

Data Analysis for identifying Future Skill Requirements

Part 1



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OUTLINE



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

EXECUTIVE SUMMARY



- Collecting data's using API's and Web Scraping
- Data Wrangling Techniques
 - Finding and removing duplicates
 - Identify Missing values
 - Data Normalizing
- Data analysis
- Data Visualization Using plots
- Dashboard



INTRODUCTION



- Task is to collect the top programming skills that are most in demand
- Once we have collected enough data, we will begin analyzing the data and identify insights and trends
- First we will begin by scraping internet web sites and accessing APIs to collect data in various formats like .csv files, excel sheets, and databases.
- Later we will make that data ready for analysis using data wrangling techniques
- When the data is ready we will then want to apply statistical techniques to analyze the data.
- Finally we will be creating Dashboards with the collected information.



METHODOLOGY



- Point1
- Point2
- Point3
- Point4
 - Sub Point1
 - Sub Point2



RESULTS



PROGRAMMING LANGUAGE TRENDS

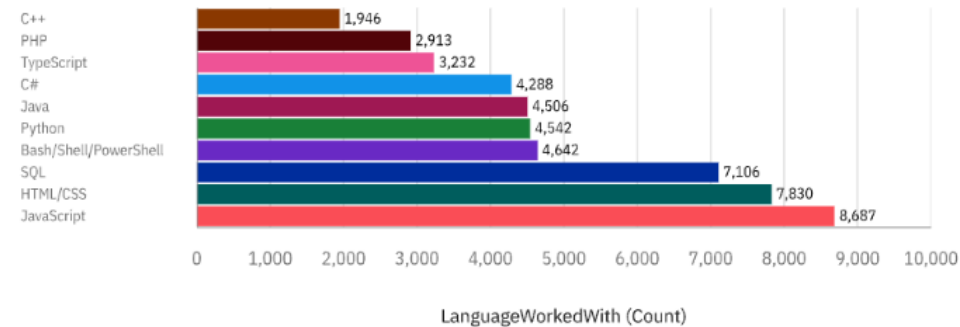
Current Year

Current Technology Usage

Top 10 Languages Worked With

LanguageWorkedWith

Legend for Current Year Languages:
● Bash/Shell/PowerShell ● C# ● C++ ● HTML/CSS
● Java ● JavaScript ● PHP ● Python
● SQL ● TypeScript



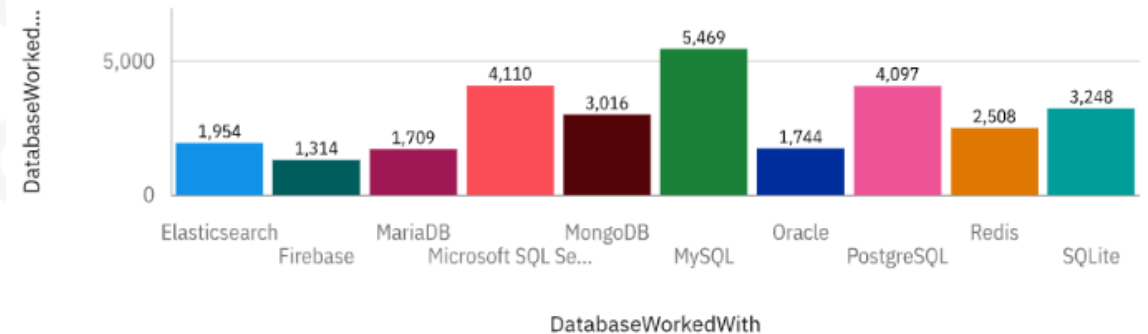
Next Year

Top 10

Databases Worked With

DatabaseWorkedWith

Legend for Next Year Databases:
● Elasticsearch ● Firebase ● MariaDB ● Microsoft SQL Server
● MongoDB ● MySQL ● Oracle ● PostgreSQL
● Redis ● SQLite



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- Java script
- HTML/CSS
- SQL

Implications

- MYSQL
- Microsoft SQL Server
- PostgreSQL

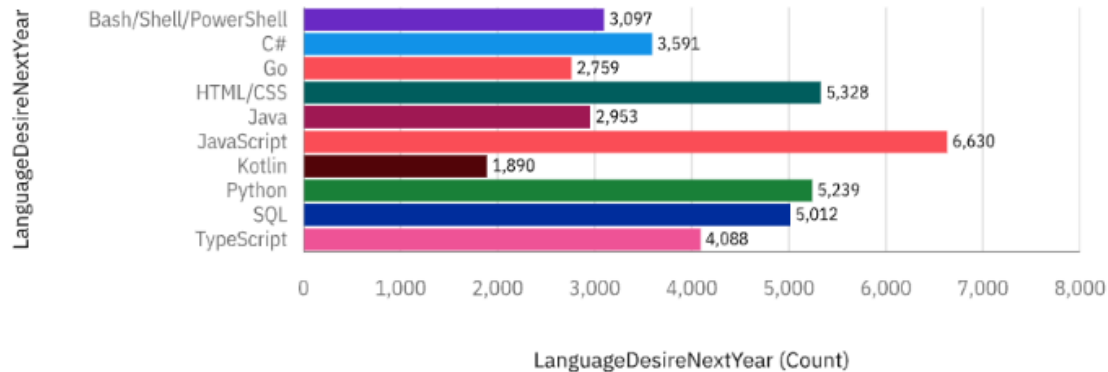


DATABASE TRENDS

Future Technology Trend

Top 10 Languages Desired Next Year

LanguageDesireNextYear



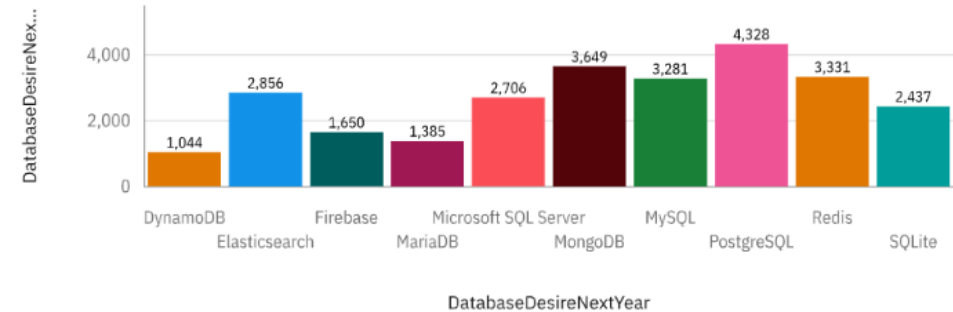
Next Year

5

Top 10 Databases Desired Next Year

6

DatabaseDesireNextYear



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript
- Python
- HTML/CSS

Implications

- PostgreSQL
- MongoDB
- Redis



DASHBOARD



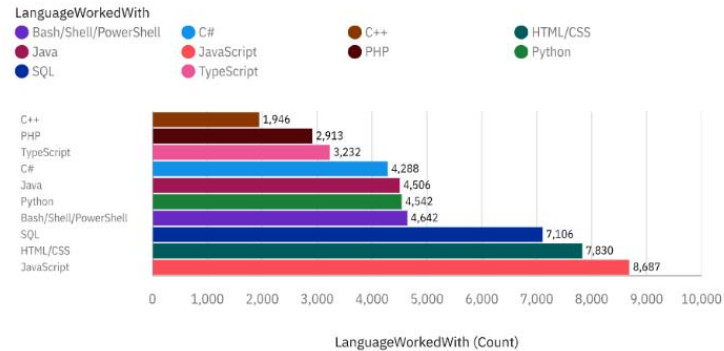
< Github Link to Dashboard >

<https://github.com/megnu/ibm-capstone/blob/main/ibm-capstone.pdf>

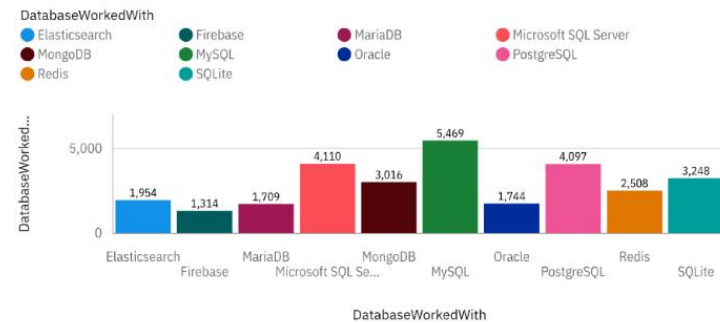
DASHBOARD TAB 1

Current Technology Usage

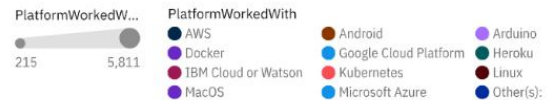
Top 10 Languages Worked With



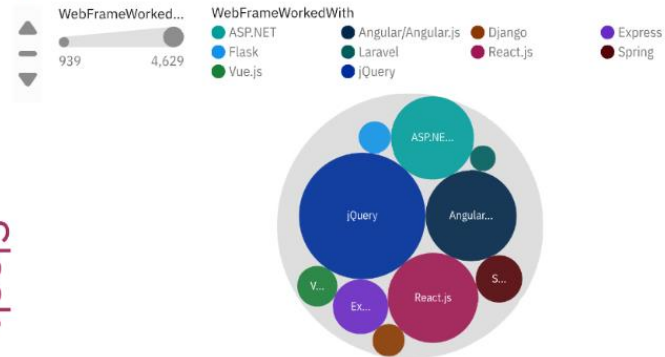
1 Top 10 Databases Worked With



Platforms Worked With



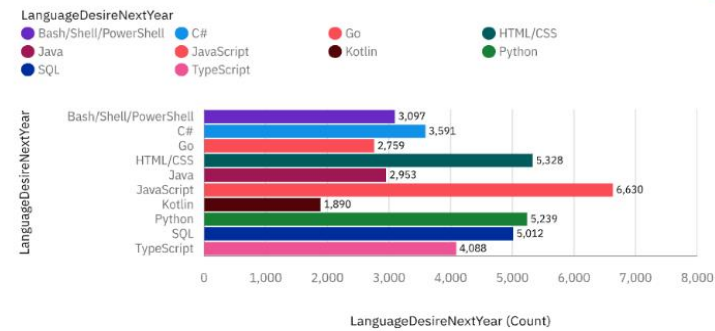
3 Top 10 Web Frameworks Worked With



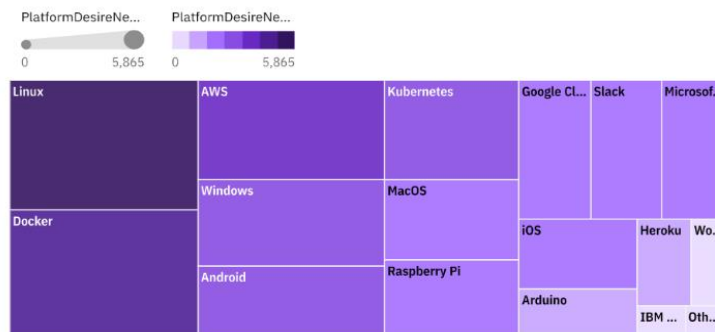
DASHBOARD TAB 2

Future Technology Trend

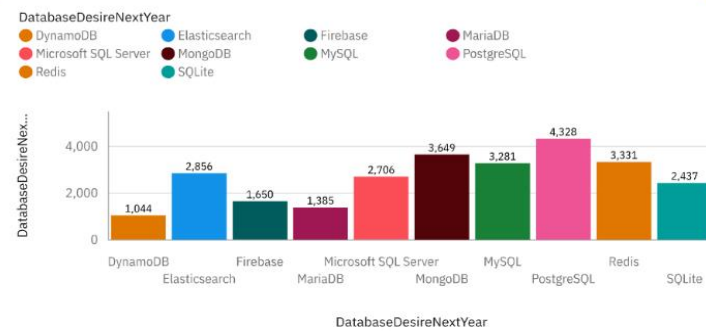
Top 10 Languages Desired Next Year



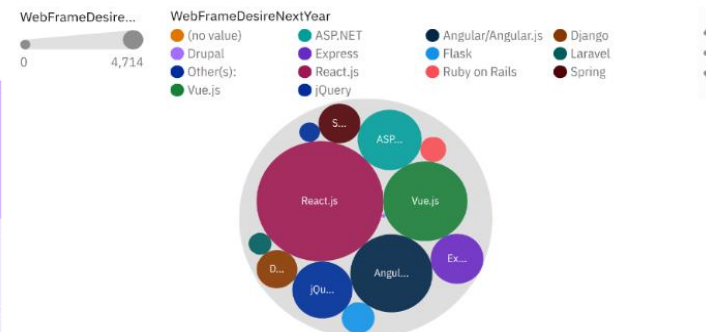
Platforms Desired Next Year



5 Top 10 Databases Desired Next Year



Top 10 Web Frameworks Desired Next Year

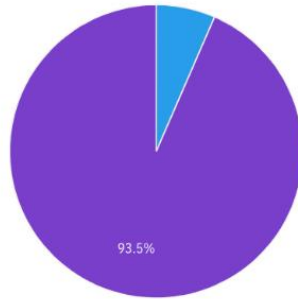


DASHBOARD TAB 3

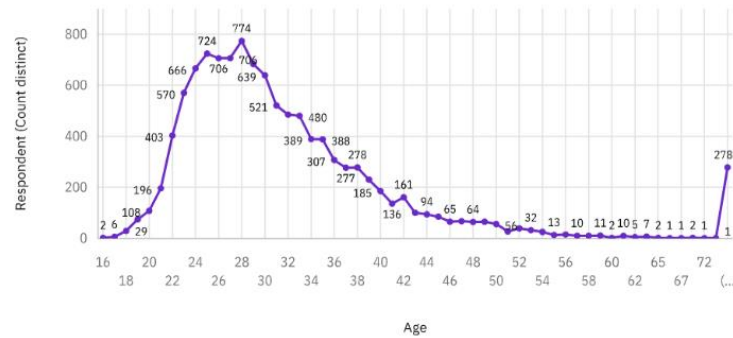
Demographics

Respondent by Gender

Gender
● Woman ● Man



Respondent by Age



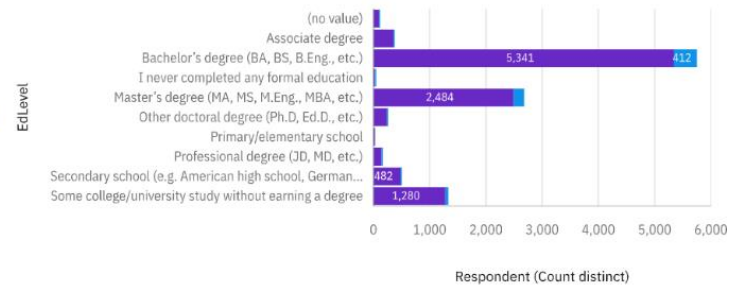
7 Respondent Count by Country

Respondent (Count)
1 3,058



9 Respondent Count by Gender, classified by Formal Education Level

Gender
● Man ● Woman



skill



OVERALL FINDINGS & IMPLICATIONS

Findings

- Finding 1
- Finding 2
- Finding 3

Implications

- Implication 1
- Implication 2
- Implication 3

CONCLUSION



- Point 1
- Point 2
- Point 3
- Point 4



APPENDIX



- Include any relevant additional charts, or tables that you may have created during the analysis phase.



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.

