TECHNOLOGY TRENDS & ANALYSIS PRESENTATION

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OUTLINE

- Executive Summary

- Introduction

- Methodology

- Results
  - Visualization – Charts
  - Dashboard

- Discussion
  - Findings & Implications

- Conclusion

- Appendix

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EXECUTIVE SUMMARY

- Trends in programming languages and databases

- Demographics survey

- Technological gap in countries

- Gender gap in jobs

INTRODUCTION

About:

Analyzing trends in software development

Purpose:

- Identify future skill requirements
- Determine the top programming languages in demand
- Identify the most sought-after database skills
- Highlight popular IDEs

Audience:

Human Resources

METHODOLOGY

- **Data Collection Sources**
  - Stack Overflow Developer 2019 Survey
  - GitHub Job Postings
  - Programming Languages Annual Salary
- **Data Exploration**
- **Data Cleaning**
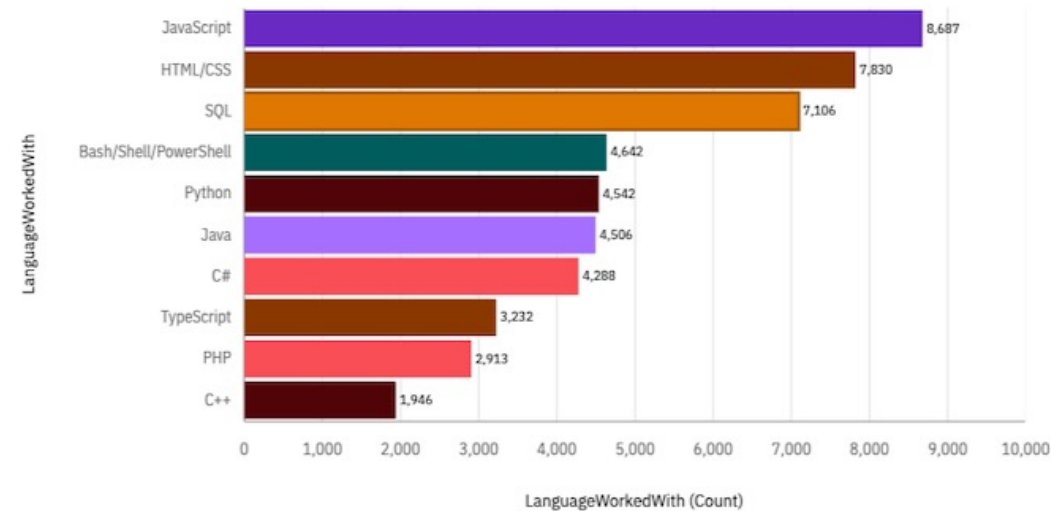- **Data Visualization**
- **Presentation**

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

Top 10 Language Worked With

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
C++ — 1,946

LanguageWorkedWith (Count)

Top 10 Language Desire Next Year

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

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

LanguageDesireNextYear (Count)

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PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS
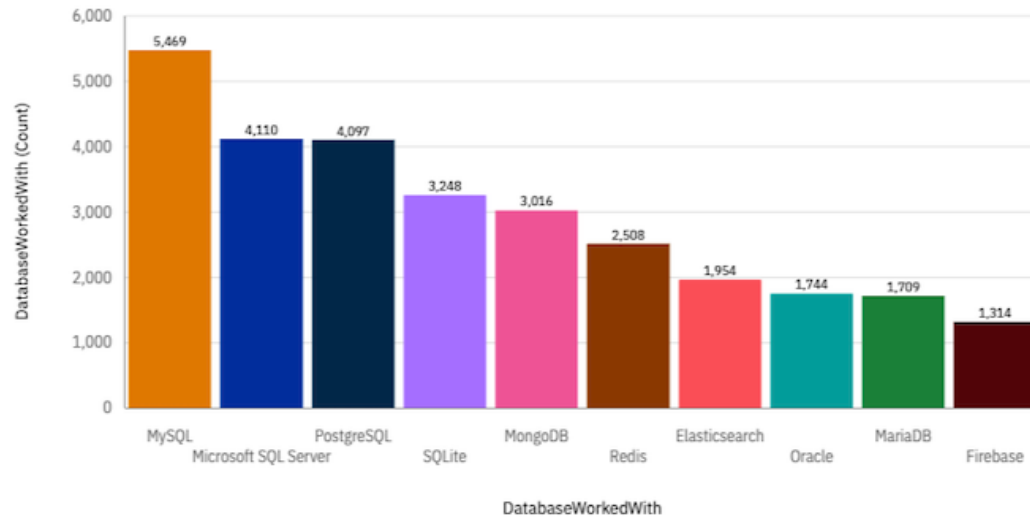
Findings

- JavaScript, HTML/CSS, and SQL are the top three this year.

- Python and TypeScript are gaining popularity for next year.

- PowerShell is expected to decline in popularity next year.
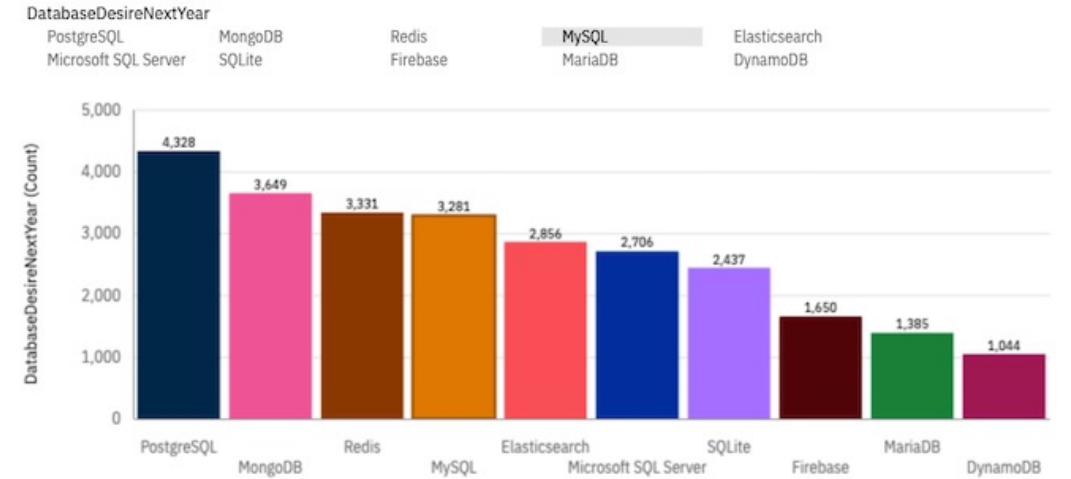
Implications

- Web development remains in high demand.

- Big Data technology in companies still relies heavily on SQL.

- With the increasing demand for AI and ML, Python is the best choice.

DATABASE TRENDS

Top 10 Database Worked With

Top 10 Database Desire Next Year

DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL most popular

- Behind is Microsoft SQL

- MongoDB and Redis are upcoming favorites

- New kid on the block: Elasticsearch

Implications

- Open source databases are still preferable in companies

- NoSQL databases will make an impact for storing non relational data

- Redis supports abstract data types

- Pre tuned search to website, app, or ecommerce store

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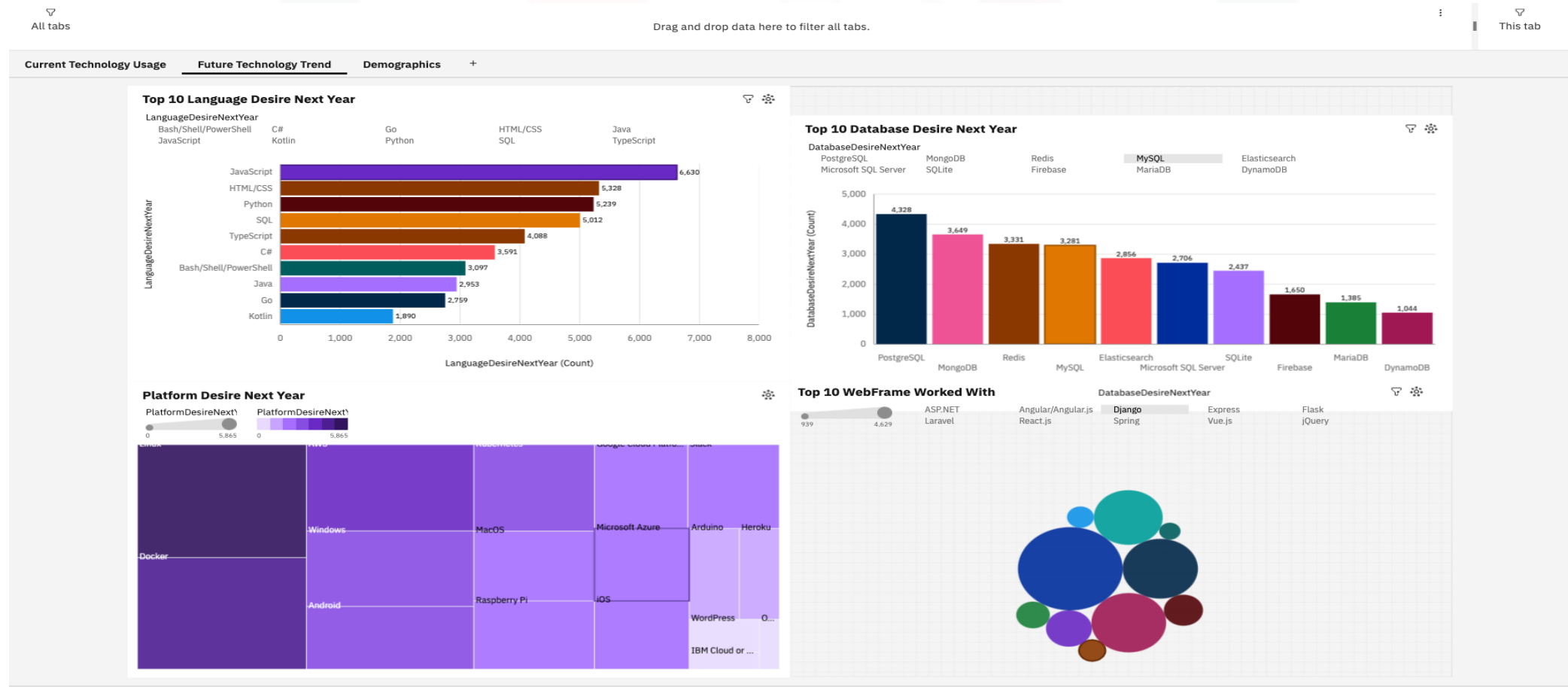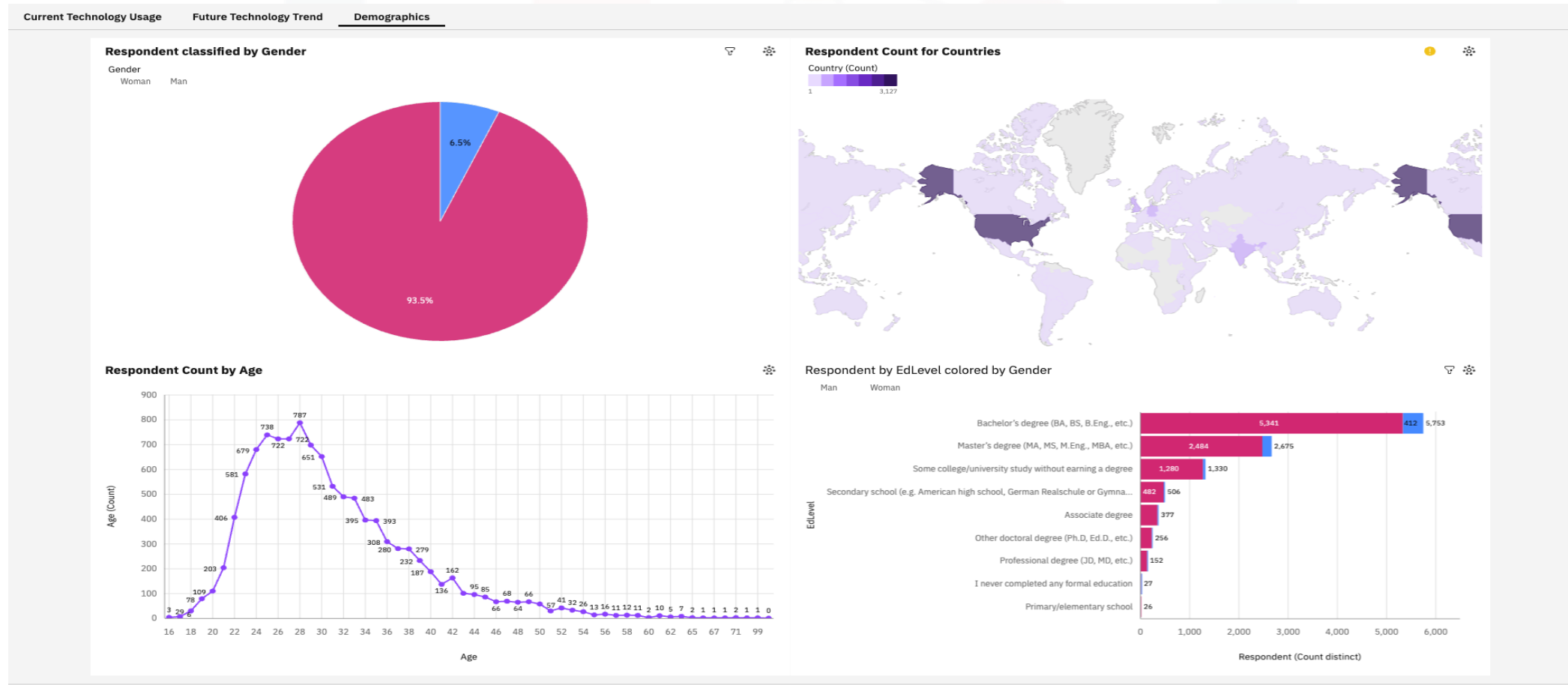
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DASHBOARD

https://github.com/Abdifatahz/stackoverflow-dashboard

DASHBOARD TAB 1
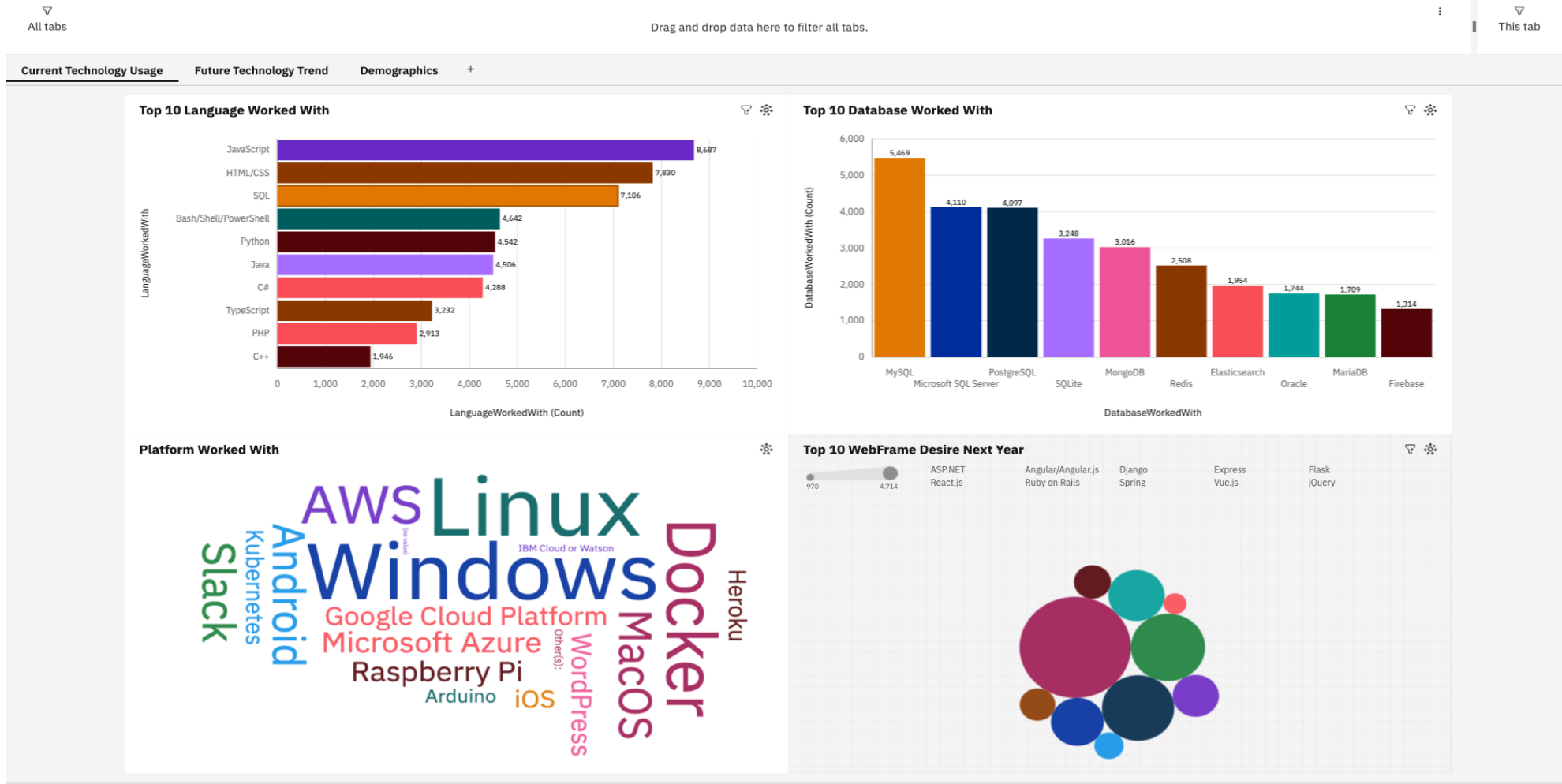
DASHBOARD TAB 2

DASHBOARD TAB 3

DISCUSSION

- **Technology Trends now and future**
- **Training and Reskilling workers**
- **Females participation in Technology field**
- **Bridge divide of technology gaps in developing countries**
- **Eliminate age and education discrimination in employment**

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OVERALL FINDINGS & IMPLICATIONS

Findings

- Rapidly evolving technology each year
- Significant concentration in countries like the USA and India
- Gender disparity in technology jobs
- Increasing popularity of platforms like Docker and AWS

Implications

- Companies must remain flexible and adapt to rapid technological changes.
- There is a need to expand technology to countries that are currently lagging.
- The impact on job hiring practices.
- A future shift towards faster application deployments and increased use of cloud services.
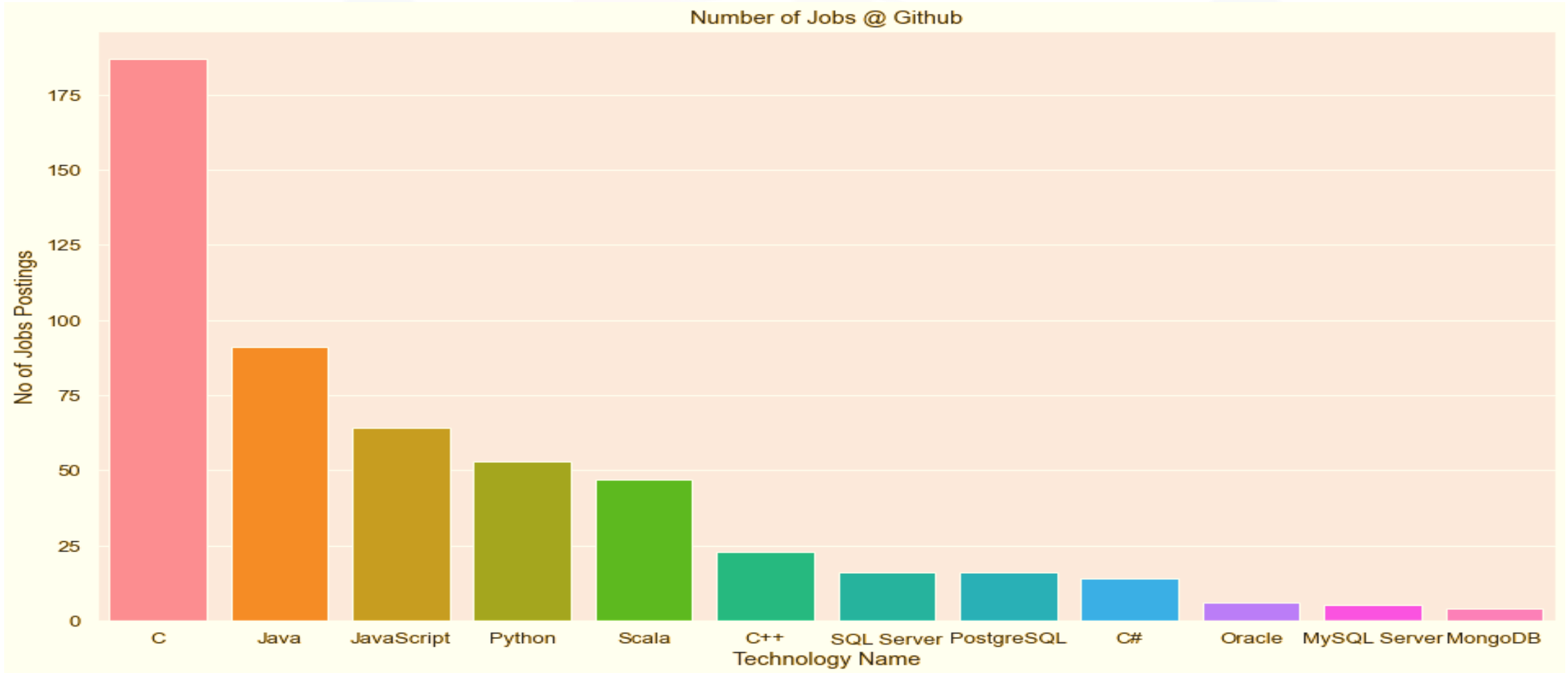
CONCLUSION

- Technology Trends for the Current and Upcoming Year

- Overview of Programming Languages, Databases, and Platforms

- Demographic Overview

- Recommended Actions

- Future Steps: Incorporating Machine Learning to Predict Trends and Salaries

APPENDIX

- Here are additional charts, or tables that I have created during the analysis phase.

JOB POSTINGS

POPULAR LANGUAGES