every year
- Platforms like Docker and AWS are growing
- The upcoming trend for databases is non-relational databases mostly

Implications

- People are looking for big data because it seem to have great future
- People are looking for advanced programming languages with easy learning in focus
- Companies need to be flexible and adjust to rapid changes

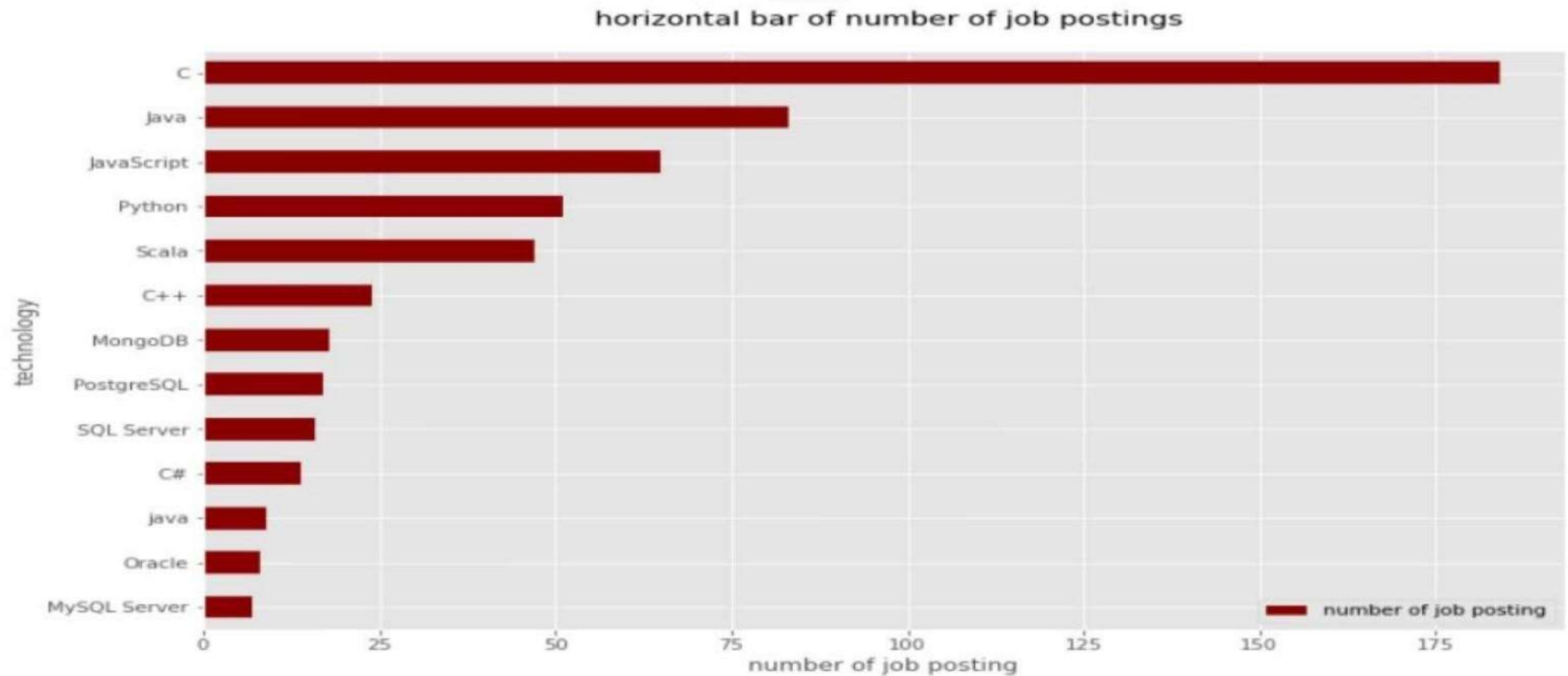**IBM Developer**

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CONCLUSION

- The top programming language in demand Present & Future is Java-script.

- The top database skills in demand Present - MySQL , Future - PostgreSQL.

- Popular Platform Present - Windows , Future - Linux Docker

- The top Web-frame in Demand Present - jQuery , Future - React.js

APPENDIX

JOB POSTINGS

horizontal bar of number of job postings

POPULAR LANGUAGES

Average Annual Salary of popular languages