

IBM DATA ANALYST CAPSTONE PROJECT

OLUKEMI OYELAMI 30/08/2023



OUTLINE



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EXECUTIVE SUMMARY



- This project analyzes data to help identify future IT skill requirements.
- Data was collected from various sources to identify trends on emerging skills. These sources include:
 - Job postings
 - Training portals
 - Surveys
- Data was then analyzed to identify trends such as:
 - What are the top programming languages in demand?
 - What are the top database skills in demand?
 - What are the popular IDEs?

INTRODUCTION



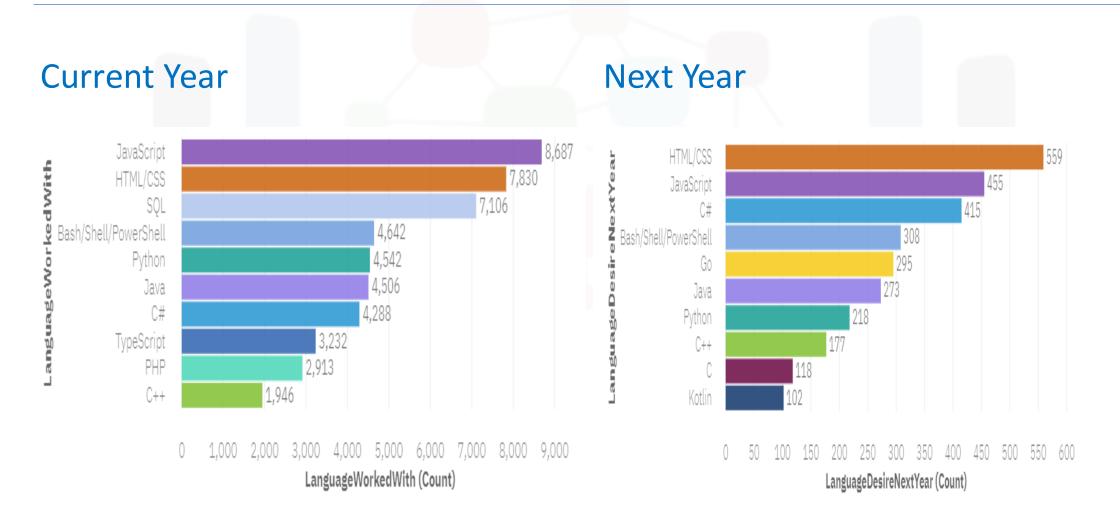
- In order to keep pace with changing technologies and remain competitive, there is a need to regularly analyze data to help identify future skill requirements.
- In this project, we collected data by scraping internet web sites and accessing APIs.
- The data was cleaned using appropriate data wrangling techniques
- The data was explored and analyzed then summarized on a dashboard using IBM Cognos Analytics to create your dashboard.

METHODOLOGY



- Data was collected by scraping internet web sites and accessing APIs.
- The data was cleaned, explored and visualized using appropriate python libraries.
- To better present the findings, a dashboard was created in IBM Cognos Analytics.

PROGRAMMING LANGUAGE TRENDS







PROGRAMMING LANGUAGE TRENDS - FINDINGS & **IMPLICATIONS**

Findings

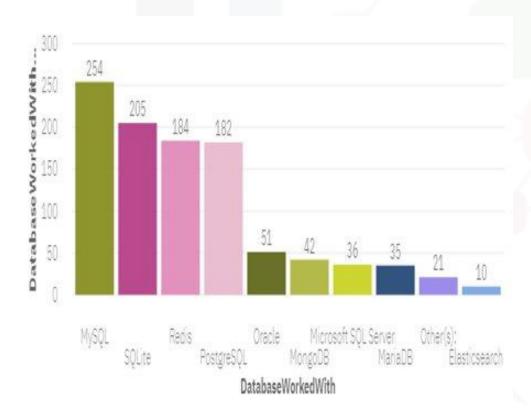
- JavaScript is the highest used programming language used this year, followed closely by HTML/CSS and SQL.
- For the next year, JavaScript and HTML/CSS still takes the lead followed closely by C#.

Implications

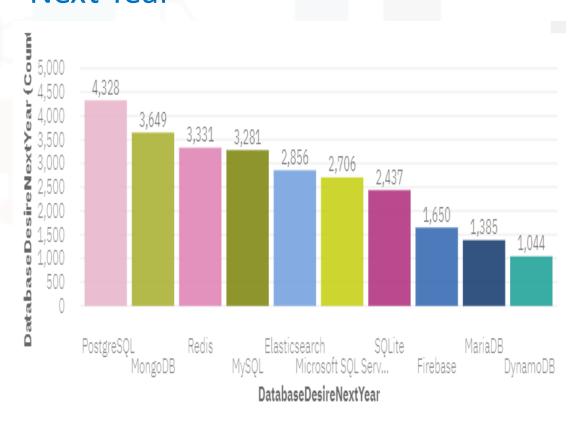
- Respondents most likely worked on web applications using relational databases for its data integrations.
- Microsoft Visual Studio might gain more users next year.

DATABASE TRENDS

Current Year



Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

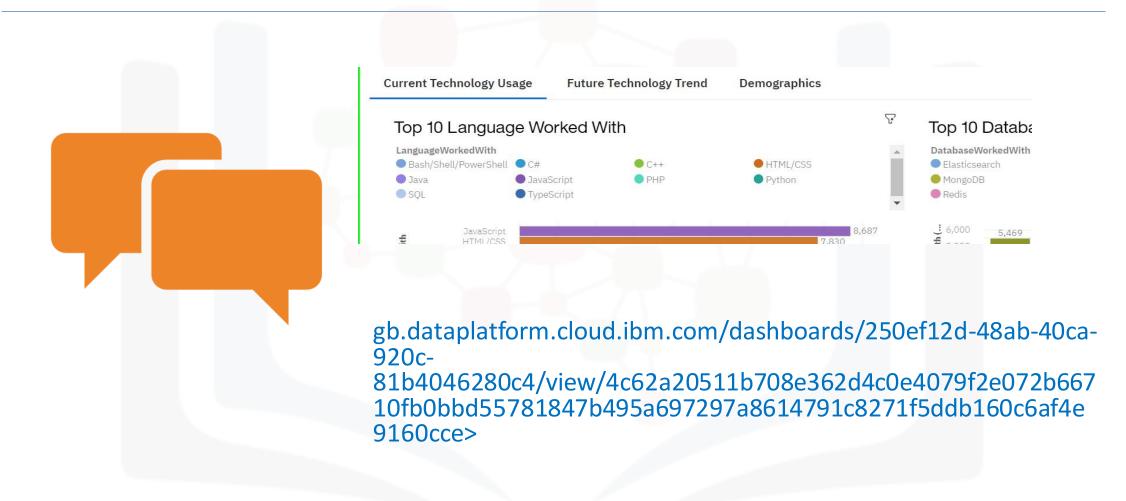
Findings

- MySQL and SQLite
 is used highest this year
 while users are planning to use
 PostgreSQL and MongoDB more
 next year.
- Relational Database will be used more in the next year just like the current year.

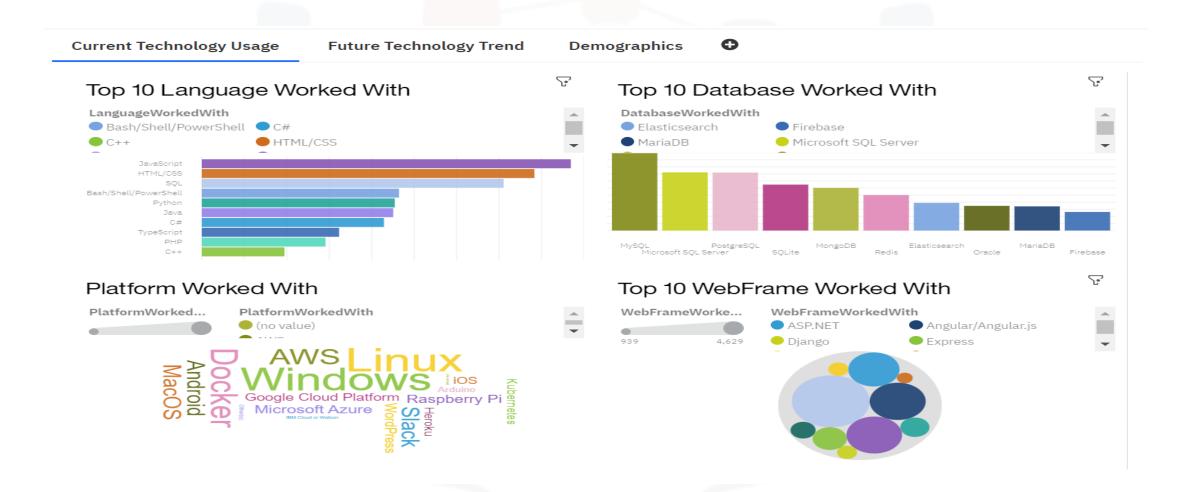
Implications

 Relational databases is the first choice of most IT specialists.

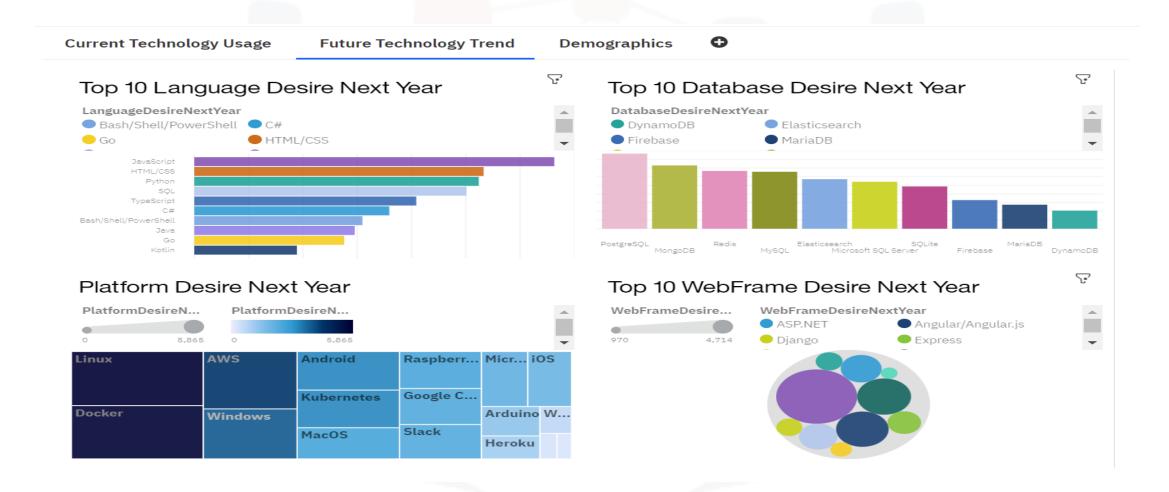
DASHBOARD LINK



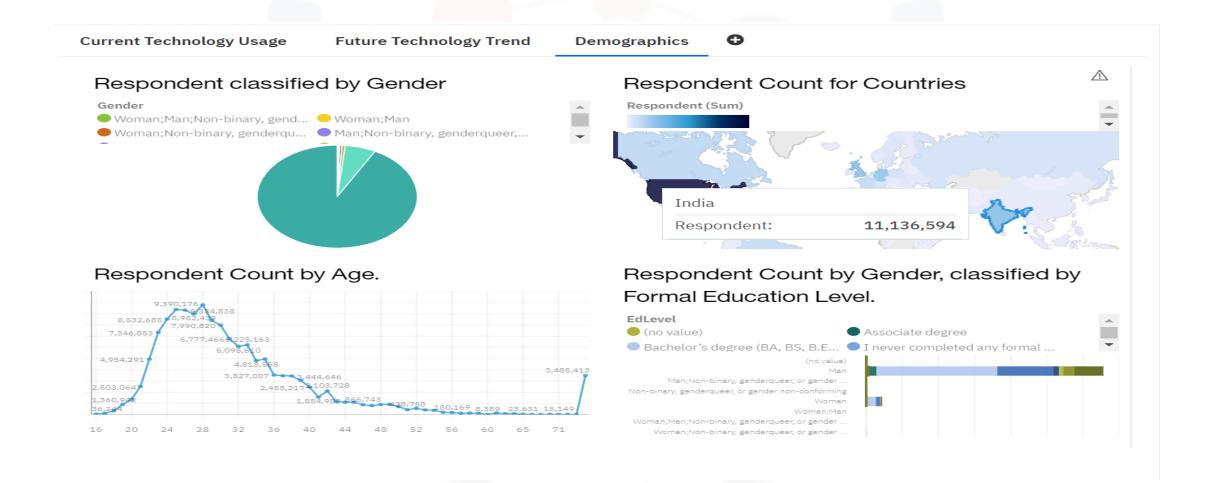
DASHBOARD TAB 1



DASHBOARD TAB 2



DASHBOARD TAB 3







OVERALL FINDINGS & IMPLICATIONS

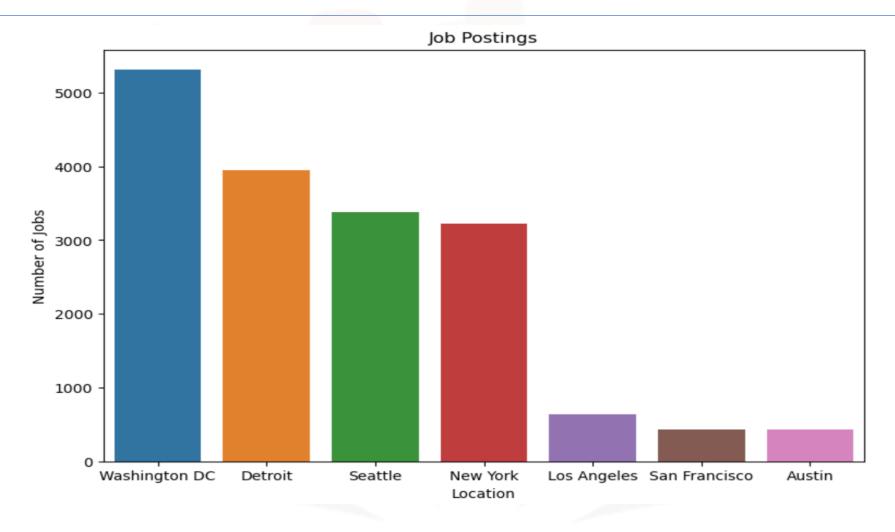
Findings

- Scripting Languages are currently most commonly used
- Scripting language will still be desired next year with python joining the list of desired language.
- Both now and in the future, relational databases are still in high demand.
- Windows and Linux platform are used mostly this year while Docker will be included in the list of high use next year.
- Most Respondents are male, from US with a Bachelor's degree

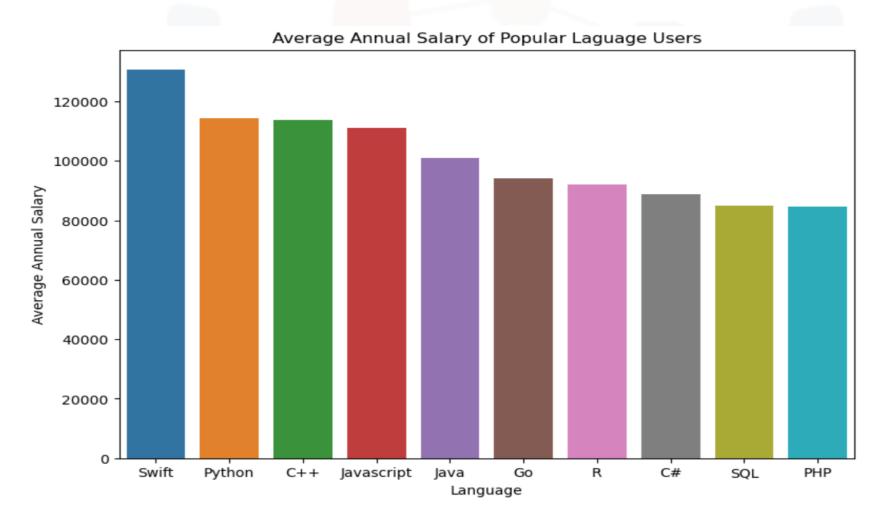
Implications

 Next year might be a year of open source languages and databases

JOB POSTINGS



POPULAR LANGUAGES



CONCLUSION



- Scripting Languages are currently most commonly used
- Scripting language will still be desired next year with python joining the list of desired language.
- Both now and in the future, relational databases are still in high demand.
- Windows and Linux platform are used mostly this year while Docker will be included in the list of high use next year.
- JQuery is and will still be the highest used web frame next year. It is worth learning.

APPENDIX - TOP 5 JOB TITLES



