Technologies Survey

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OUTLINE

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  - Dashboard
- Discussion
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EXECUTIVE SUMMARY

- Survey findings reveal
  - Most used programming language is JavaScript
  - Most used database is MySQL
  - Most used web framework is jQuery

- Future learning interests
  - Top programming language professionals plan to learn is JavaScript
  - Significant interest in learning new frameworks and databases

- Most of the respondents were men

- Most of the respondents were young from 22 to 32

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INTRODUCTION

- The tech industry is constantly evolving, making it essential to stay updated on the latest tools

- Our survey was conducted to understand
  - The commonly used programming languages, databases, and web frameworks
  - The tools professionals plan to learn in the upcoming year

- The goal of this presentation is to analyze these trends and provide insights on current and future tool preferences

METHODOLOGY

- Data collection
  - Survey data was collected from 11398 respondents
  - The survey included questions on the most used programming languages, databases, web frameworks, and future learning interests

- Data storage
  - The collected responses were stored in Excel spreadsheets.

- Data analysis
  - Used descriptive analytics to summarize the data
  - Created visualizations (e.g., bar charts, pie charts) to represent key findings

- Tools used
  - Excel for data storage and initial analysis
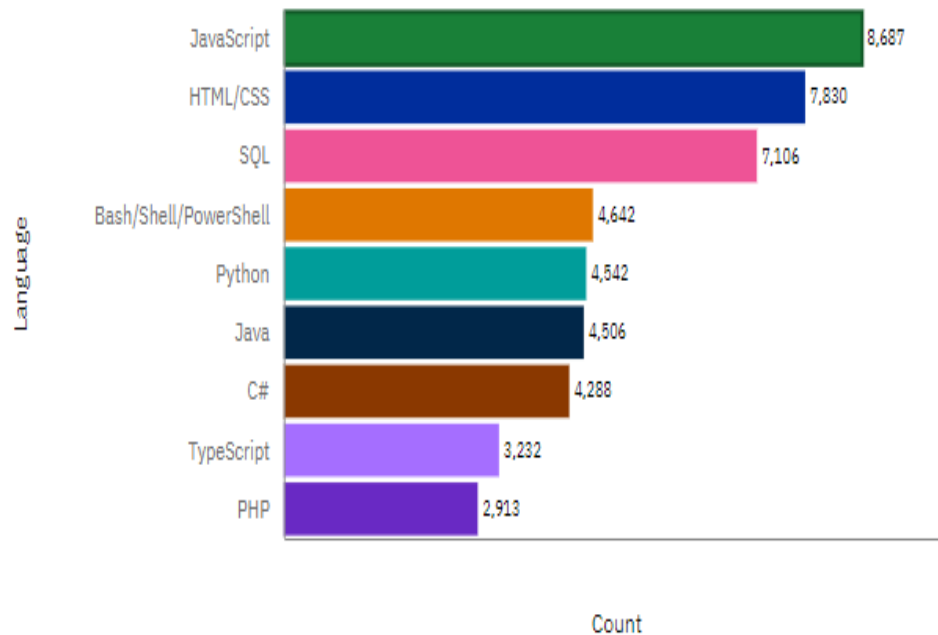 - IBM Cognos Analytics for visualization
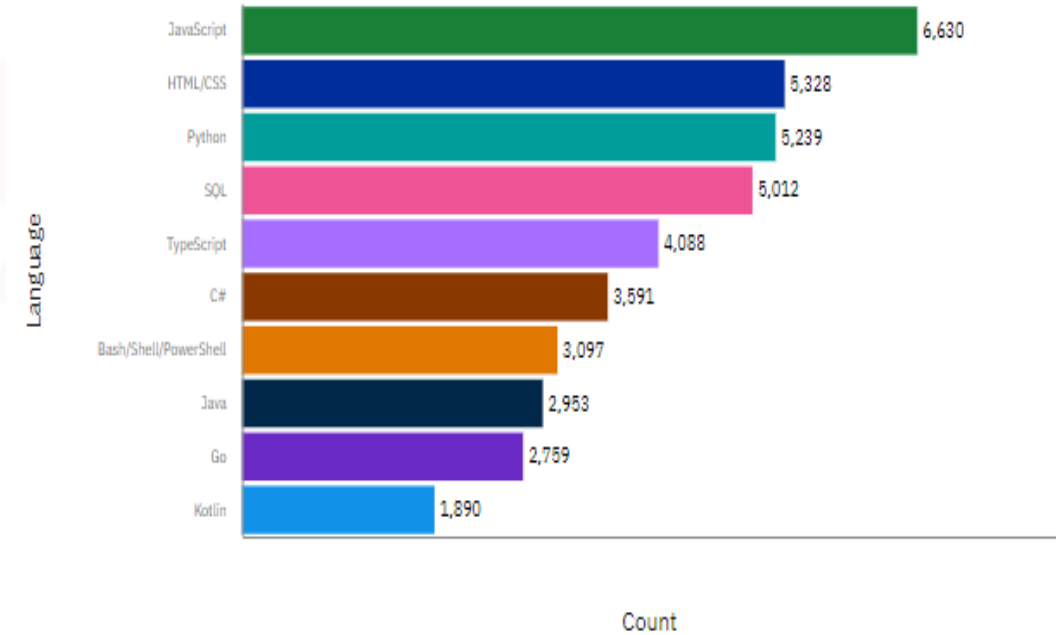
RESULTS

PROGRAMMING LANGUAGE TRENDS

Current Year

Top 10 Language Worked With

Next Year

Top 10 Languages Desired Next Year

PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript leads the list of programming languages people want to learn next year, with 6,630 respondents

- HTML/CSS and Python are also highly desired, with over 5,000 respondents each showing interest

- JavaScript is the most worked-with language, with 8,687 respondents, showing its dominance in both current usage and future learning goals

- HTML/CSS and SQL are also highly used by professionals

Implications

- JavaScript remains a key skill for the future, with high demand for learning it, indicating its continued relevance in web development and beyond

- The high interest in HTML/CSS suggests that front-end development skills are still highly sought after, even as frameworks become more complex

- JavaScript's dominance in both current usage and future demand implies that it will continue to be a key language for professionals

- HTML/CSS and SQL being commonly worked with confirms their foundational roles in both front-end development and database management
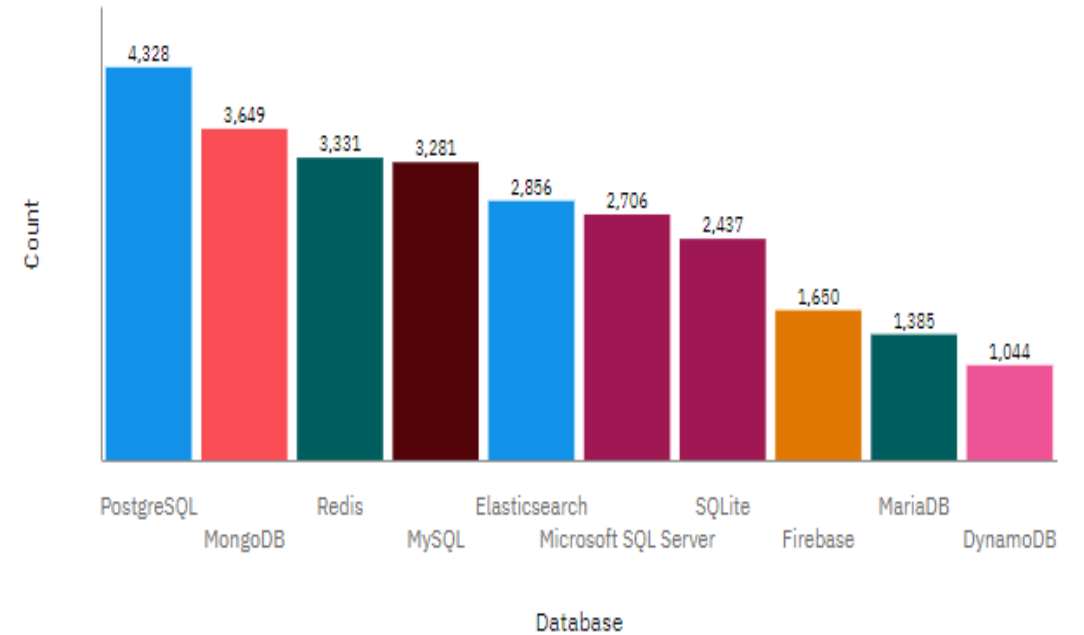
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DATABASE TRENDS

Current Year

Top 10 Database Worked With
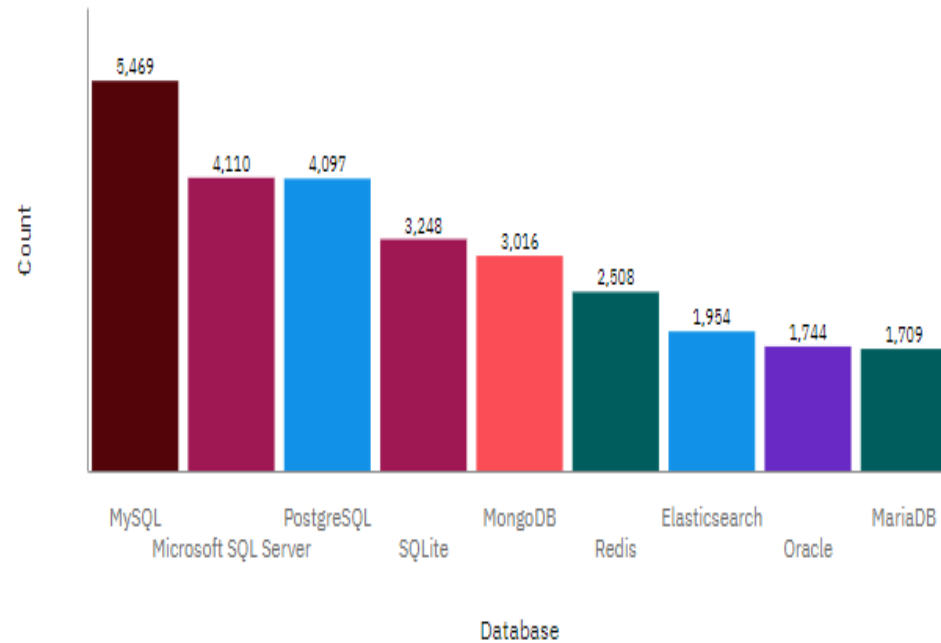
Next Year

Top 10 Databases Desired Next Year

DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL is the most widely used database, indicating its popularity and versatility across various applications

- SQL databases, such as MySQL, PostgreSQL, Microsoft SQL Server, and SQLite, occupy the top positions, demonstrating their continued relevance in enterprise environments

- PostgreSQL is the most desired database for the next year, indicating its strong popularity and potential for continued growth

- MongoDB and Redis, both NoSQL databases, rank high, suggesting a growing preference for flexible and scalable data storage solutions

Implications

- MySQL's dominance suggests that its open-source nature, robust features, and widespread adoption will likely continue to drive its popularity

- The prevalence of SQL databases underscores their importance in enterprise applications, particularly for structured data and transactional workloads

- PostgreSQL's dominance suggests that its open-source nature, robust features, and strong community support will continue to drive its adoption

- The popularity of MongoDB and Redis highlights the increasing need for flexible and scalable data models to accommodate modern application requirements
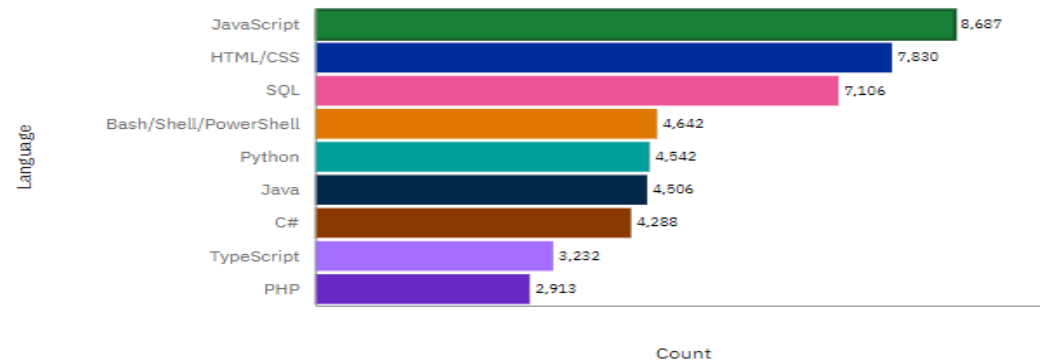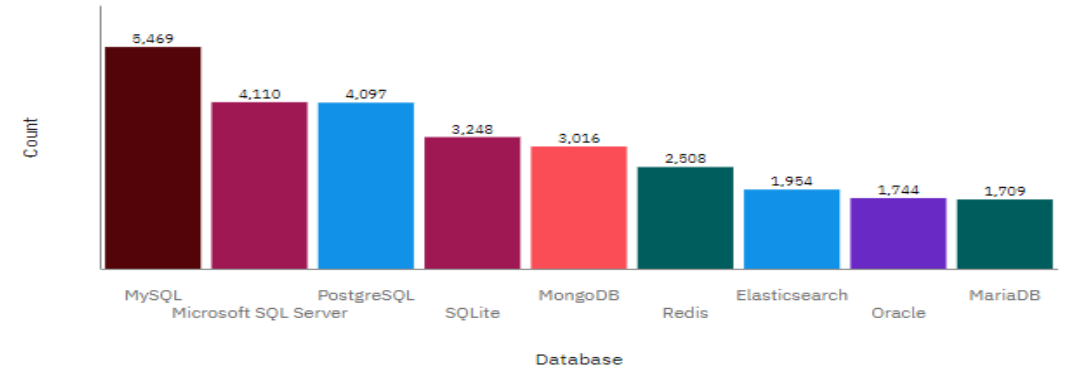
DASHBOARD

https://github.com/ahmed-fayez-abdalla/IBM_Project

DASHBOARD TAB 1

Top 10 Language Worked With

Language / Count

JavaScript	8,687
HTML/CSS	7,830
SQL	7,106
Bash/Shell/PowerShell	4,642
Python	4,542
Java	4,506
C#	4,288
TypeScript	3,232
PHP	2,913

Top 10 Database Worked With

Count / Database

MySQL 5,469, Microsoft SQL Server 4,110, PostgreSQL 4,097, SQLite 3,248, MongoDB 3,016, Redis 2,508, Elasticsearch 1,954, Oracle 1,744, MariaDB 1,709

Platform Worked With

Aws Linux Windows Android WordPress Google Cloud Platform Microsoft Azure Raspberry Pi Arduino iOS Kubernetes Docker Heroku MacOS Slack IBM Cloud or Watson Other(s)

Top 10 Web Frames Worked With

ASP.NET, jQuery, Angular/A..., React.js, Exp..., V..., Sp..., D..., F...

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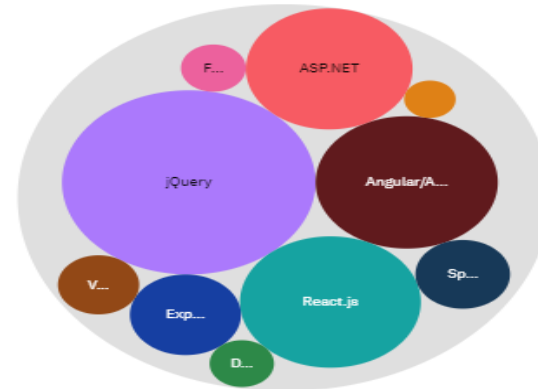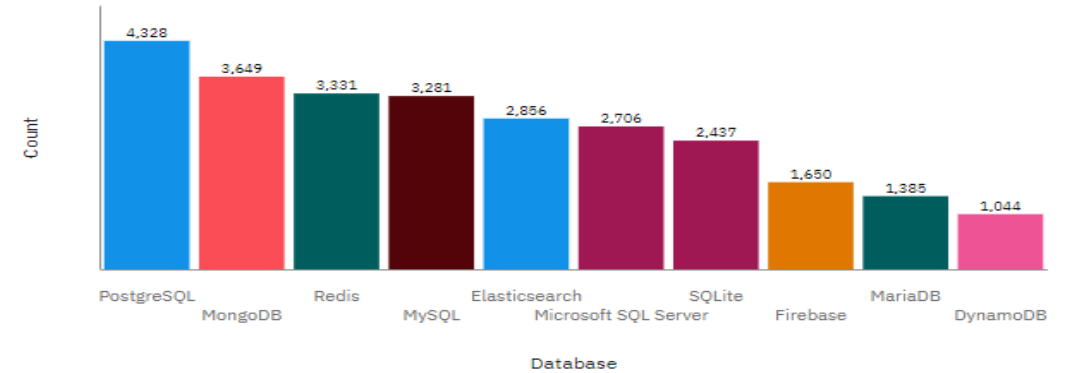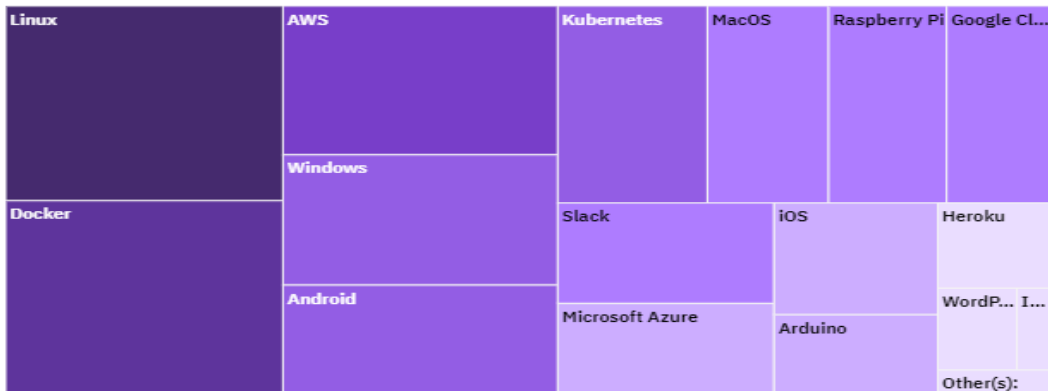
DASHBOARD TAB 2
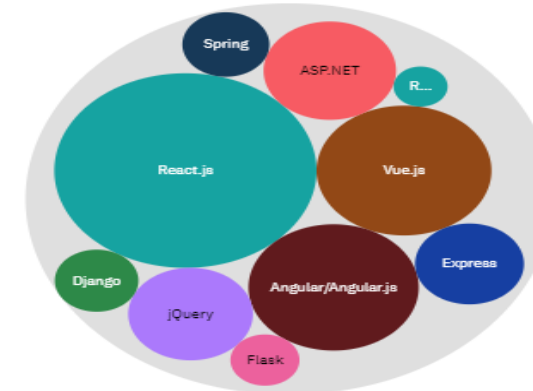

Top 10 Languages Desired Next Year
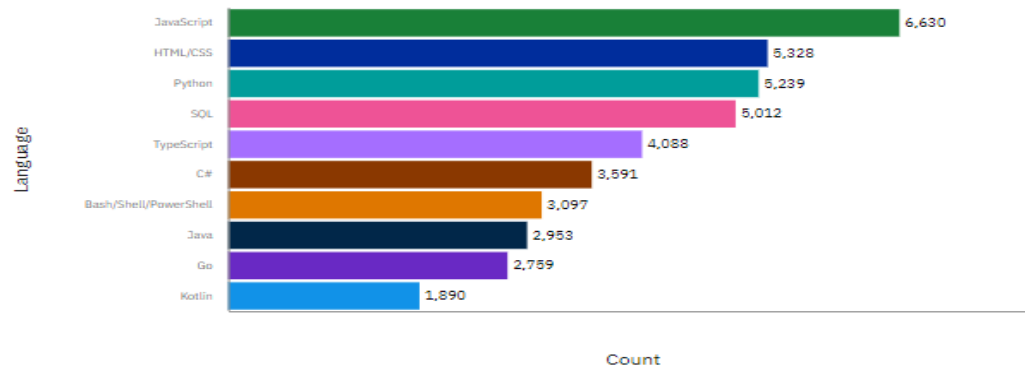
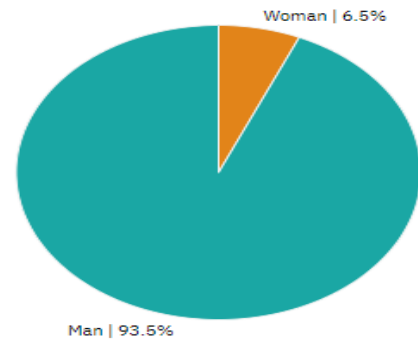Top 10 Databases Desired Next Year

Count Of Platform Desire Next Year

Top 10 Web Frame Desired Next Year

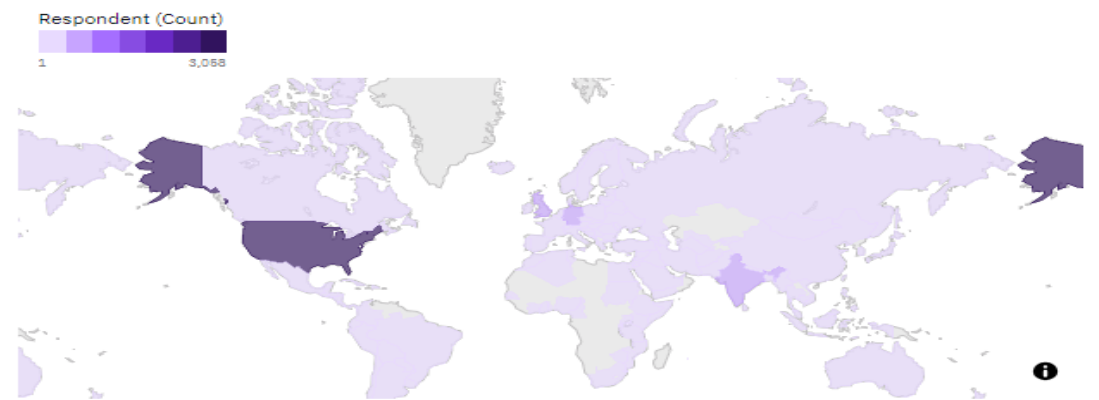# DASHBOARD TAB 3
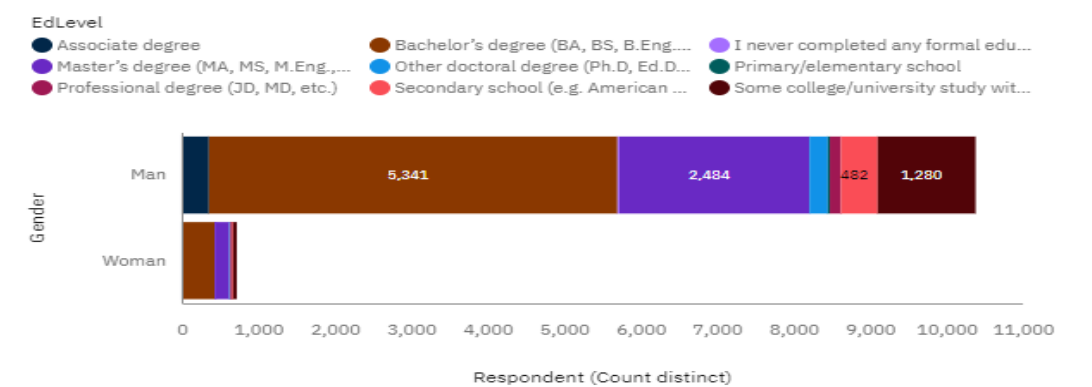
DISCUSSION

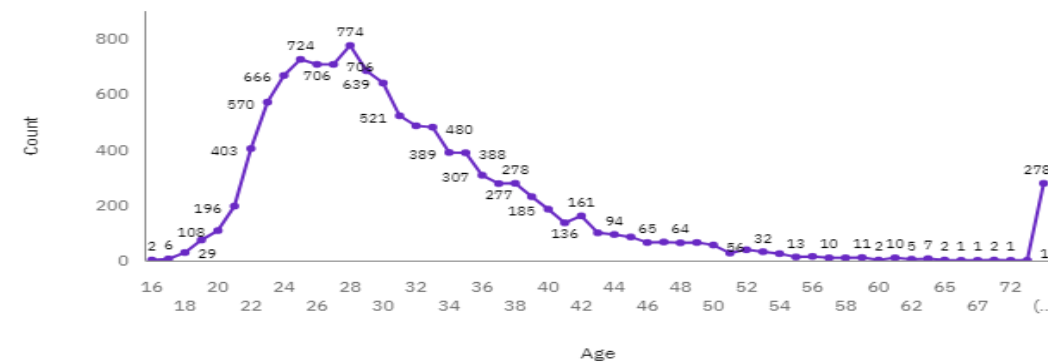- In this section we will discuss overall findings and implications about the charts derived from the two data files

OVERALL FINDINGS & IMPLICATIONS

Findings

- The commonly used languages are JavaScript, HTML/CSS, SQL, Python, and Java. JavaScript leads with 8,687 users, followed by HTML/CSS with 7,830 users

- MySQL, PostgreSQL, and Microsoft SQL Server are the top databases in use, with MySQL being the most popular

- AWS, Linux, and IBM Cloud or Watson are the leading platforms, indicating a strong preference for cloud-based and open-source solutions

- React.js, Angular, and ASP.NET are the top web frameworks, with React.js being the most widely used

Implications

- There is a strong interest in learning Python, which suggests that educational programs and training should focus on this language to meet demand

- The high usage of JavaScript and React.js suggests that front-end development skills are in high demand

- The gender disparity in the respondents indicates a need for initiatives to encourage more women to enter and stay in the technology field

- Understanding the educational background of respondents can help tailor educational content to different levels of expertise

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CONCLUSION

- JavaScript, Python, and cloud platforms like AWS are highly prevalent in both current usage and future interest

- There is a significant demand for learning Python and cloud technologies, suggesting a need for targeted educational programs

- Front-end development skills, particularly in JavaScript and React.js, are in high demand

- Relational database management skills are crucial, with MySQL and PostgreSQL being widely used

- The gender disparity among respondents highlights the need for initiatives to encourage more women to enter and remain in the tech industry

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.
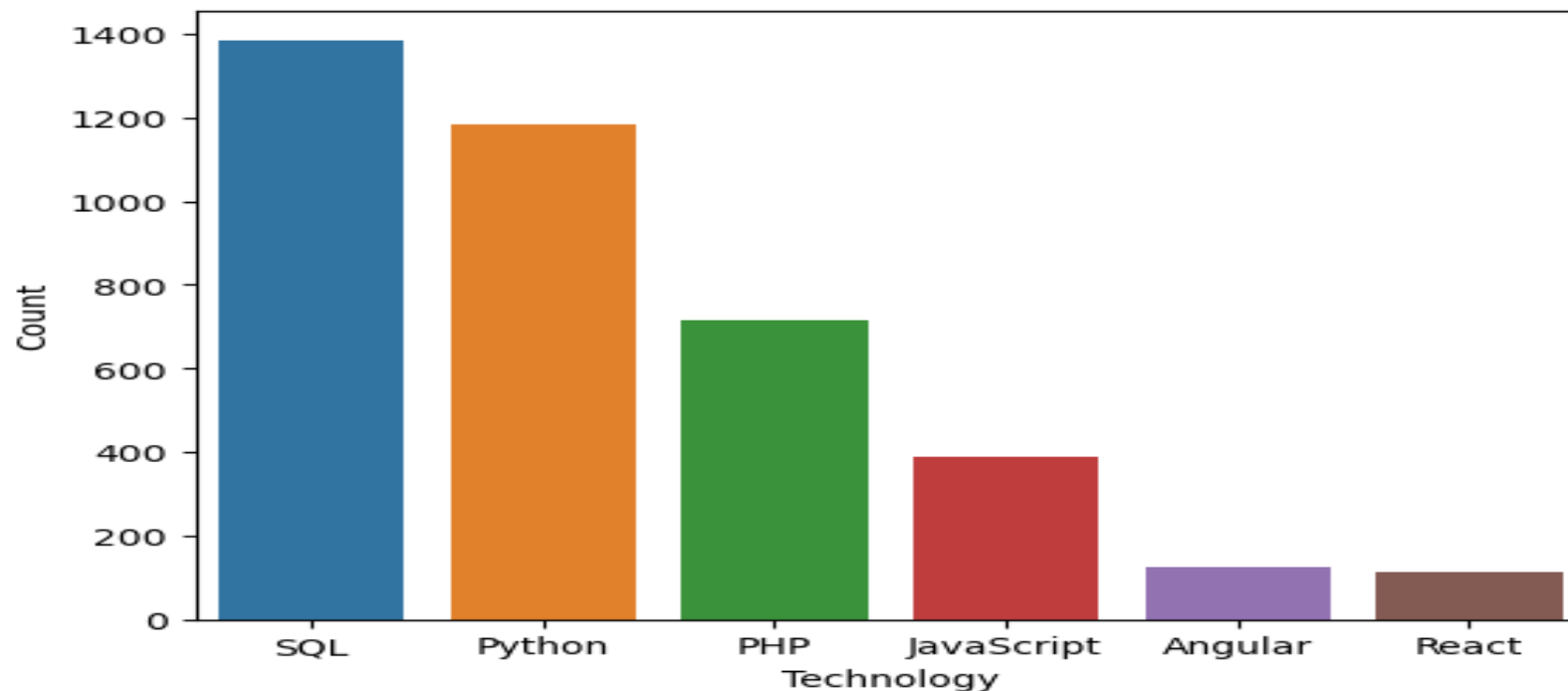
POPULAR LANGUAGES

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.

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