Future skill requirements Report

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IBM **D**eveloper

SKILLS NETWORK

OUTLINE

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

EXECUTIVE SUMMARY

- This Report present the result of the Analysis of future skill requirements for the annual report of global IT and business consulting services

- I'll begin by scraping internet web sites and accessing APIs to collect data in various formats like .csv files, excel sheets, ans databases

- Then apply statistical techniques to analyse the data

- In the end, I'll bring all of Information together by using IBM Cognos Analytics to create a dashboard

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INTRODUCTION

- This Analyst is to identify future skill requirements in order to keep pace with changing technologies and remain competitive

- The task consist of collecting data from various sources and identifying trends for this year's report on emerging skills for Global It business consulting

- The gold of this analysis is to answer the questions:
  - What are the top programming languages in demand?
  - What are the top database in demand?
 - What are the popular IDEs?

METHODOLOGY

- Origin of Data : https://stackoverflow.blog/2019/04/09/the-2019-stack-overflow-developer-survey-results-are-in/?utm_medium=Exinfluencer&utm_source=Exinfluencer&utm_content=000026UJ&utm_term=10006555&utm_id=NA-SkillsNetwork-Channel-SkillsNetworkCoursesIBMDA0321ENSkillsNetwork21426264-2021-01-01

- Data Collection using APIS, Webscraping and explore Data that are the top programming skills that are most in demand from various sources including:
    - Job postings
    - Training portals
    - Surveys

- Data Wranglling to Determine Missing Values, Removing Duplicates and Normalizing Data

- Using statistical tools to Analyse the Data in order to find:
    - Distribution
    - Outliers
    - Correlation

- Visualizing Distribution of Data, Relationship, composition

RESULTS

- The data was scraped and collected

- The data was wrangled

- The data was organized

- The data was analyzed

- The data was presented through graphs and dashboard
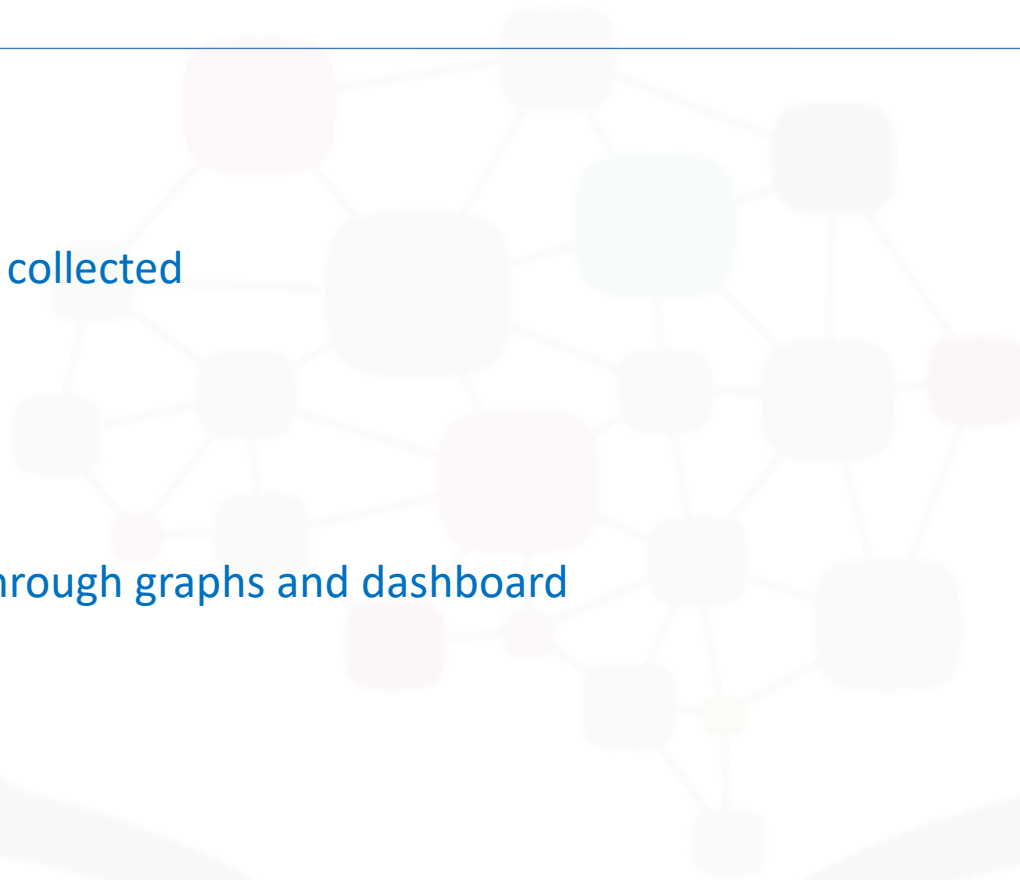
RESULTS

In the dataset there are many differents technologies of **language, database, platform, webplatform**. And the respondent have choice with one the are actually use and with one the would use in the next year.
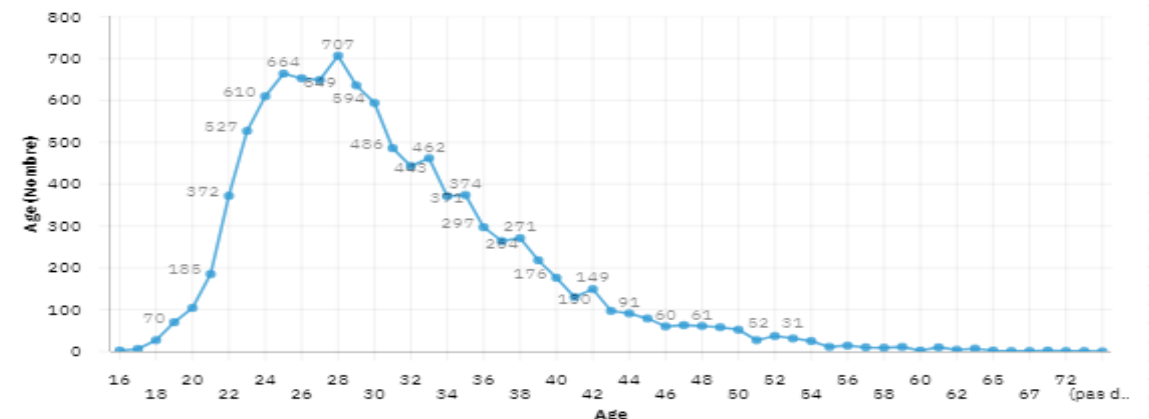
The respondents are **93,5 percent male versus 6,5 percent female**, most of them in **the United States** and between **16 and 72 years old**

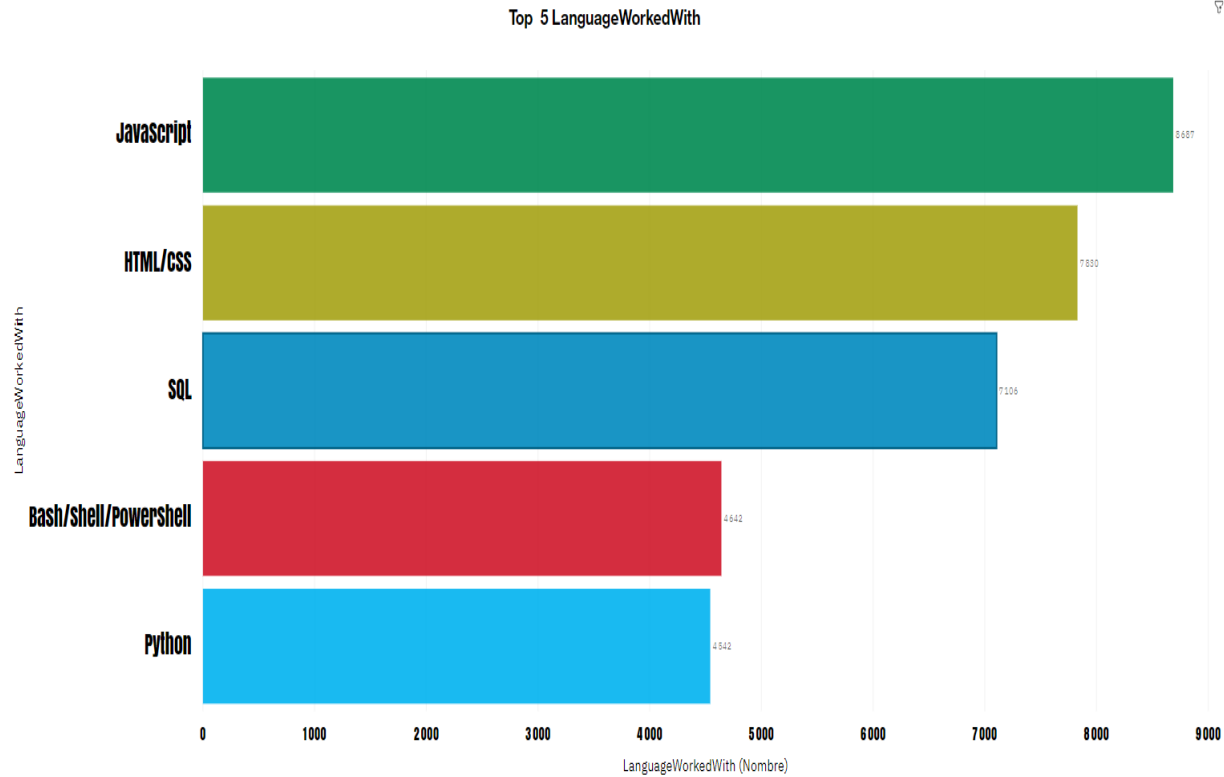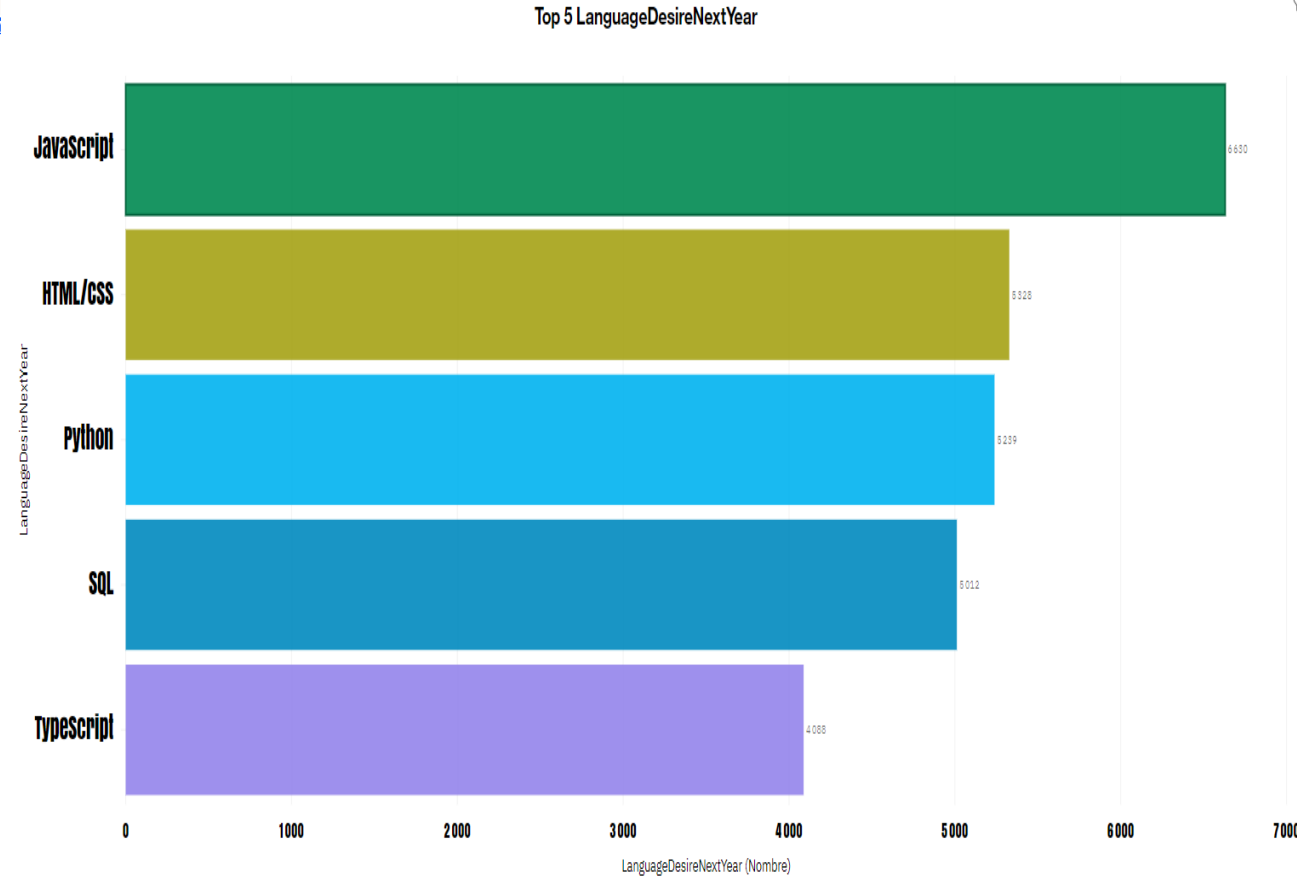**Respondent classified by Gender**

Gender
○ Woman ● Man

6,5 %

93,5 %

Respondent Count by Age

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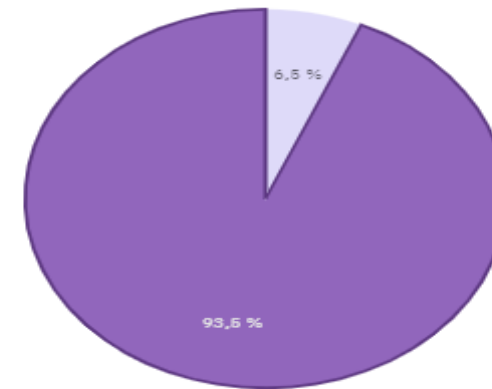
PROGRAMMING LANGUAGE TRENDS

Current Year

Top 5 LanguageWorkedWith

Next Year

Top 5 LanguageDesireNextYear

PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- Javascript, css,sql,shell , python are the most populate language in the current Year

- Javascript, css, python, sql,typescript are the most populate language in the next Year
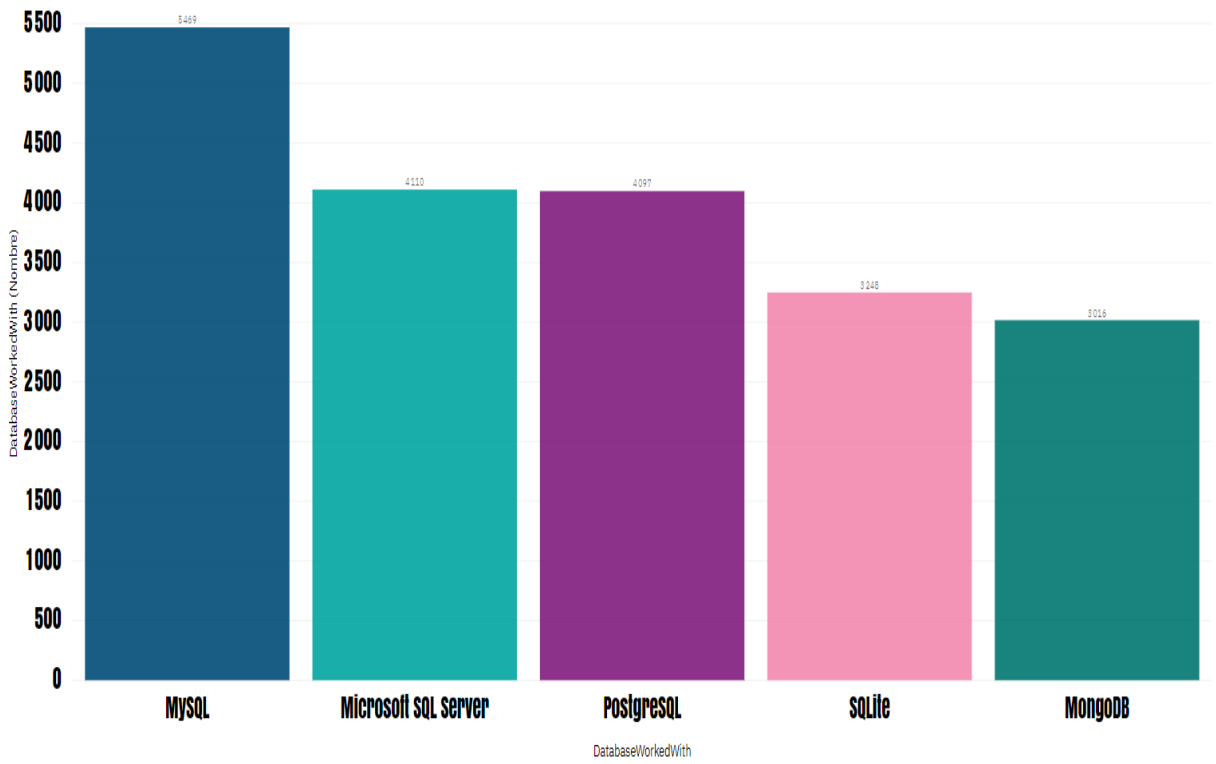
- Python ist now in 3td position

Implications

- This language are uselfull in many domain(=many jobs opportunity)

- This language will stay in trend

- python is popular and it will become even more so(due to neue technologie like AI)
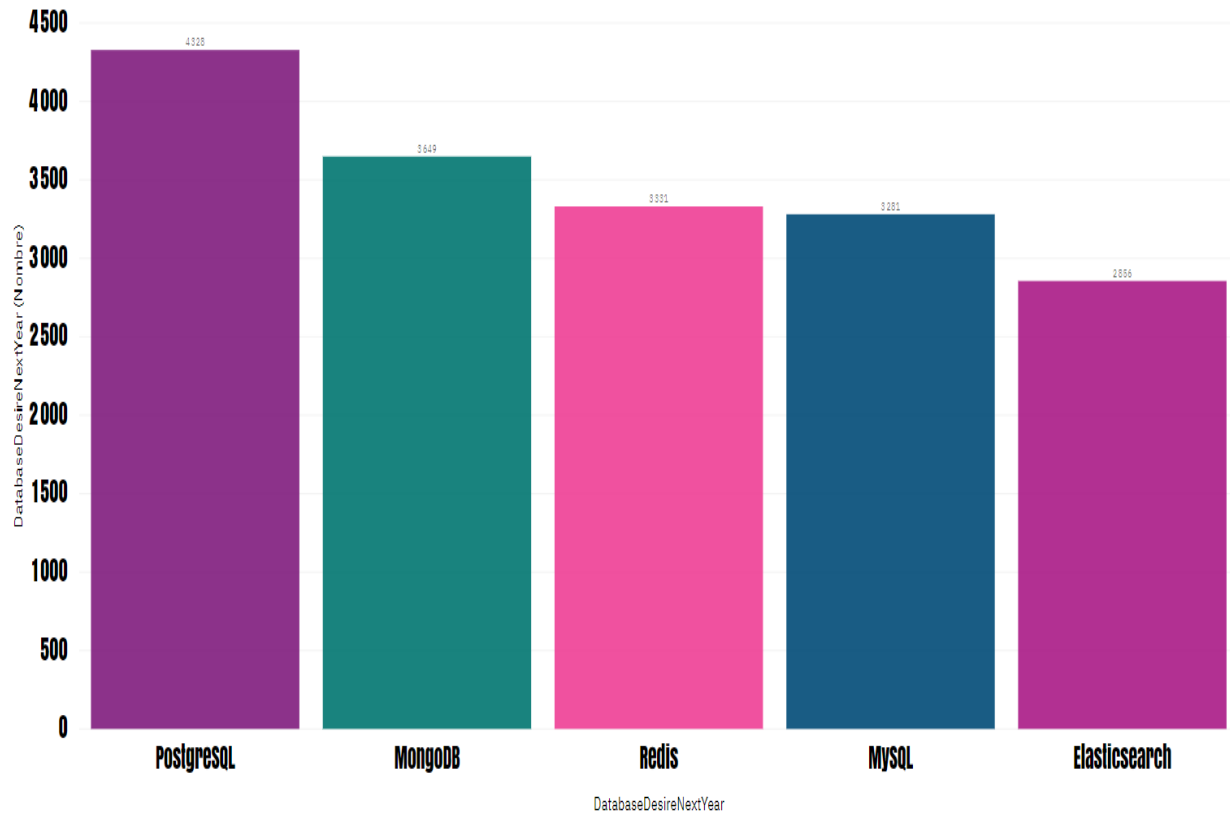
DATABASE TRENDS

Current Year

Next Year

Top 5 DatabaseWorkedWith

Top 5 DatabaseDesireNextYear

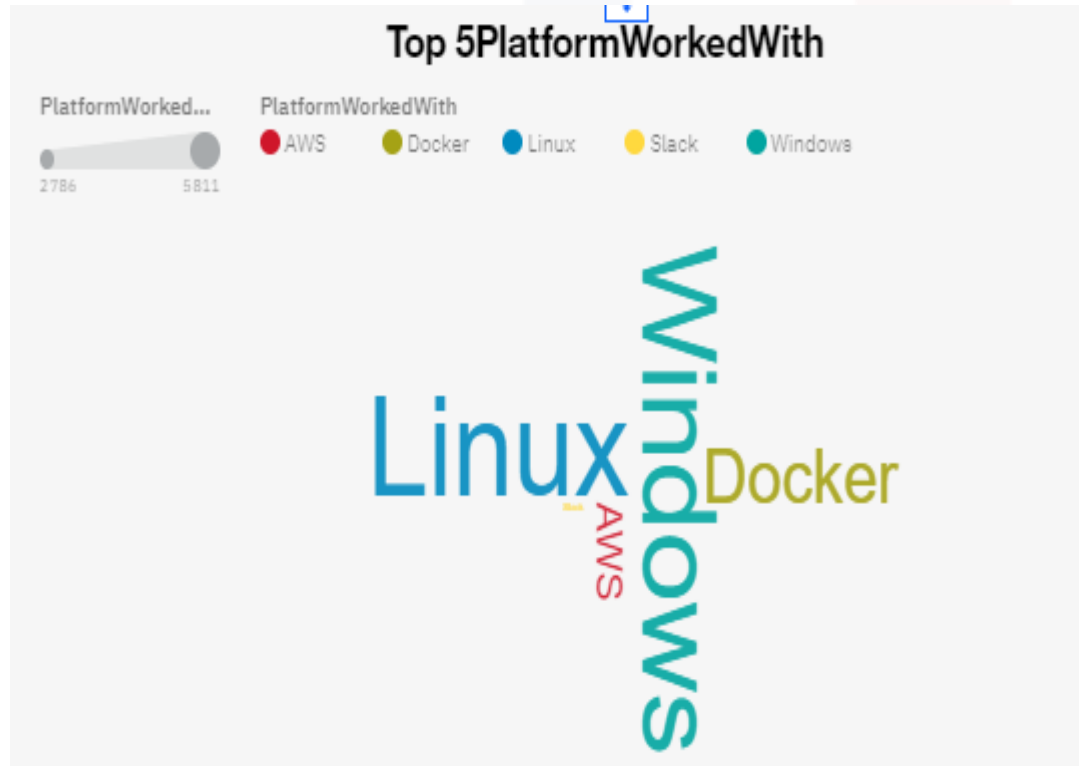# DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL, MS SQL Server, PostgreSQL, SQLlite, MongoDB are the most popular used Database in the current Year

- PostgreSQL, MongoDB, Redis, MySQL, Eleasticsearch are the most selected Database for the next Year

- PostgreSQL and MongoDB will become more popular.

- Elasticsearch and Redis will come in trend

Implications

- Ist a good think to know how to work with minimal 2 Database

- MySQL ,PostgreSQL and MongoDB are important to know

- You should learn how to use Redis and Eleasticsearch maybe there the next technologie

PLATFORM TRENDS

Current Year

Next Year

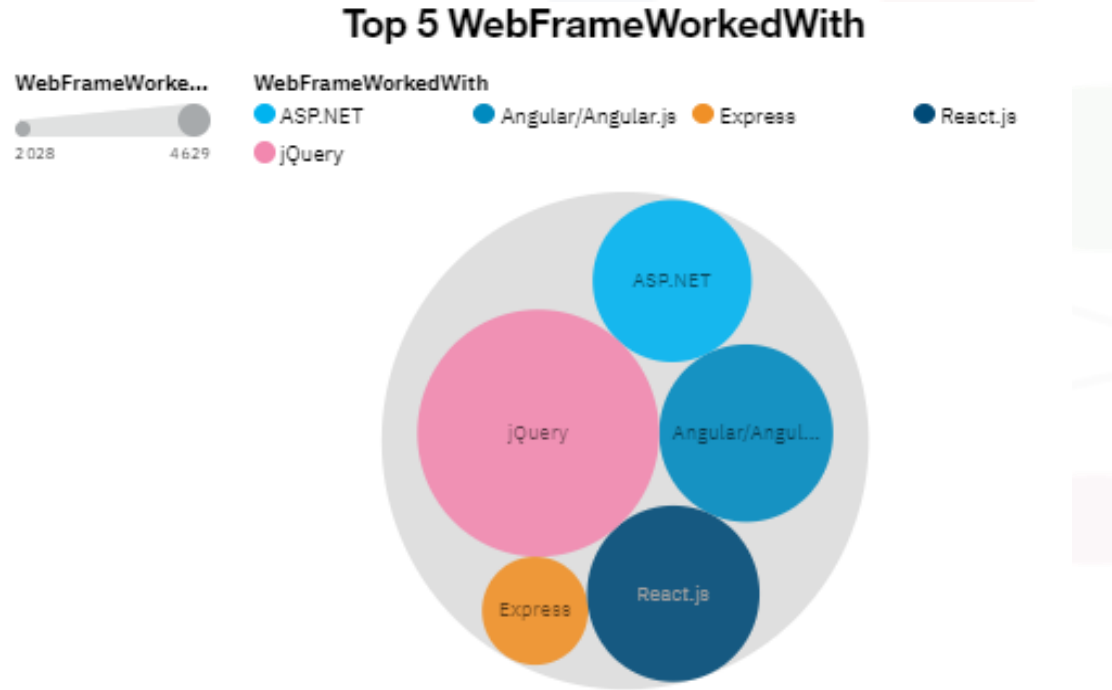# PLATFORM TRENDS - FINDINGS & IMPLICATIONS

Findings

- Linux, Windows, Docker, AWS are the most popular used Platform
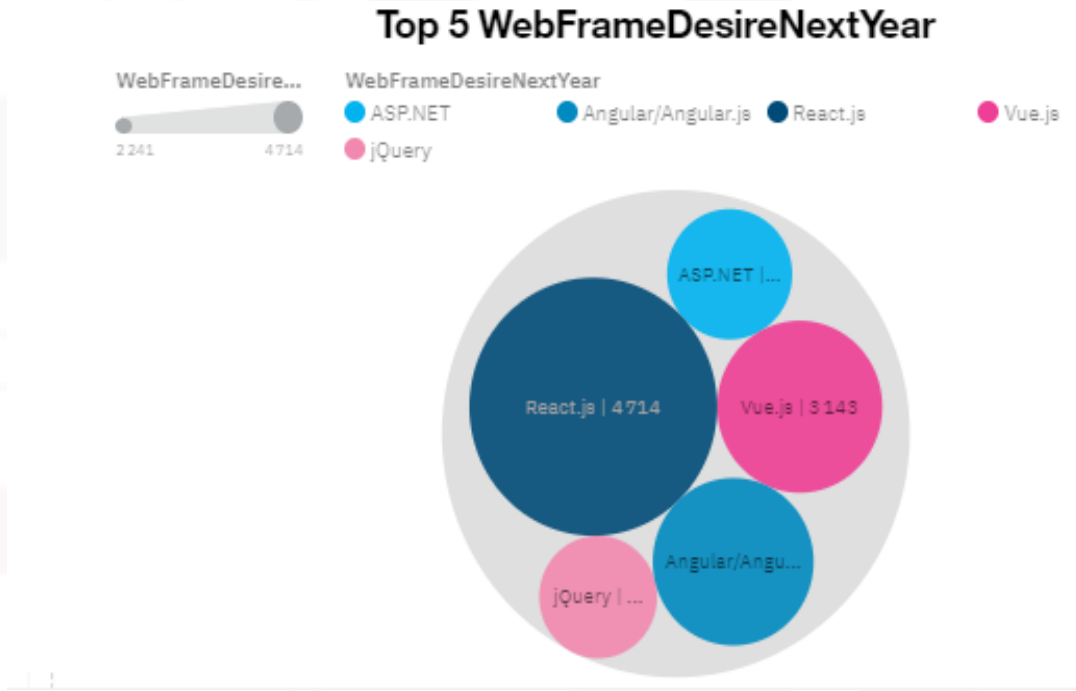
- Docker come strong in trend

Implications

- it's good to know how to work with at least two of this You should

- You should learn how to use Docker

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WEBFRAME TRENDS

Current Year

Next Year

Top 5 WebFrameWorkedWith

WebFrameWorke...
2028   4629

WebFrameWorkedWith
- ASP.NET
- Angular/Angular.js
- Express
- React.js
- jQuery

Top 5 WebFrameDesireNextYear

WebFrameDesire...
2241   4714

WebFrameDesireNextYear
- ASP.NET
- Angular/Angular.js
- React.js
- Vue.js
- jQuery

React.js | 4714
Vue.js | 3143
ASP.NET | ...
Angular/Angu...
jQuery | ...

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WEBPFRAME TRENDS - FINDINGS & IMPLICATIONS

Findings

- JQuery, Angular, React.JS, APS.NET, EXPRESS are the most popular used Webframe in the current Year

- React.JS, Vue Js, and Angular come in trend in the next Year

Implications

- it's good to know how to work with at least two of this You should

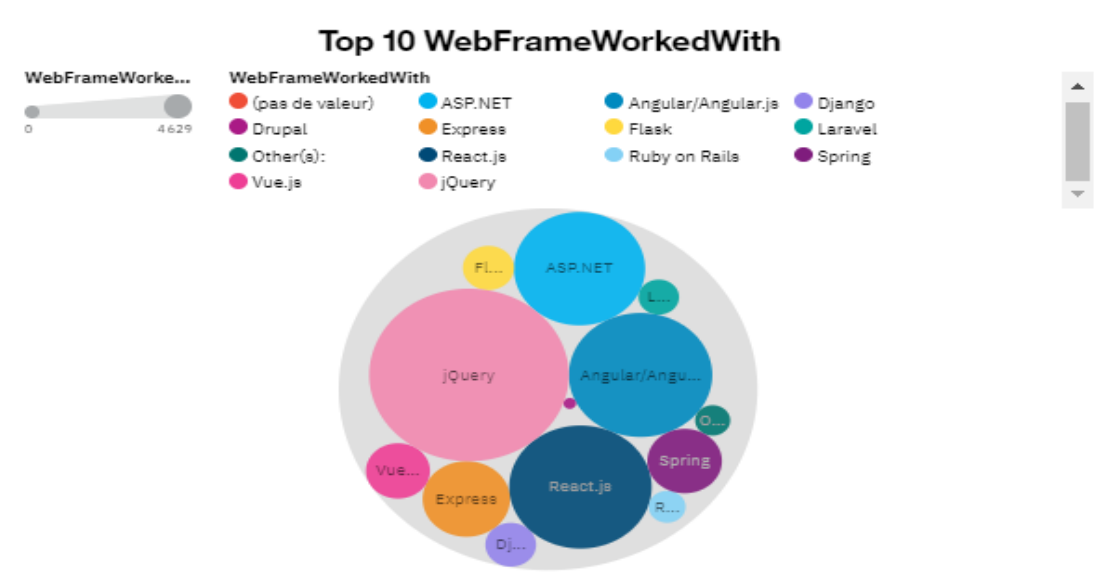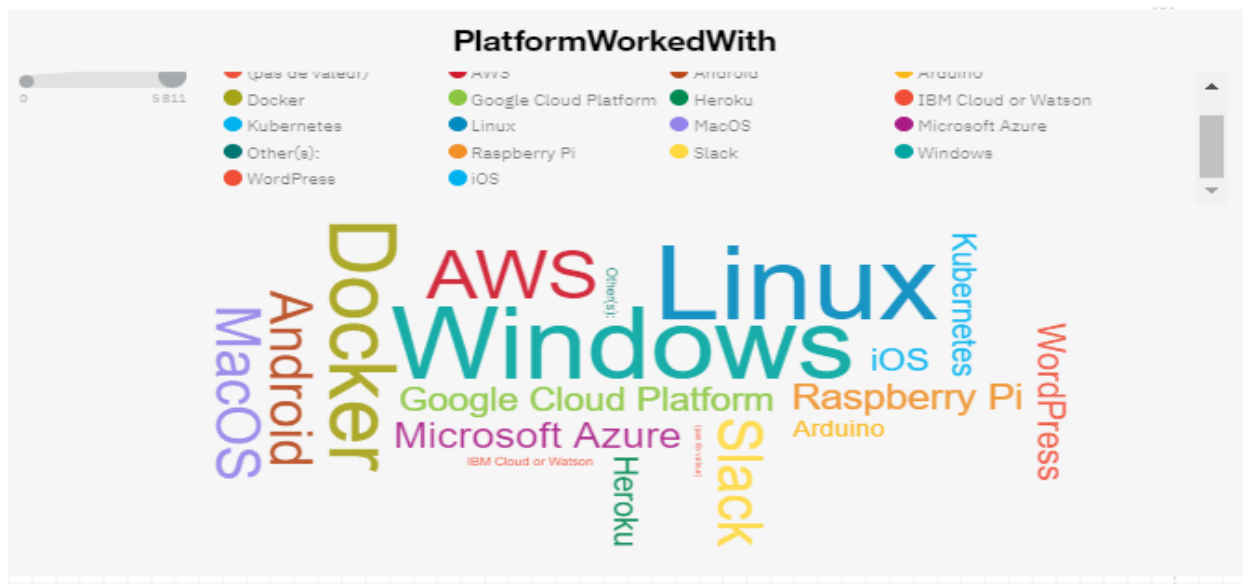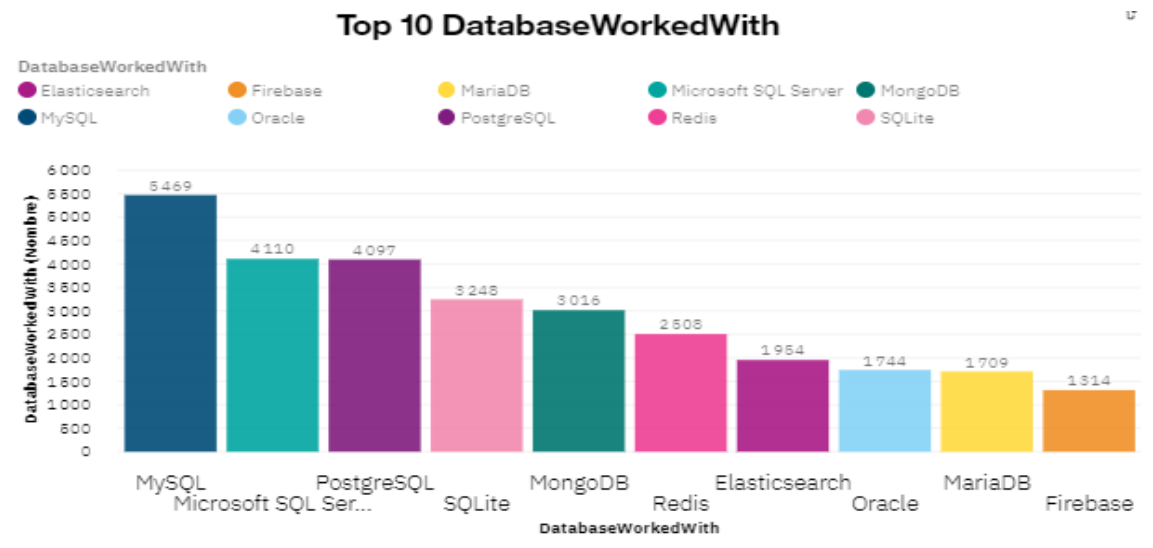- You should learn how to use React.JS and Angular
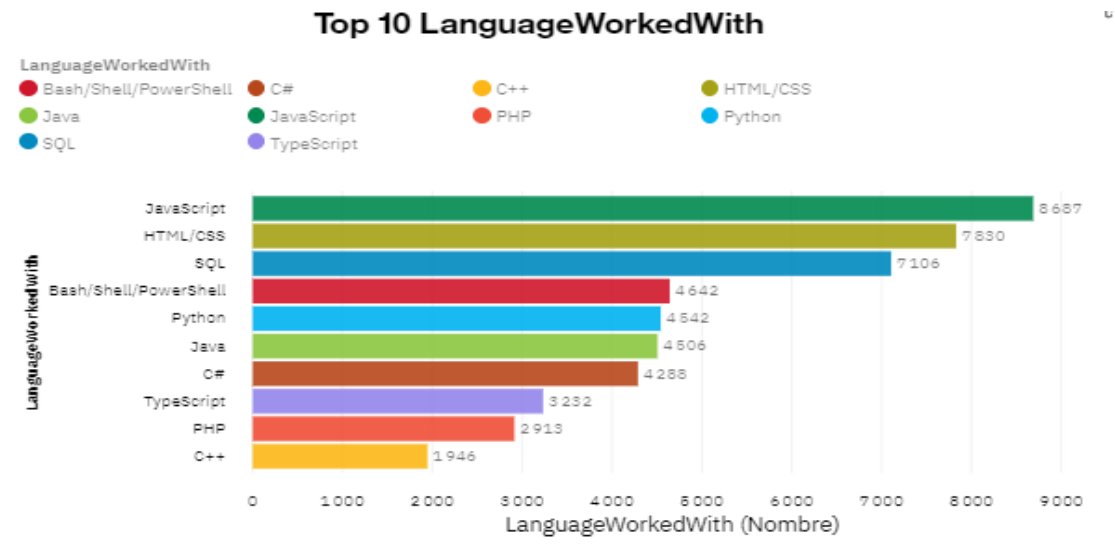
DASHBOARD

The permanent link of the read-only view of the Cognos dashboard : https://eu-gb.dataplatform.cloud.ibm.com/dashboards/406999f2-2555-426b-8d53-33cf2583a034/view/7321c90331e263ca55c7b1e4079f7e027c3e765be1bbd10b83817b495a317897a86c4797c82c1e098e145661a0eb125fca
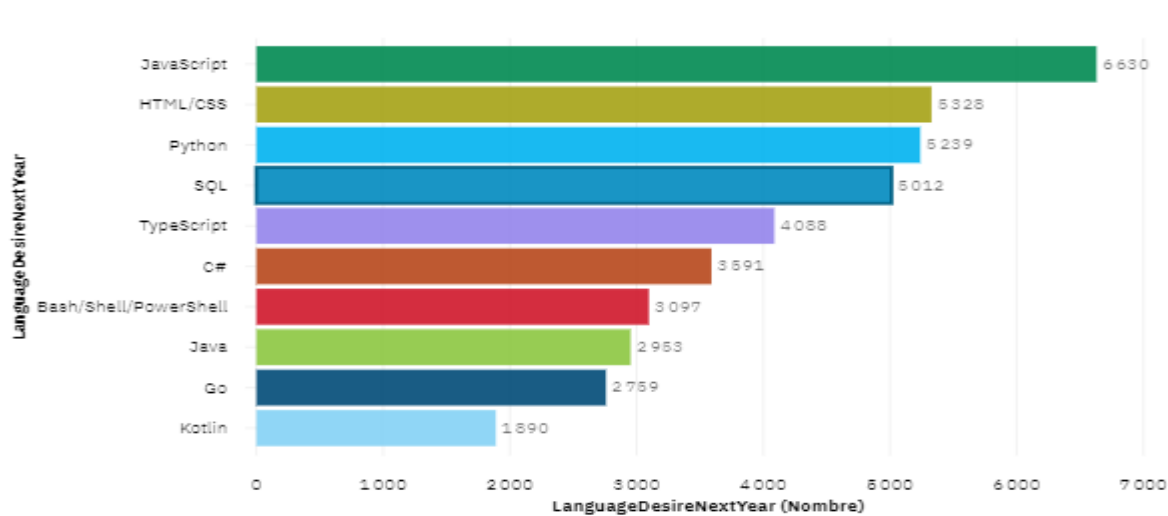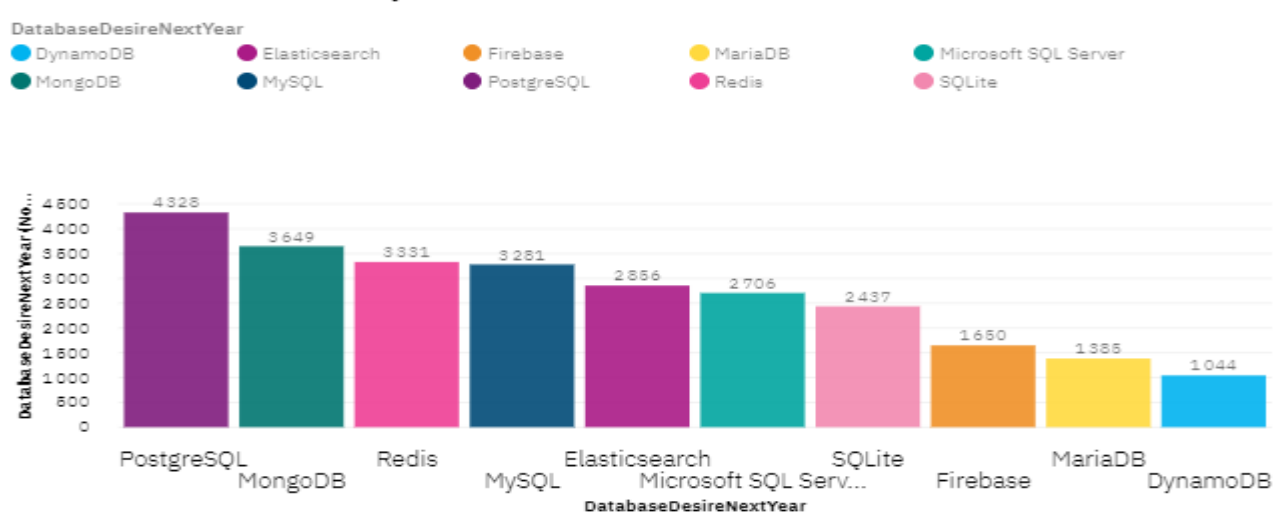
DASHBOARD TAB 1
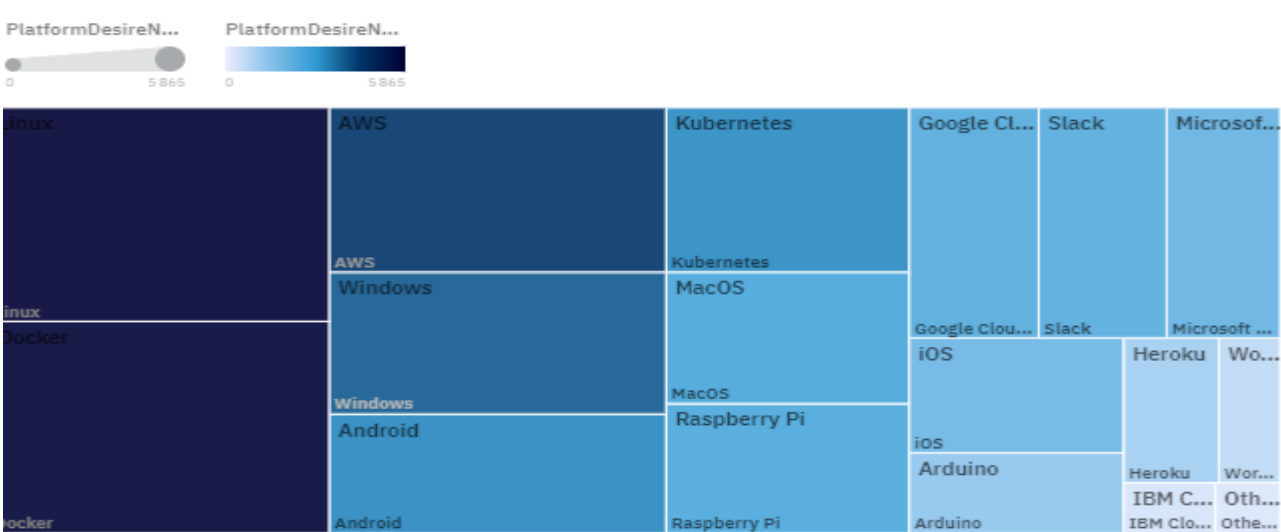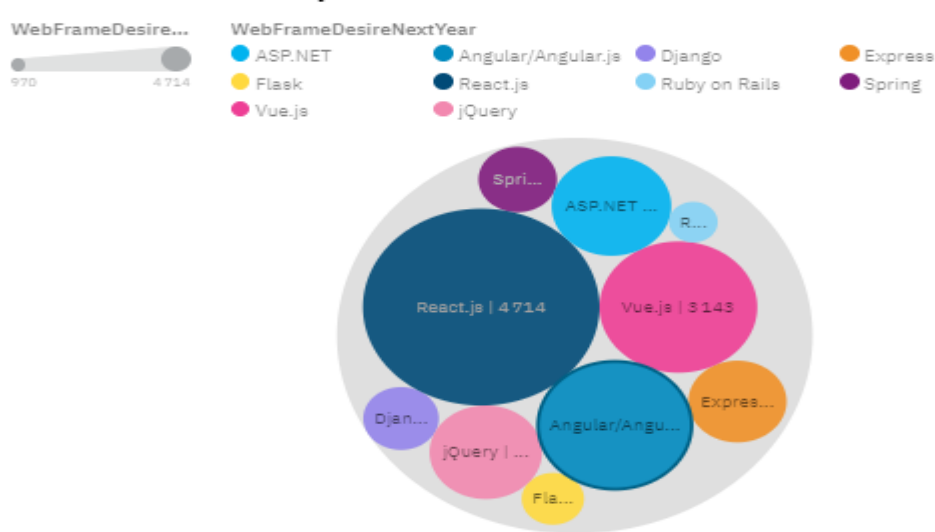
DASHBOARD TAB 2

Top 10 LanguageDesireNextYear

Top 10 DatabaseDesireNextYear

PlatformDesireNextYear

Top 10 WebFrameDesireNextYear

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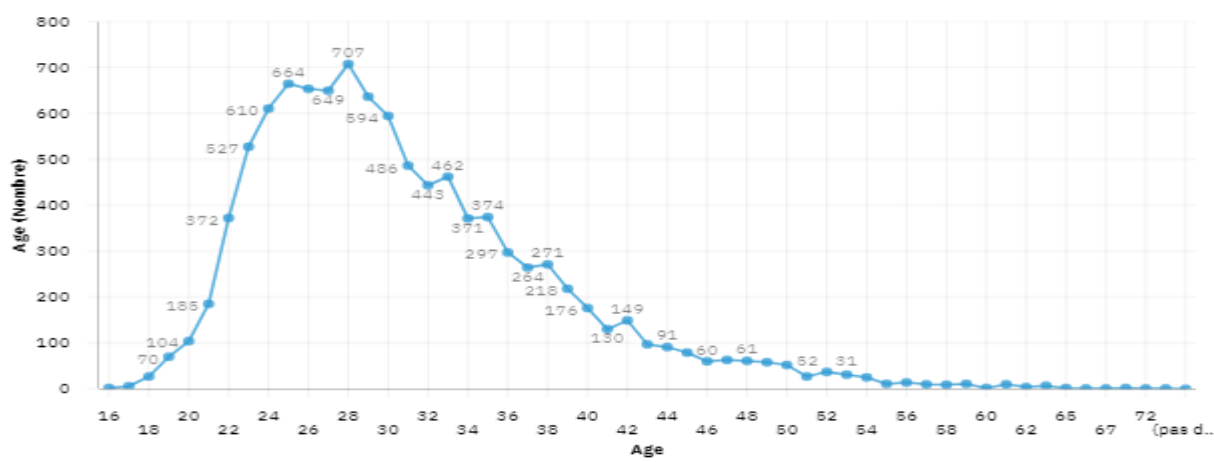SKILLS NETWORK

DASHBOARD TAB 3

Respondent classified by Gender

Gender
○ Woman ● Man

6,5 %

93,5 %

Respondent Count for Countries

Country (Nombre)
1 — 2805

Norway · Russian Federation · Canada · United States · Mexico · Iran · China · India · Indonesia · Brazil · Australia

Respondent Count by Age
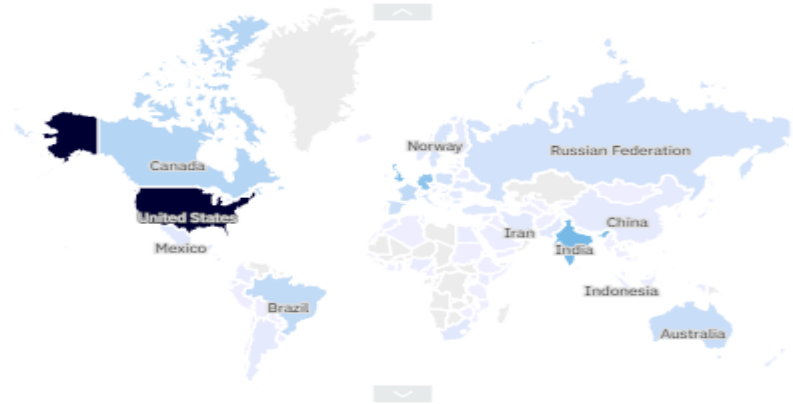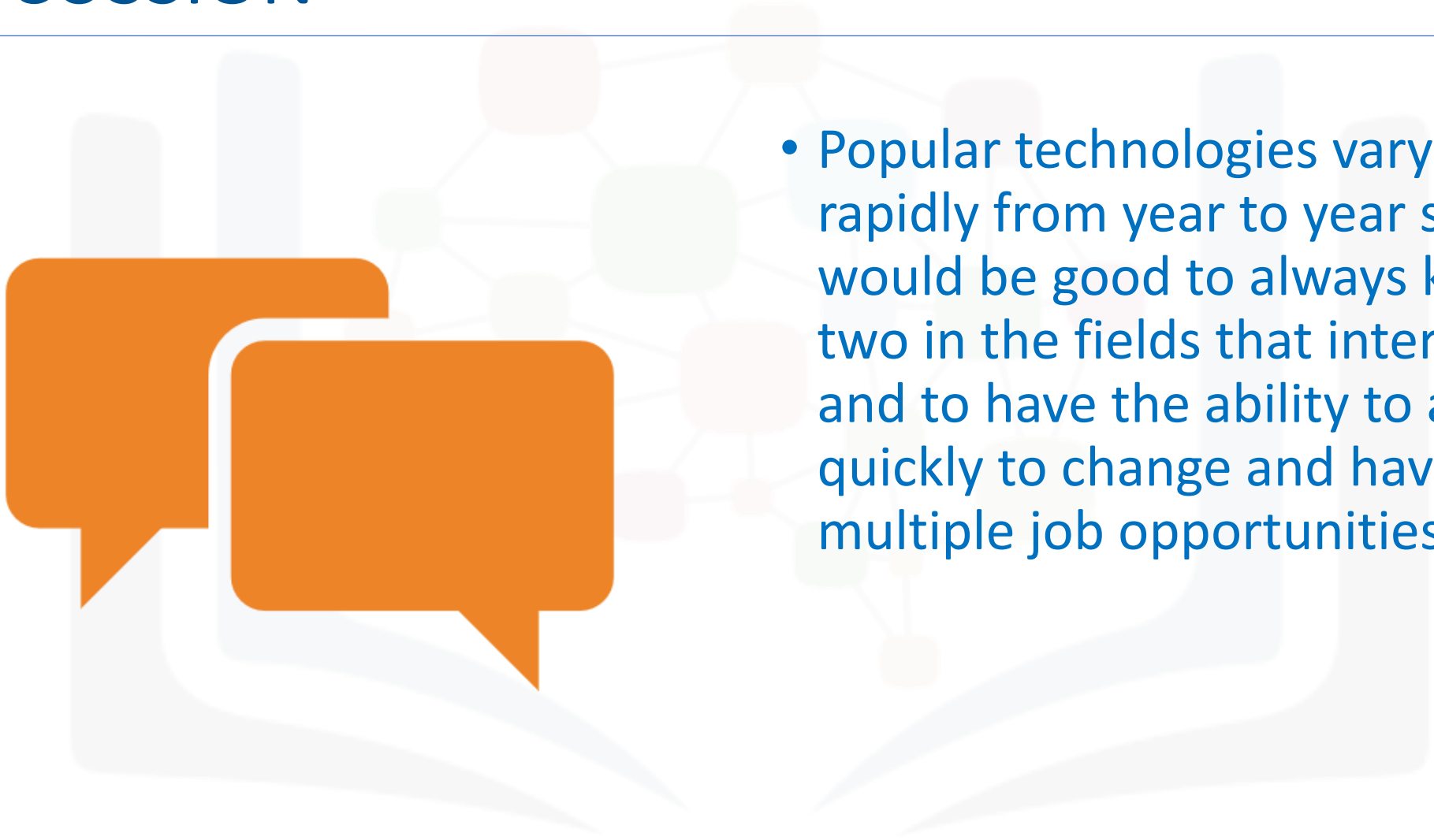
Respondent Count by Gender, classified by Formal Education Level

EdLevel
● (pas de valeur)   ● Associate degree   ● Bachelor's degree (BA, BS, B.E...
● I never completed any formal ...   ● Master's degree (MA, MS, M.E...   ● Other doctoral degree (Ph.D, E...
● Primary/elementary school   ● Professional degree (JD, MD, e...   ● Secondary school (e.g. Americ...
● Some college/university study ...
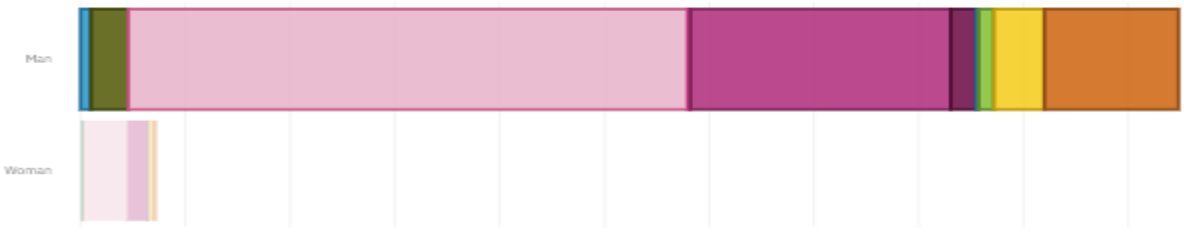
DISCUSSION

- Popular technologies vary rapidly from year to year so it would be good to always know two in the fields that interest us and to have the ability to adapt quickly to change and have multiple job opportunities.

OVERALL FINDINGS & IMPLICATIONS

Findings

- The top programming languages in demand are: Javascript, css, python, sql,typescript
- The top database in demand are : PostgreSQL, MongoDB, Redis, MySQL, Eleasticsearch
- The popular IDEs are: Angular, React.JS, APS.NET, Vue JS, JQuery

Implications

- there are several job opportunities for those who master these Programming languages
- there are several job opportunities for those who master these technologies
- there are several job opportunities for those who master these technologies
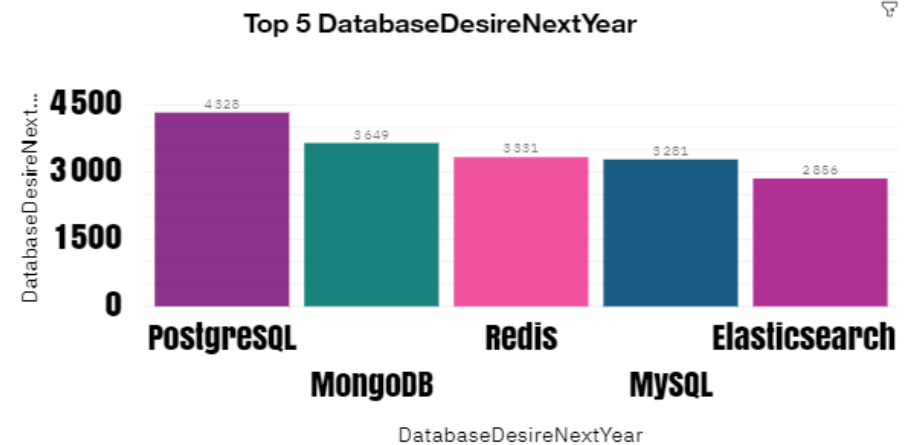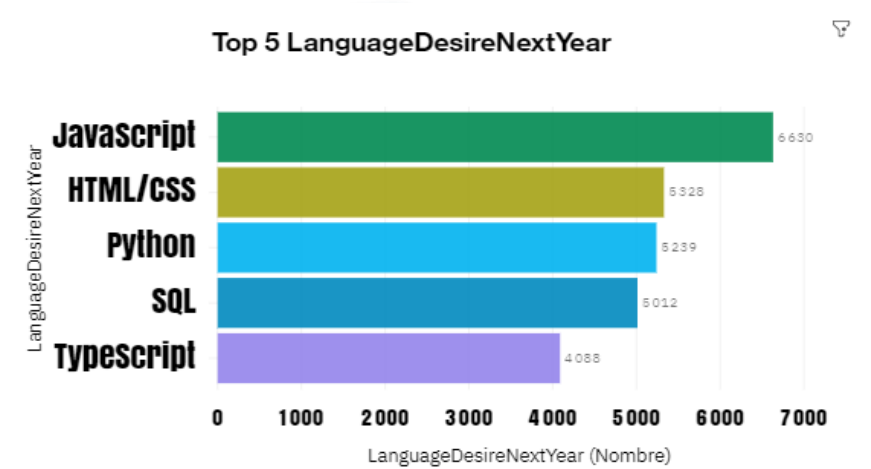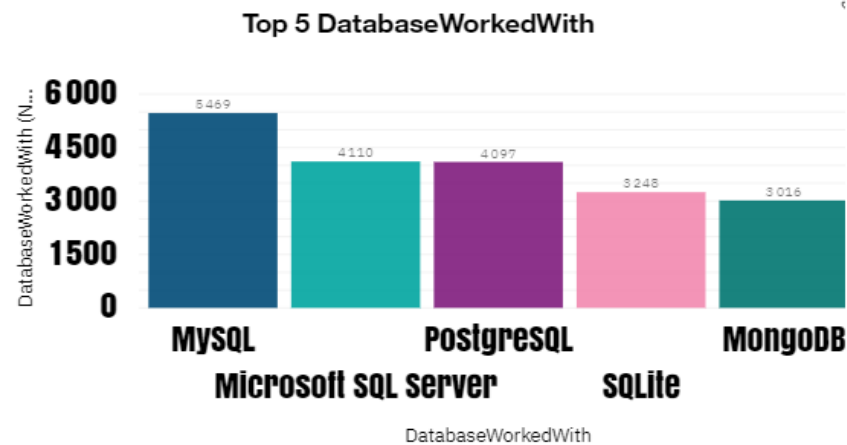
CONCLUSION

- several people are interested in web technologies(javascript, html, React.JS/Angular, Mysql)

- many people are more interested to learn the cloud in the next year(Drocker)

- python is and becoming more and more popular

- to have various job opportunities with a good salary, you must be able to adapt easily to technological change and constantly learn.

- It would therefore be good to know how quickly on average learning a technology (programming language, database platform) takes, to be able to easily plan your learning and always be qualified for new positions.

APPENDIX

Top 5 LanguageWorkedWith

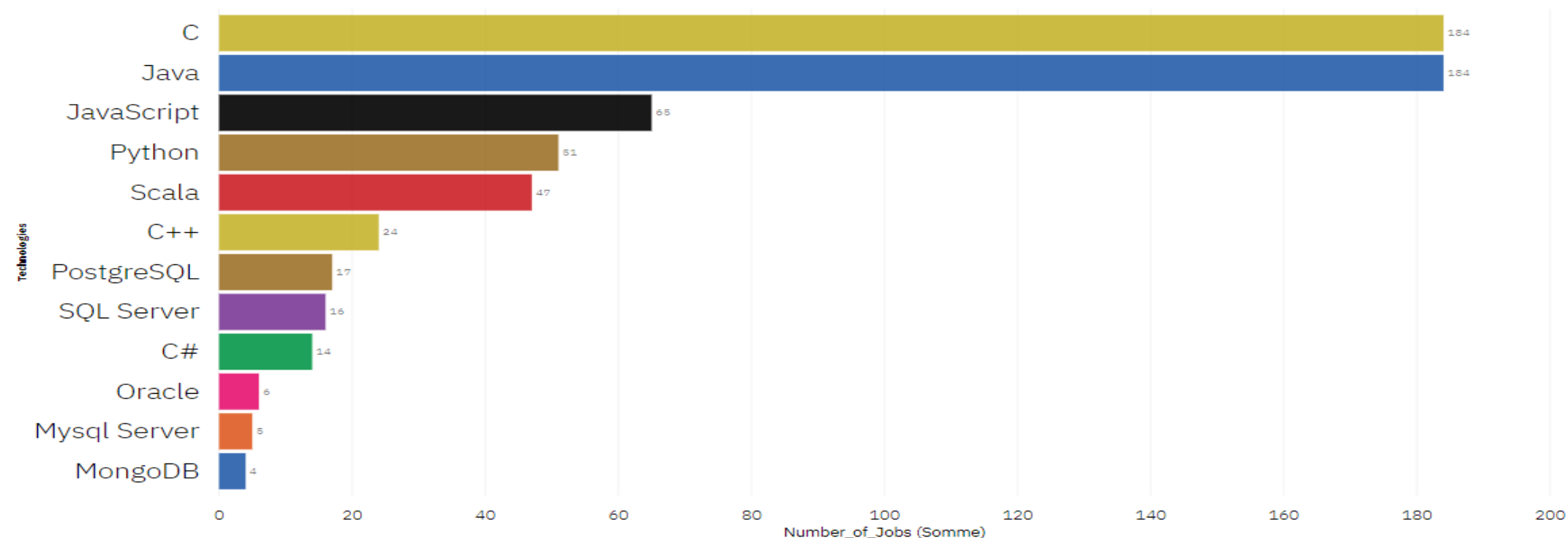| Language	Value
JavaScript	8687
HTML/CSS	7830
SQL	7106
Bash/Shell/Powershell	4642
Python	4542

LanguageWorkedWith (Nombre)

Top 5 LanguageDesireNextYear

Language	Value
JavaScript	6630
HTML/CSS	5328
Python	5239
SQL	5012
TypeScript	4088

LanguageDesireNextYear (Nombre)

Top 5 DatabaseWorkedWith

Database	Value
MySQL	5469
Microsoft SQL Server	4110
PostgreSQL	4097
SQLite	3248
MongoDB	3016

DatabaseWorkedWith

Top 5 DatabaseDesireNextYear

Database	Value
PostgreSQL	4328
MongoDB	3649
Redis	3331
MySQL	3281
Elasticsearch	2856

DatabaseDesireNextYear

GITHUB JOB POSTINGS

Number of Jobs for Technologie

POPULAR LANGUAGES

annual_average_salary per Programming language