Data technologies & data demographics survey

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EXECUTIVE SUMMARY

- the programming languages and databases currently in trend
- Platforms and Web Frames currently in trend
- the programming languages and databases desired for the next year
- Platforms and Web Frames desired for the next year
- Demographics information about Respondent

INTRODUCTION

- Analyzing the trends in technologies :

    - Identifying technical skills currently in trend
    - Identifying technical skills required for future
    - Finding the most database skills in demand
    - Identifying information technology needs by geography

- In short, the goal is to identify current and future needs for technical skills to help the company make more informed decisions about which skills to recruit in the future.

METHODOLOGY

- First, a subset of the Stack Overflow dataset was used, the data was wrangled to remove duplicates, add missing values, and standardize the data.

- Second, the data were investigated to determine the distribution of the data, the presence of outliers, and the correlation between several variables.

- The data were also used to visualize the distribution, the relationship between two characteristics, the composition and for data comparison.

- Finally, databases that are modified from the StackOverflow dataset are used for visualization with Cognos Dashboard Embedded and analysis
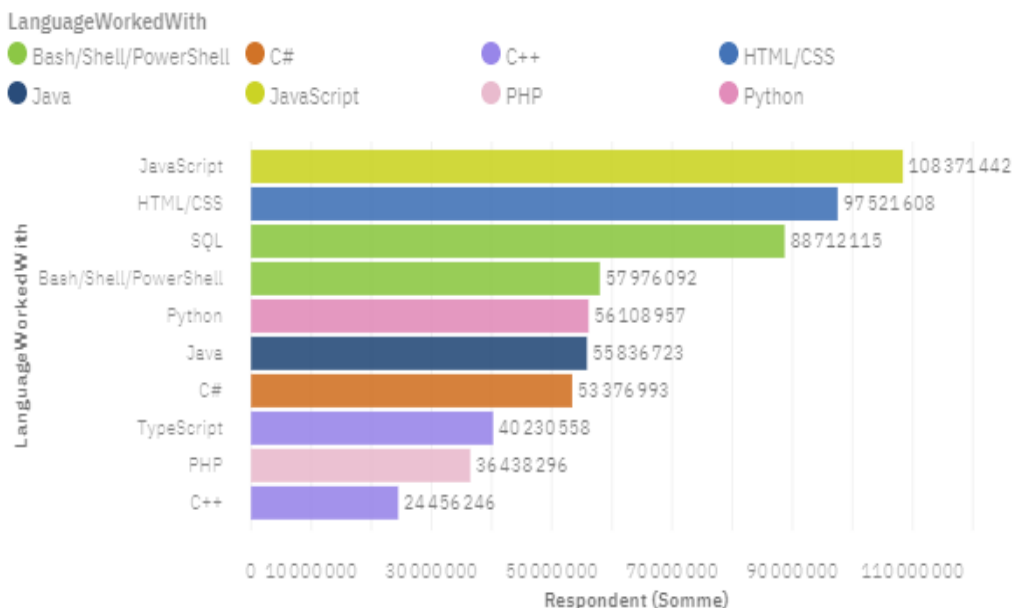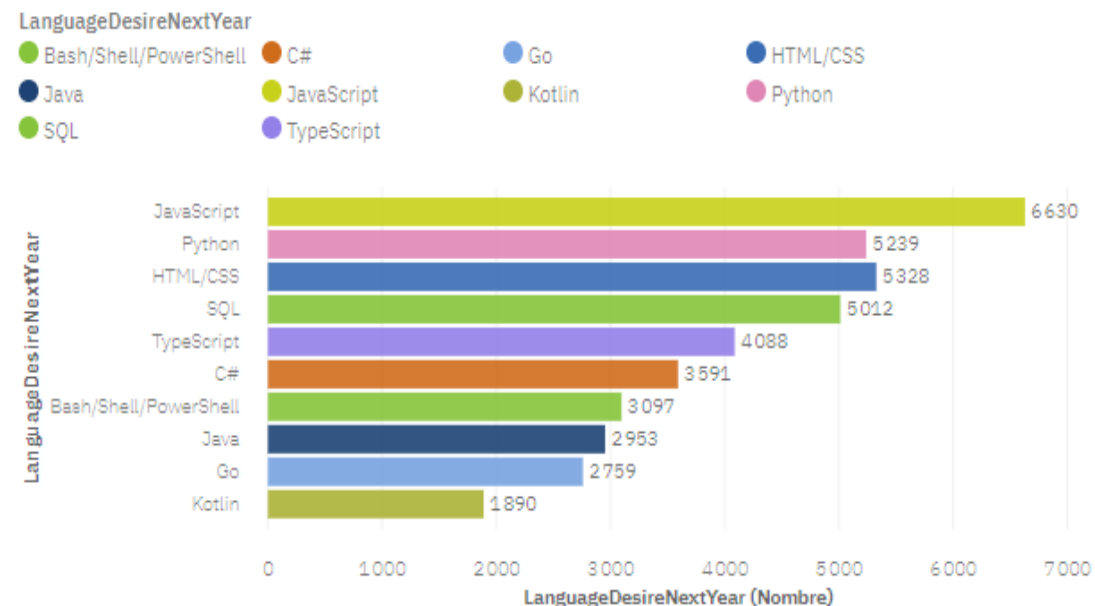
RESULTS

- Visualization – Charts
- Dashboard

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SKILLS NETWORK

PROGRAMMING LANGUAGE TRENDS

Current Year

Next Year

Top 10 Languages Worked With

LanguageWorkedWith
- ● Bash/Shell/PowerShell
- ● C#
- ● C++
- ● HTML/CSS
- ● Java
- ● JavaScript
- ● PHP
- ● Python

Language	Respondent (Somme)
JavaScript	108 371 442
HTML/CSS	97 521 608
SQL	88 712 115
Bash/Shell/PowerShell	57 976 092
Python	56 108 957
Java	55 836 723
C#	53 376 993
TypeScript	40 230 558
PHP	36 438 296
C++	24 456 246

Top 10 Language Desire Next Year

LanguageDesireNextYear
- ● Bash/Shell/PowerShell
- ● C#
- ● Go
- ● HTML/CSS
- ● Java
- ● JavaScript
- ● Kotlin
- ● Python
- ● SQL
- ● TypeScript

Language	LanguageDesireNextYear (Nombre)
JavaScript	6 630
Python	5 239
HTML/CSS	5 328
SQL	5 012
TypeScript	4 088
C#	3 591
Bash/Shell/PowerShell	3 097
Java	2 953
Go	2 759
Kotlin	1 890

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PROGRAMMING LANGUAGE TRENDS – FINDINGS & IMPLICATIONS

Findings

- The top 5 of finding this year are JavaScript, HTML/CSS, SQL, bash/shell/ powershell and python.
- Typescript and Python become popular next year
- bash/shell/PowerShell lose their ranking next year from 4th to 5th
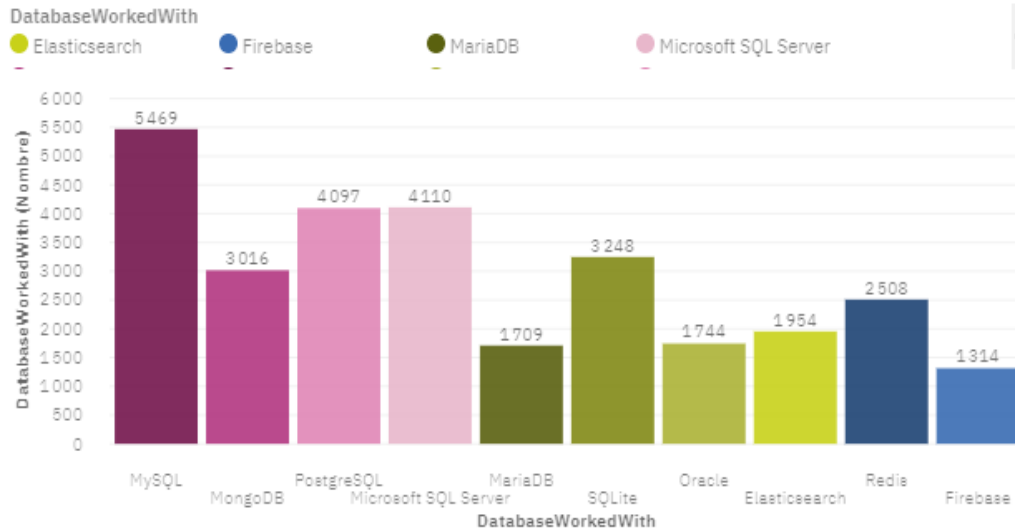- JavaScript remains the first

Implications

- JavaScript, HTML/CSS and SQL are still skills to look for in candidate skills
- they will become skills for which to recruit a candidate
- JavaScript is a programming language essential in technical skills

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DATABASE TRENDS

Current Year
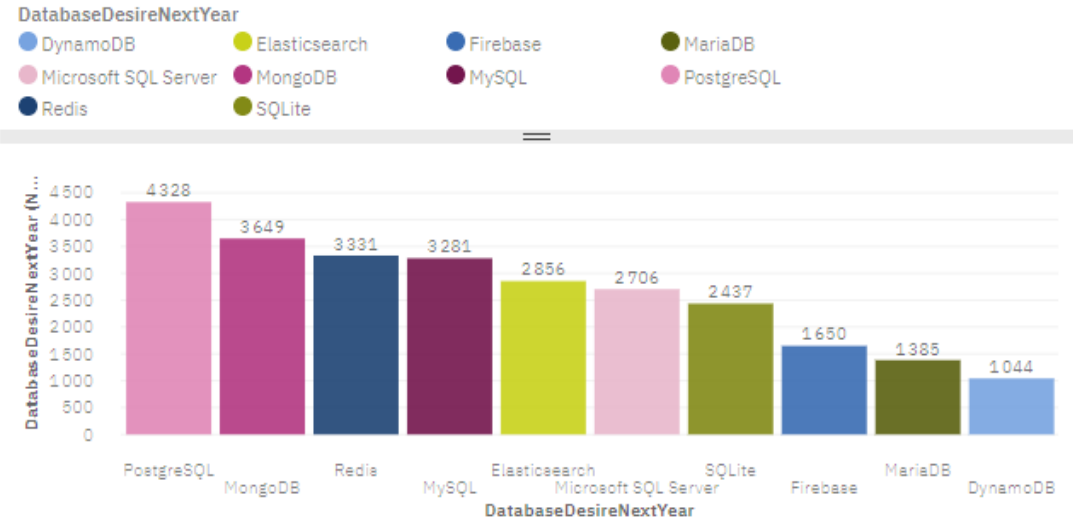
Next Year

DATABASE TRENDS – FINDINGS & IMPLICATIONS

Findings

- MySQL,MongoDB, PostgreSQ, Micrpsft SQL Server and MariaDB are the most 5 popular
- Redis and Elasticsearch become more popular next year as well as PostgreSQL that is in the first rank
- MySQL lose IT ranking next year from 1th to 4th

Implications

- MongoDB is still a skill to look for in candidate skills
- recruit more candidates qualified in PostgreSQL and Redis
- recruit less candidates skilled in MySQL

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DASHBOARD

To view the Cognos dashboar :
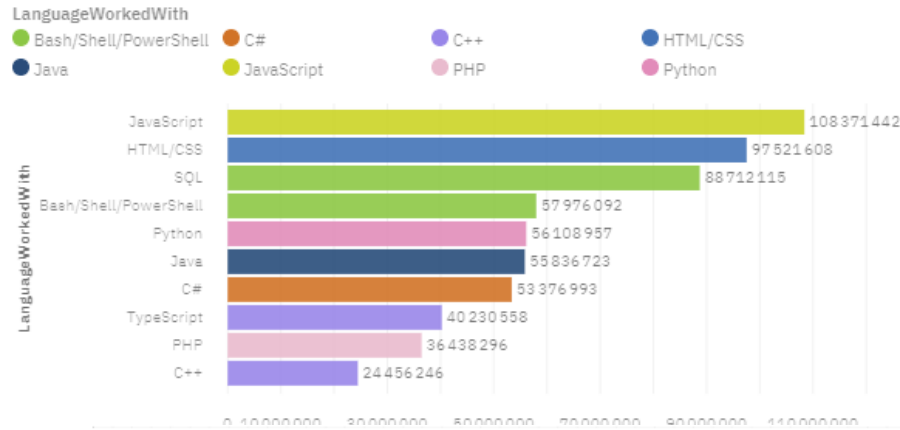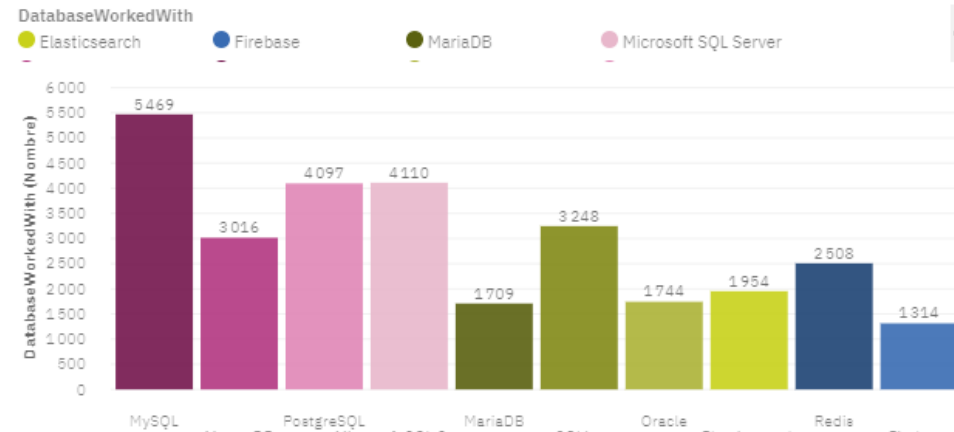
https://eu-gb.dataplatform.cloud.ibm.com/dashboards/011f71b6-3db8-4c2f-b6ea-e5a3c969f13a/view/5531fa3a38b518ea53cbb1e407cb2f0e7c3e775dbabbd15682847b490a682597f36042c3c8281e538e160432fabe160d9c

DASHBOARD TAB 1

DASHBOARD TAB 2

DASHBOARD TAB 3

DISCUSSION

Findings & Implications

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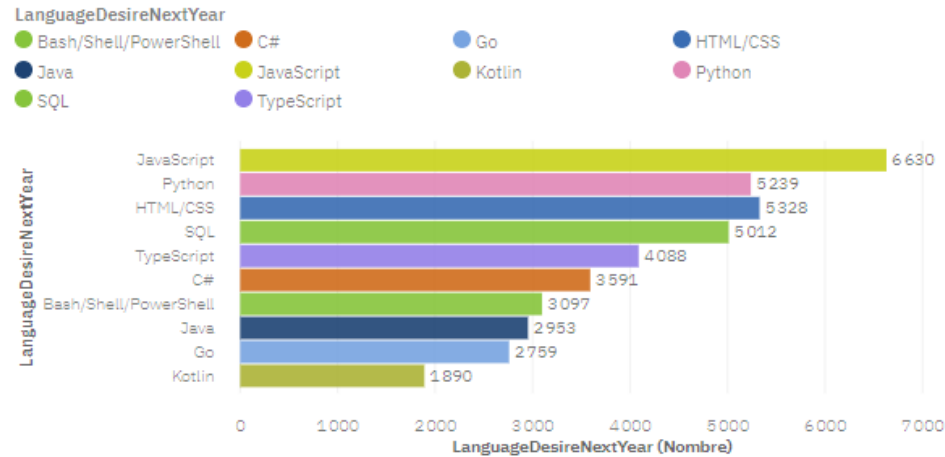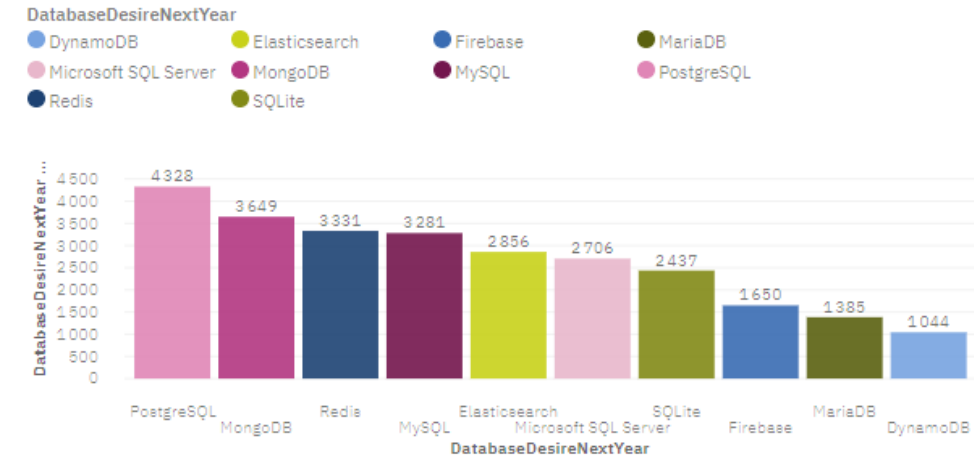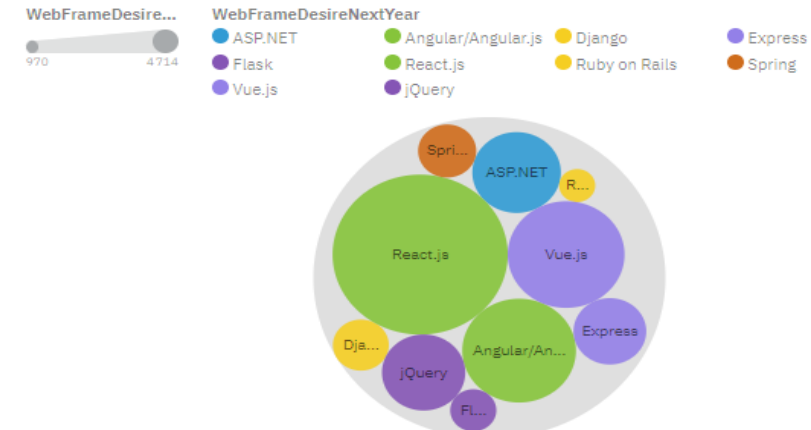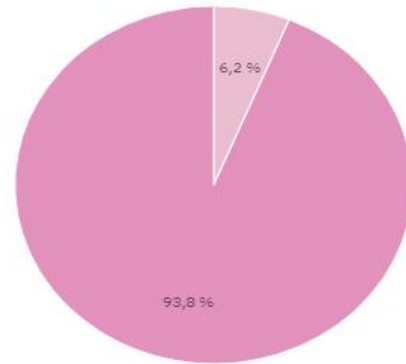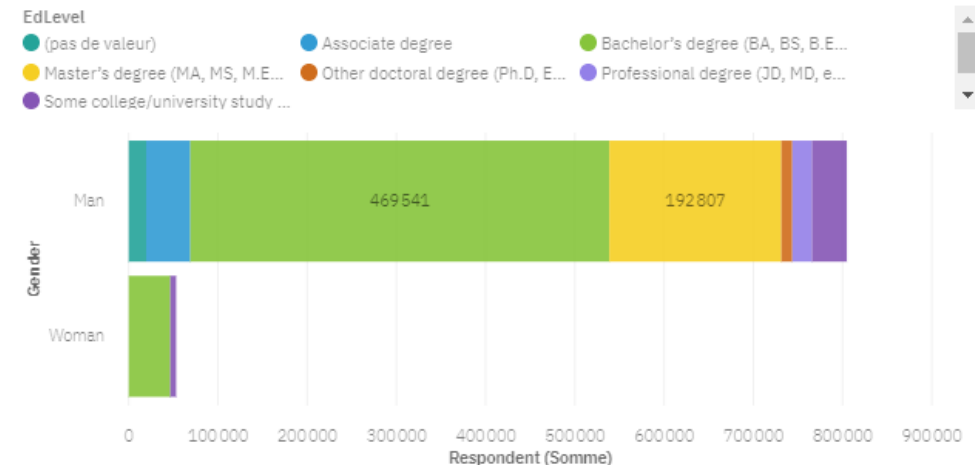
OVERALL FINDINGS & IMPLICATIONS

Findings

- Programming Languages like python and JavaScript are gaining more interest in the future
- MongoDB is essential now and in the futur
- Microsoft Azure and Windows are dropping significantly.
- For web frame : React.js is growing

Implications

- Recruit more candidates skilled in python and JavaScript.
- Recruit more candidates skilled in Vue.js and React.js.
- Recruit less candidates skilled in Microsoft Azure and Windows.

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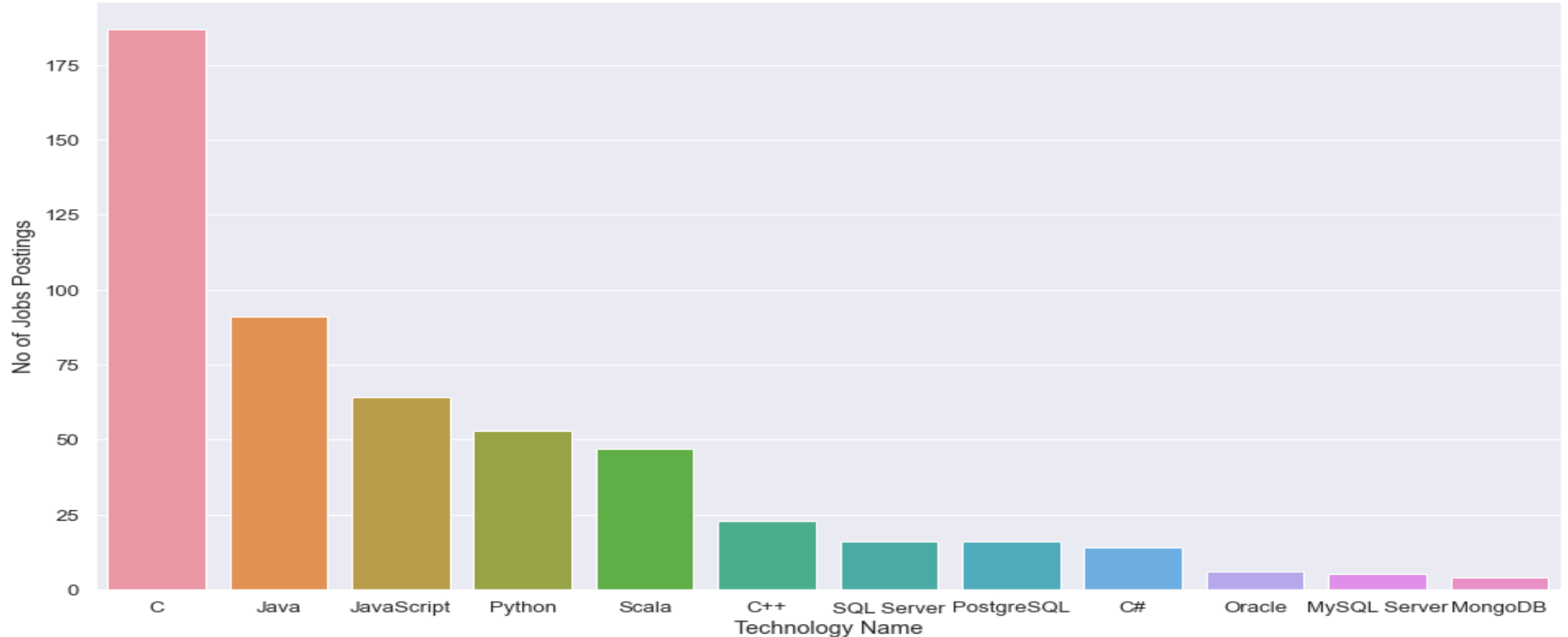**SKILLS NETWORK**

CONCLUSION

- Ensure a budget for hiring based on the skills needed now and in the future.

- The company must be flexible and adapt the skills it covers by launching training from time to time

- Technology needs to be extended around the world surface and women need to be encouraged every were, programs need to be launched to address these issues

APPENDIX

JOB POSTINGS

POPULAR LANGUAGES