



# Technology Trends and Demographics: A Comprehensive Analysis of Current and Future Patterns

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# OUTLINE

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

# EXECUTIVE SUMMARY

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- With rapid tech advancements, data professionals need to master multiple technologies to improve their analysis capabilities
- Types of Technology:
  - Programming Languages
  - Databases
  - Web Frames and Platforms
- Demographics Survey
- Technological gap in countries and by gender
- Objective: Find and analyze the technology trends of data professionals

# INTRODUCTION

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- This report analyzes technology usage trends among data professionals, covering both current usage and future projections.
- This report is written for target consumers who want to enter the technical field.
- This presentation helps target consumers quickly grasp technology usage trends among data professionals and pinpoint additional skills to enhance job prospects in this field.
- Purpose:
  - Identify skills requirement for future
  - Analyzing the trends in software development

# METHODOLOGY

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- Data Collection Sources:
  - Survey:
  - API and Web Scrapping
- Data Exploration
- Data Wrangling
- Exploratory data analysis
- Data Visualization
- Data Presentation

# RESULTS

	Respondent...	LanguageWorkedWith	LanguageDesireNextYear	DatabaseWorkedWith	DatabaseDesireNextYear
1.	25142	R			
2.	25142	Python			
3.	25142	C	C		
4.	25142	Go	Python		
5.	25142	C++	C++		
6.	25142	HTML/CSS	R		
7.	25142	PHP			
8.	25142	Bash/Shell/PowerShell	Bash/Shell/PowerShell	PostgreSQL	PostgreSQL
9.	25141	C#	F#		Microsoft SQL Server
10.	25141	JavaScript			
11.	25141	TypeScript			
12.	25141	HTML/CSS			Redis
13.	25141	Java			
14.	25141	Python			
15.	25141	SQL			

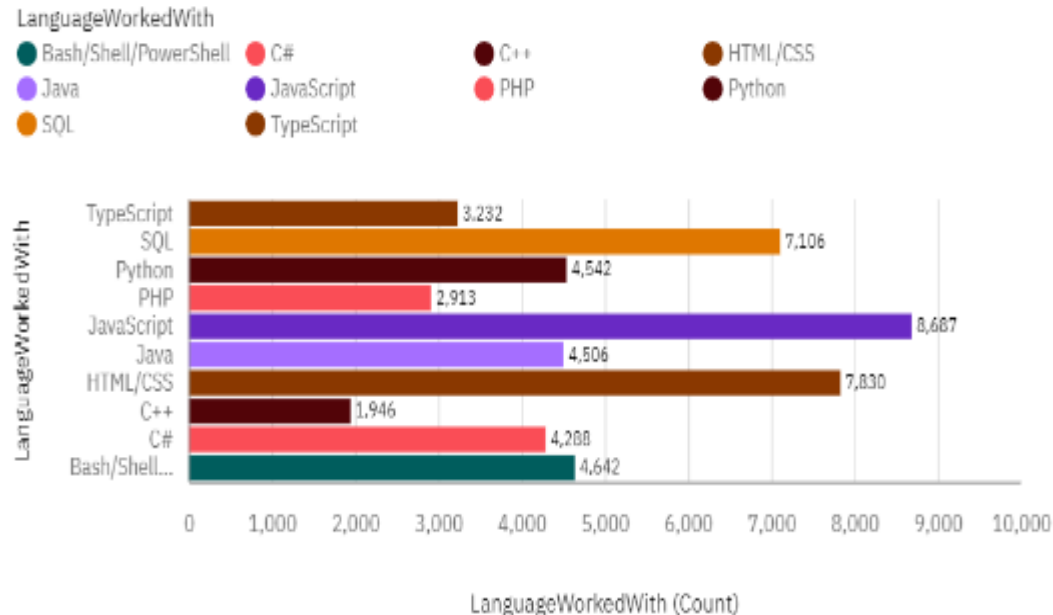
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# PROGRAMMING LANGUAGE TRENDS

## Current Year

Top 10 Languages Worked With

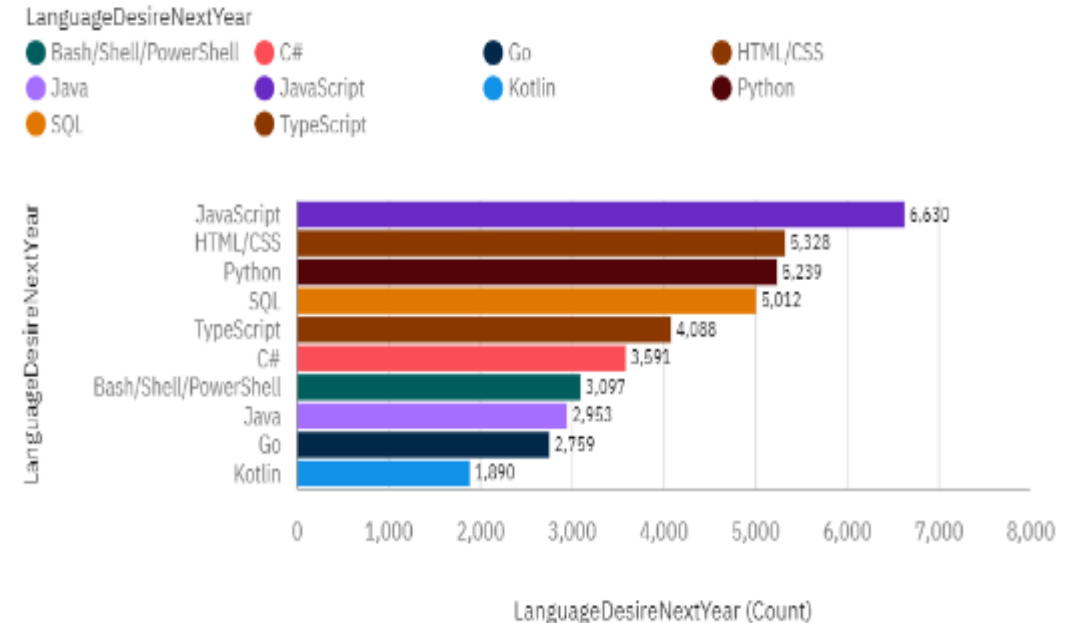
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## Next Year

Top 10 Languages Desire Next Year

4



# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- Java Script is the most popular programming language for current usage and future usage.
- HTML/CSS is the second most popular programming language.
- Python is getting more and more popular in the future end.

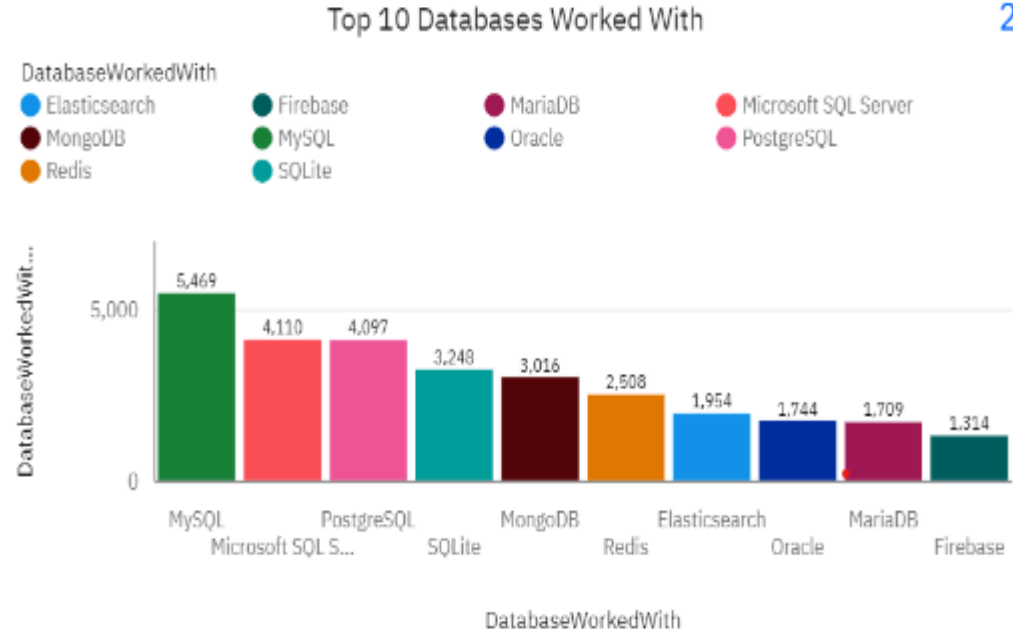
## Implications

- Front-end development is crucial in the data professional field. To enter this field, proficiency in at least one front-end programming language (JavaScript, HTML, CSS) is essential.
- Learning Python will increase one's competitiveness in the future data professional market.

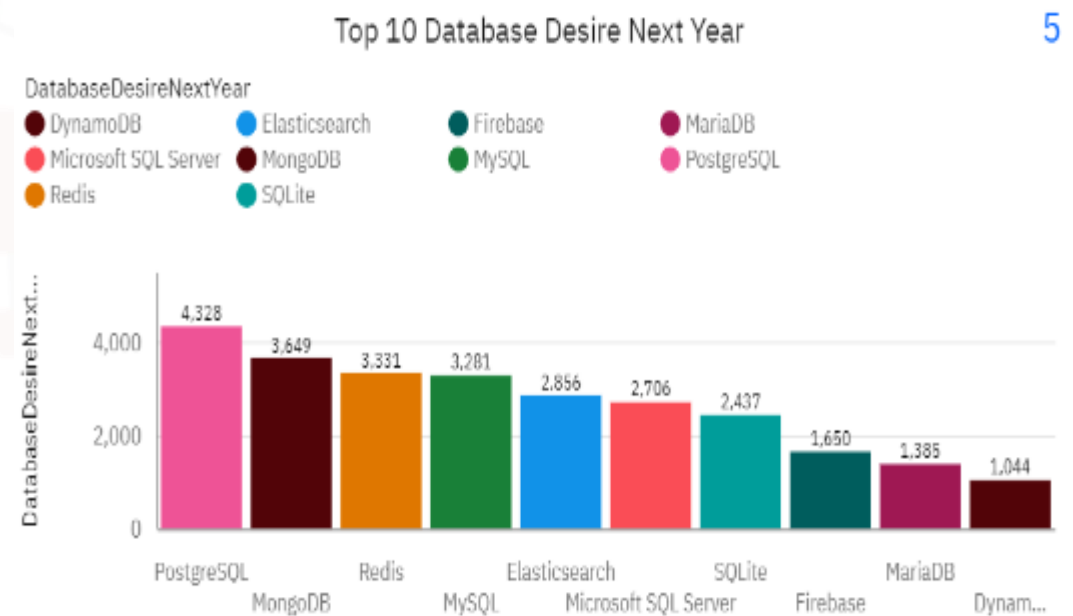


# DATABASE TRENDS

## Current Year



## Next Year



# DATABASE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- **MySQL** is an important database that data professionals currently use most.
- **PostgreSQL** and **MongoDB** are popular databases in current usage and getting more and more popular in the future trend.
- **Redis** is upcoming favorite.

## Implications

- NoSQL database will make an impact for storing Non relational data.
- Pre tuned search to website, app, or ecommerce store
- Open source databases are still preferable in companies
- Redis Supports abstract data types.

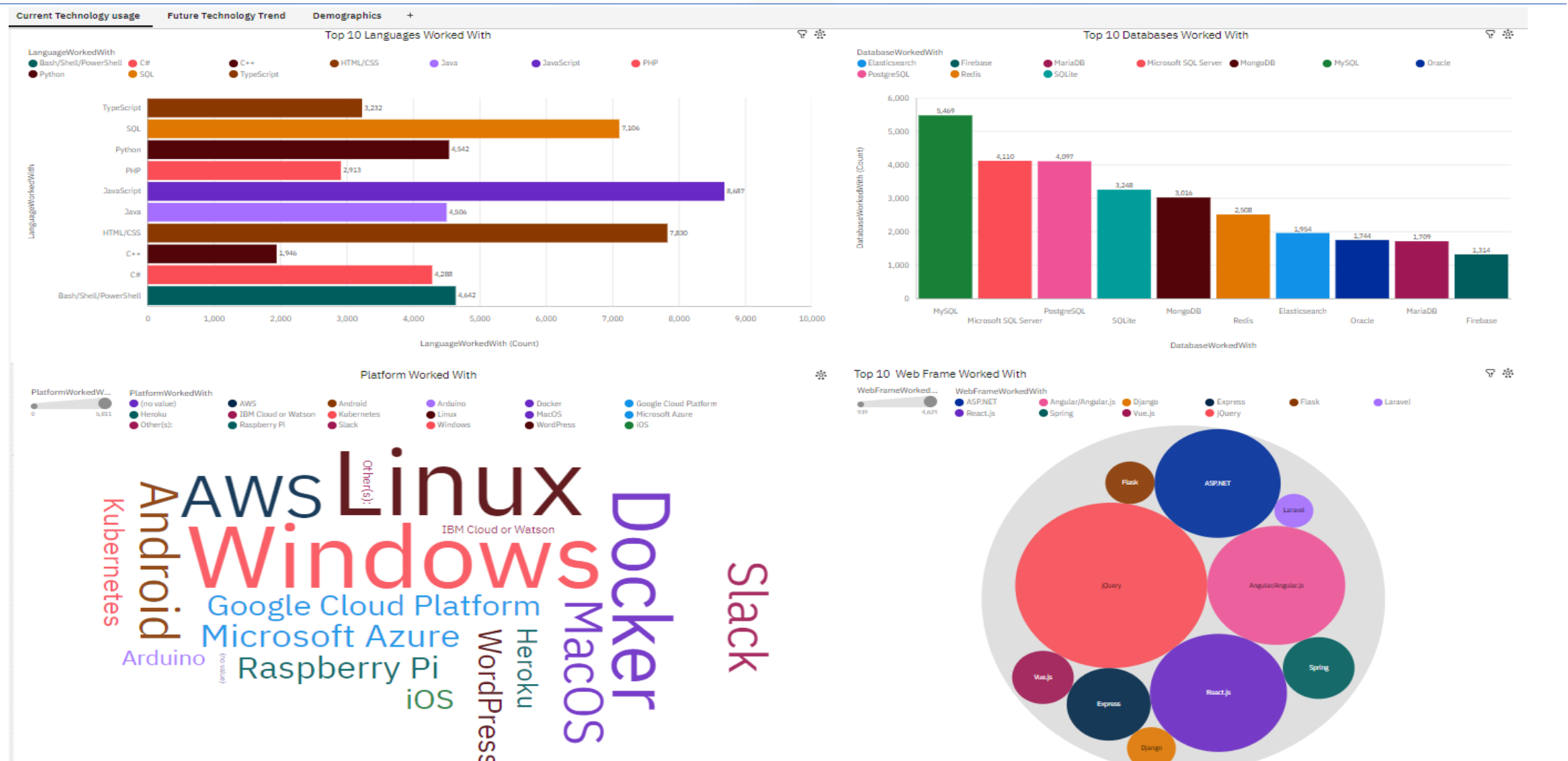
# DASHBOARD

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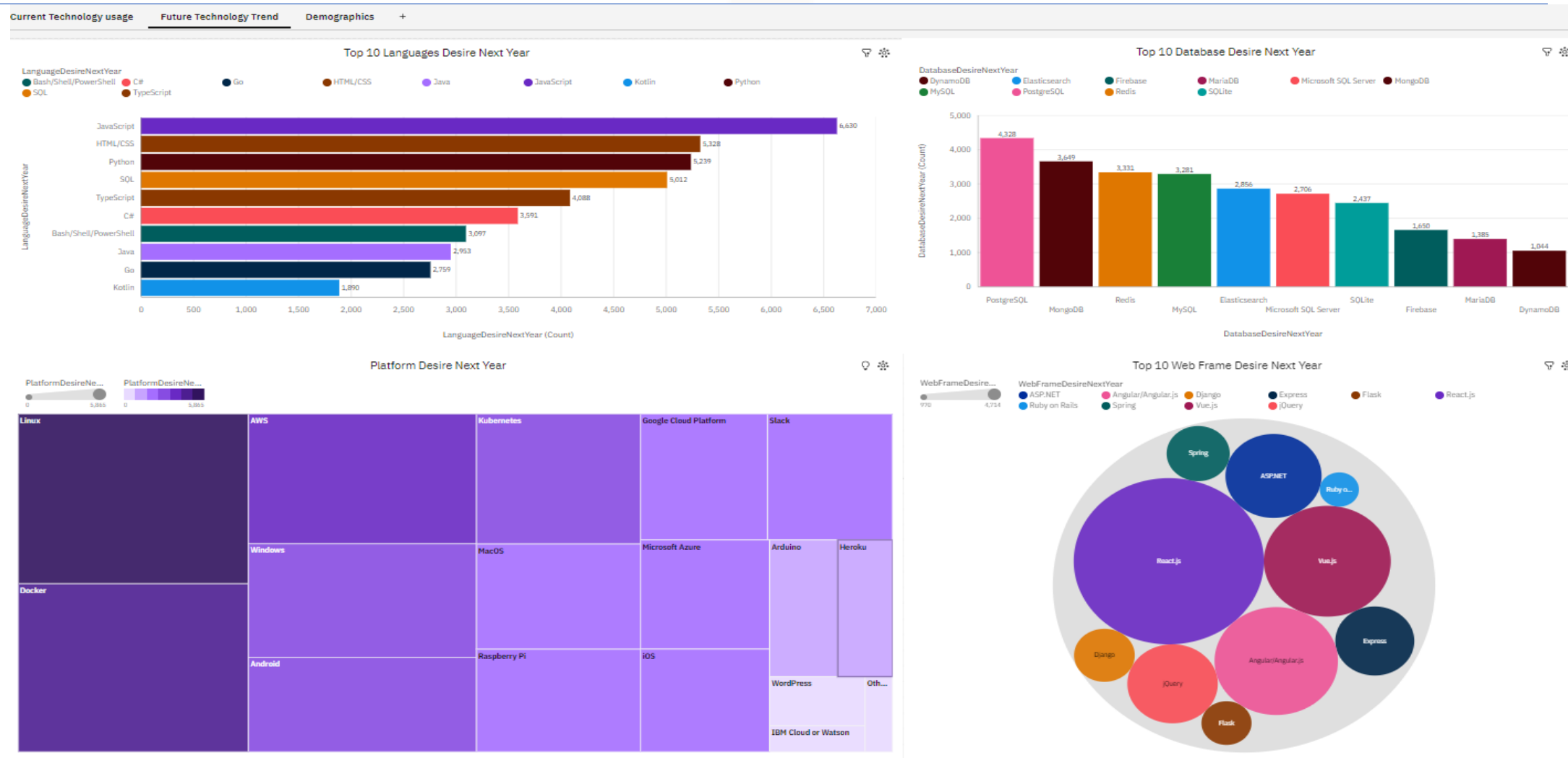


<https://github.com/JaspreetKaur23/IBM-Data-Analyst-Capstone-Project/blob/main/Dashboard-%20Capstone%20Project%20By%20IBM.pdf>

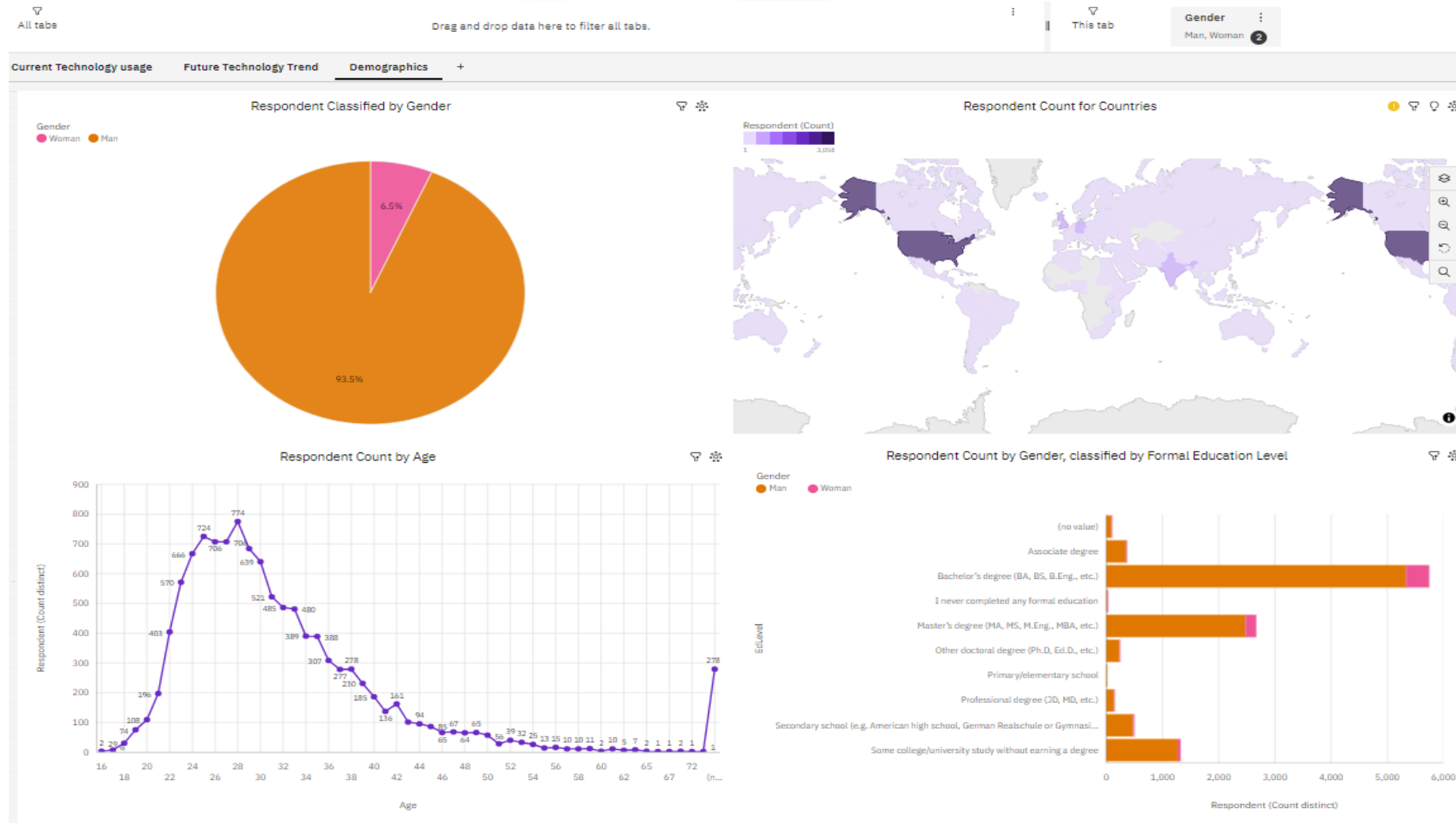
# DASHBOARD TAB 1



# DASHBOARD TAB 2



# DASHBOARD TAB 3



# DISCUSSION

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- Technology trends in Programming language, Databases and Web frames now and in future.
- Females Participation in Technological field
- Bridge divide of technology gaps in developing countries
- Eliminate age and education discrimination in employment

# OVERALL FINDINGS & IMPLICATIONS

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## Findings

- Fast changing technology every year
- Concentration on several countries like India and USA
- Platforms like AWS and Docker are growing
- Gender gap in technology jobs

## Implications

- Companies need to be flexible and adjust to rapid changes
- Need to spread technology out to lagging countries
- Impact of Job's hiring
- Shift to faster app developments and cloud services in future



# CONCLUSION

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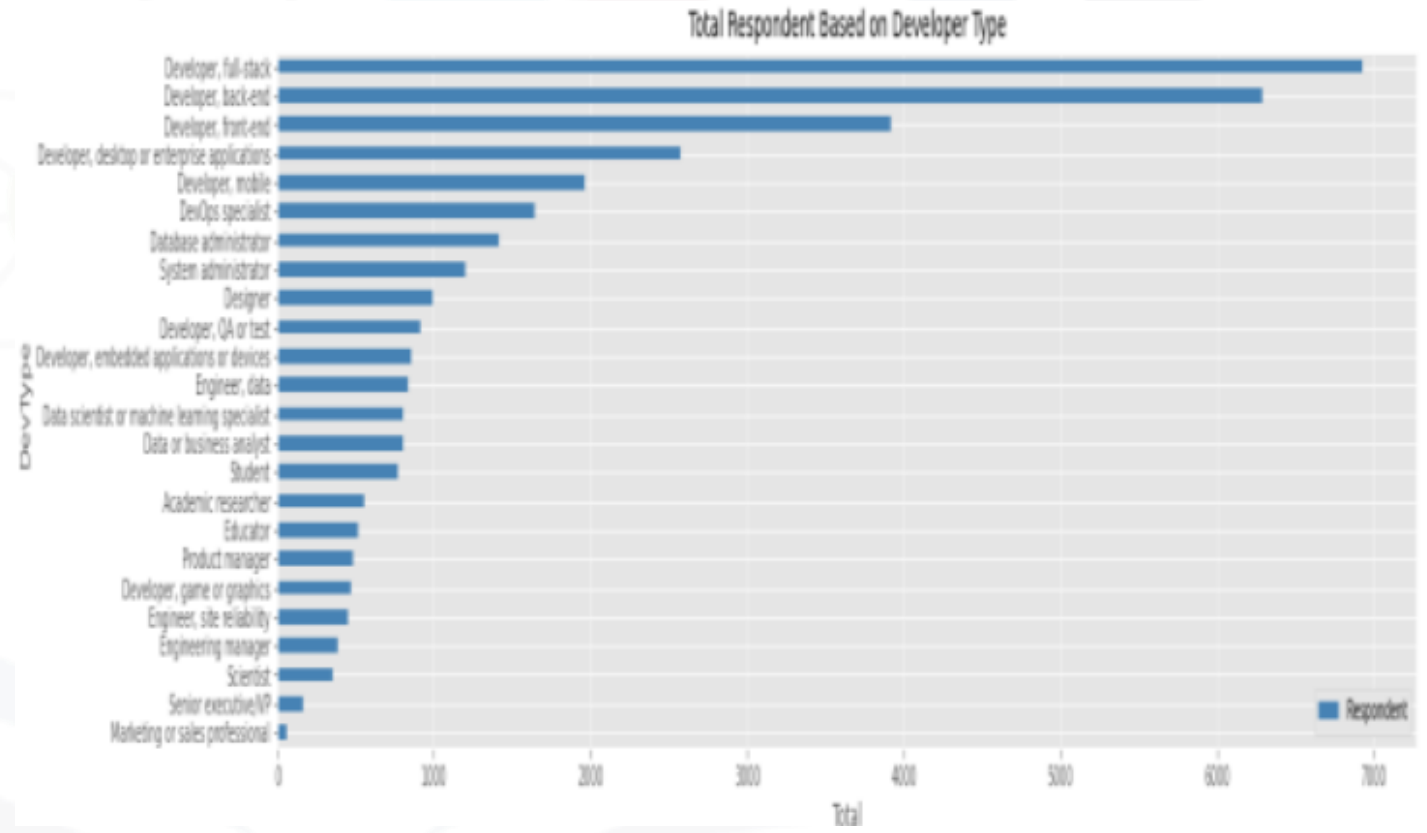
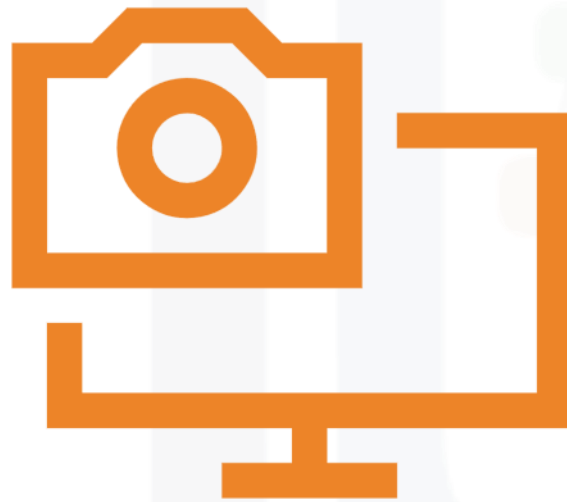


- Data analytics are becoming more and more popular as many fields require data analysis to make decisions.
- In order to become data professionals, we recommend one to manage software skills including programming languages and databases
- Recommendation:

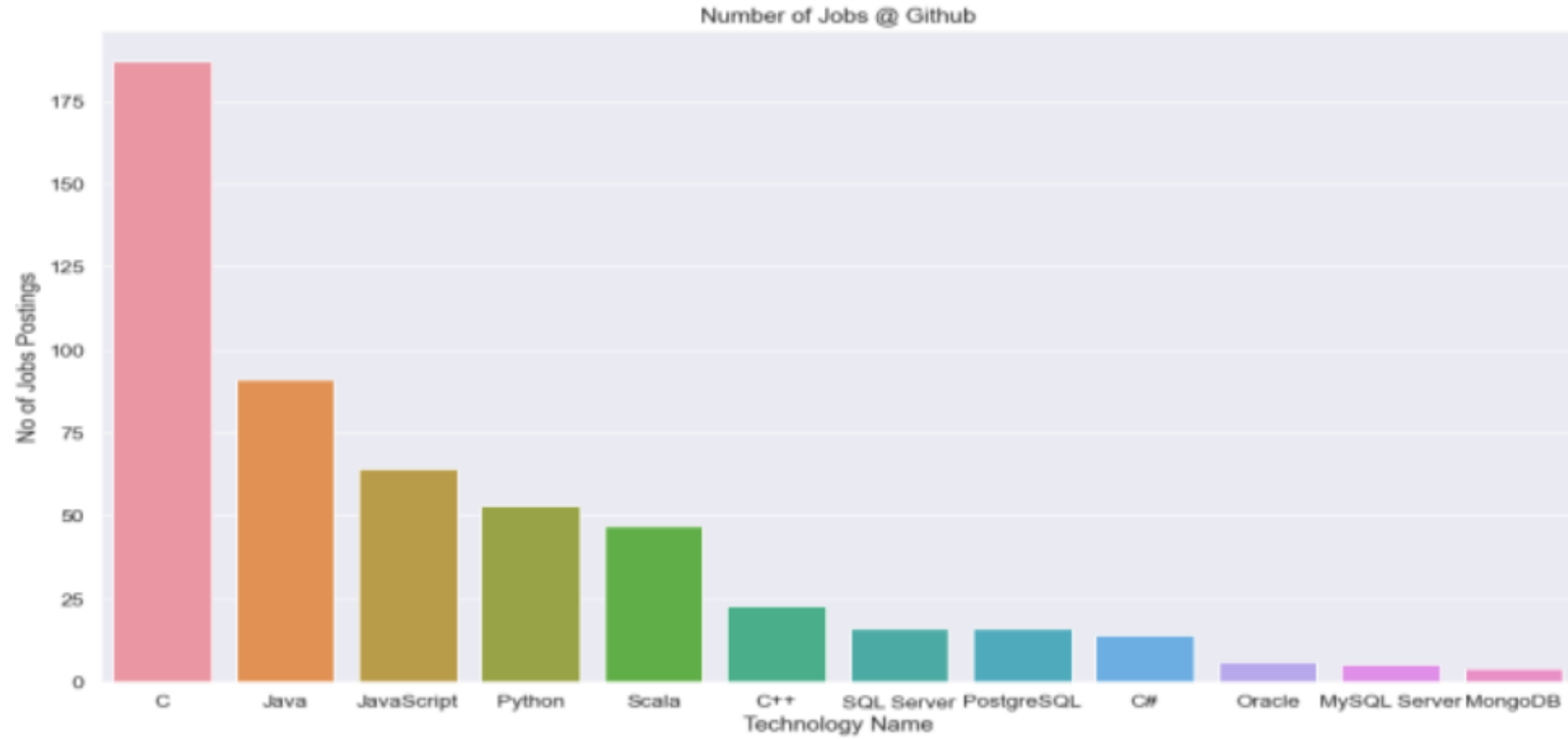
Programming languages: JavaScript, HTML/CSS, Python

Databases: MySQL, PostgreSQL, MongoDB

# APPENDIX



# JOB POSTINGS



# POPULAR LANGUAGES

