



Current and Future Technology Trends: Insights from Industry Survey

NAME: Timileyin Awolola

DATE: August 2024

OUTLINE



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

EXECUTIVE SUMMARY



- This report provides an analysis of the current technology usage and future trends among respondents, focusing on programming languages, databases, and platforms.
- The data reveals the most commonly used technologies and highlights the trends that indicate the future direction of the tech industry.
- Additionally, demographic insights are provided, including gender distribution and educational background, which offer a deeper understanding of the respondent base.

INTRODUCTION



- The purpose of this report is to analyze the current state of technology usage and future technology aspirations among respondents.
- The data was collected from a diverse group of individuals with varying levels of experience and expertise in the tech industry.
- By examining this data, we aim to identify trends and provide insights that could guide future developments and educational initiatives in the field of technology.

METHODOLOGY



- The data was collected through a survey distributed to a broad range of respondents across various demographics.
- The survey included questions on the programming languages, databases, and platforms that respondents have worked with in the past, as well as those they aspire to learn or work with in the future.
- The analysis includes visualizations such as charts and word clouds to represent the data effectively.

RESULTS

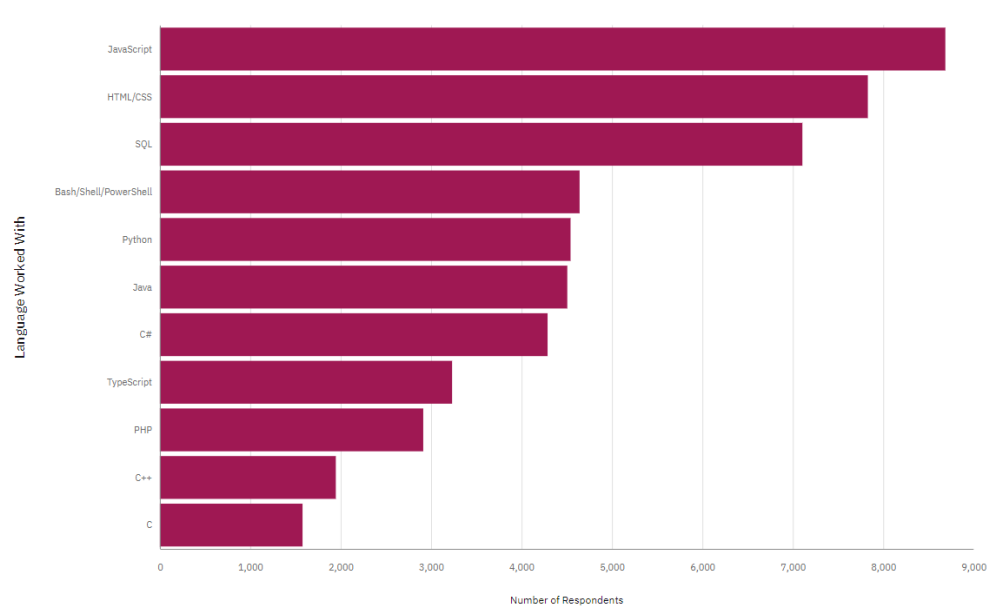


PROGRAMMING LANGUAGE TRENDS

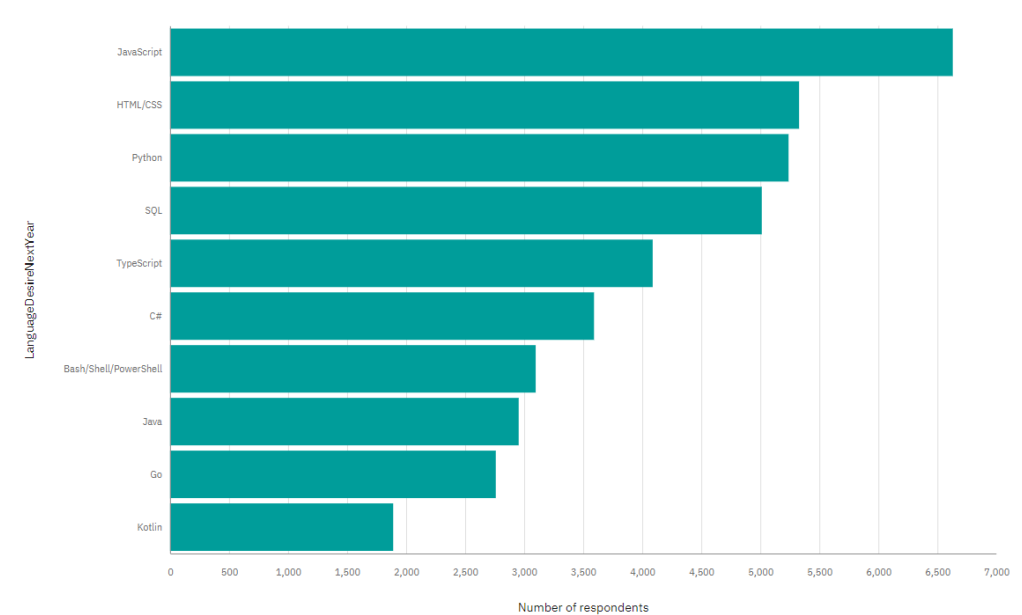
Current Year

Next Year

Top 10 Languages Respondents have worked with



Top 10 Desired Language to Learn Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings:

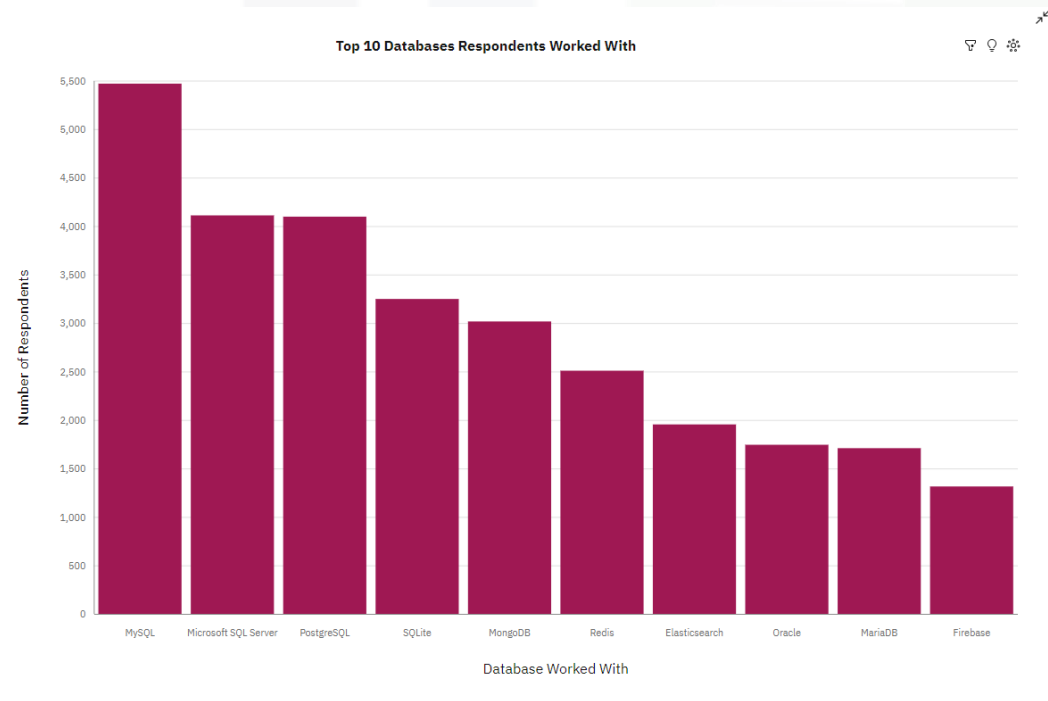
- **JavaScript** continues to be the most commonly used programming language, highlighting its dominance in web development.
- **Python** is highly desired by respondents for future learning, reflecting its growing importance in data science, machine learning, and automation.
- **SQL** remains a critical language for database management, showing consistent usage across various tech environments.

Implications:

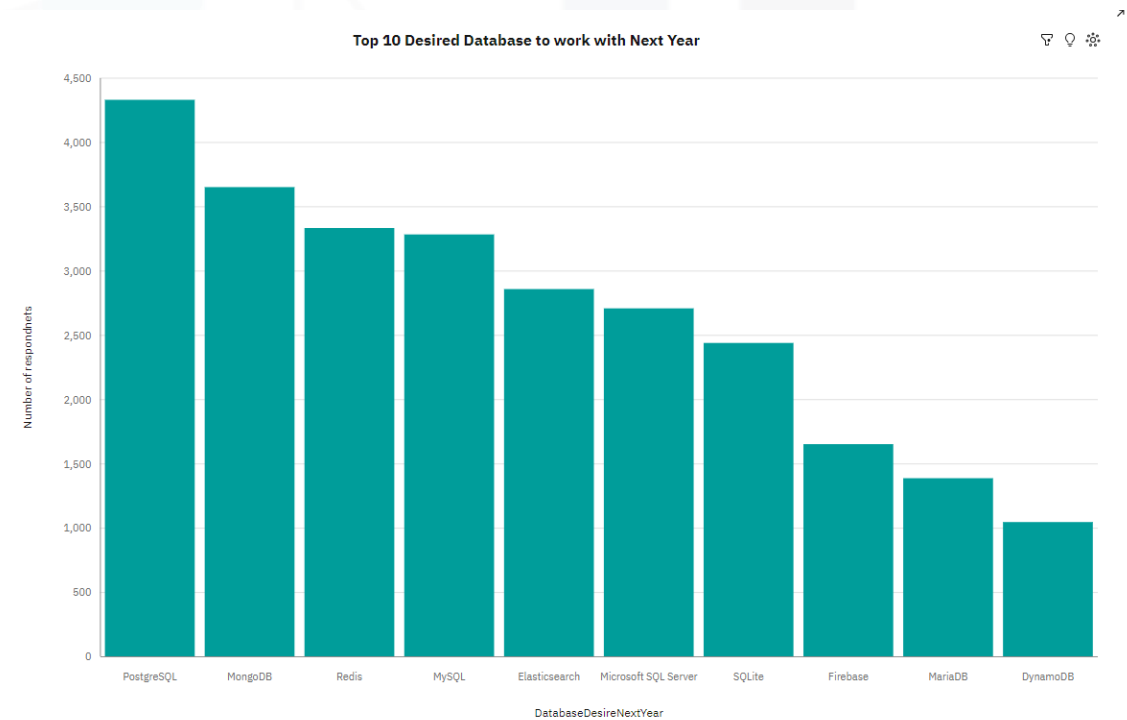
- The ongoing popularity of JavaScript suggests a sustained demand for web development skills, particularly in front-end and full-stack roles.
- The increasing interest in Python indicates a shift towards data-driven roles and the necessity for developers to have strong data manipulation and analysis skills.
- The consistent use of SQL underscores the continued relevance of relational databases, meaning proficiency in SQL remains a key requirement for many tech positions.

DATABASE TRENDS

Current Year



Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL and PostgreSQL are the most used databases, with MySQL leading slightly, indicating a strong preference for relational databases.
- MongoDB emerges as a desired database for future work, showcasing the rising interest in NoSQL databases for handling unstructured data.
- Microsoft SQL Server also remains a significant player, reflecting its integration with enterprise solutions.

Implications

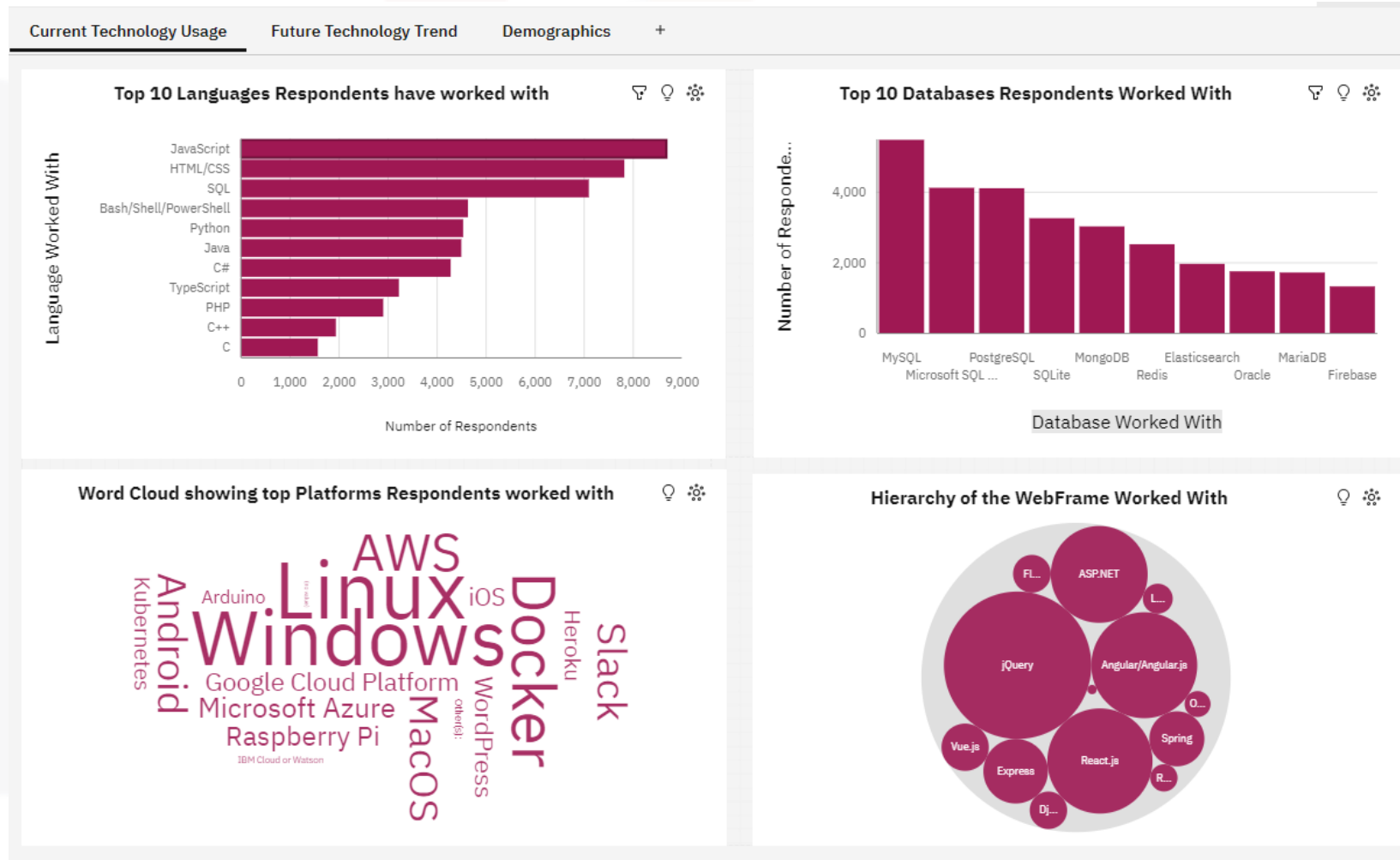
- The strong usage of MySQL and PostgreSQL suggests that relational databases will continue to be a cornerstone of backend development, especially in traditional application environments.
- The growing interest in MongoDB implies that developers and organizations are increasingly looking towards NoSQL solutions for more flexible, scalable data storage, particularly in cloud and big data applications.
- The continued relevance of Microsoft SQL Server points to the enduring importance of enterprise-grade database management systems, particularly in organizations with existing Microsoft infrastructure.

DASHBOARD

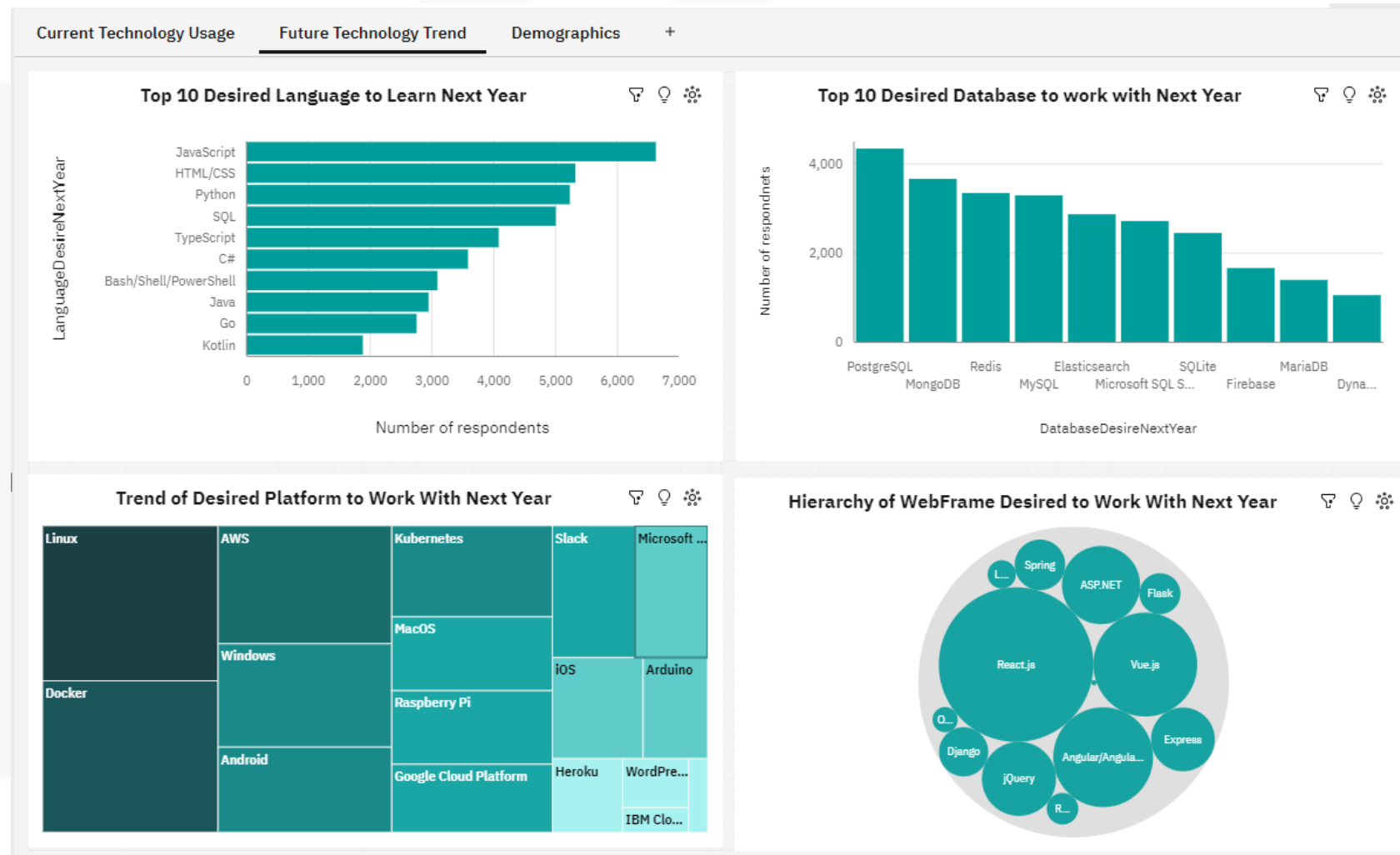


[<https://github.com/Timilayo/Data-visualization-with-IBM-Cognos/blob/main/IBM%20Final%20Project%20Dashboard.pdf>](https://github.com/Timilayo/Data-visualization-with-IBM-Cognos/blob/main/IBM%20Final%20Project%20Dashboard.pdf)

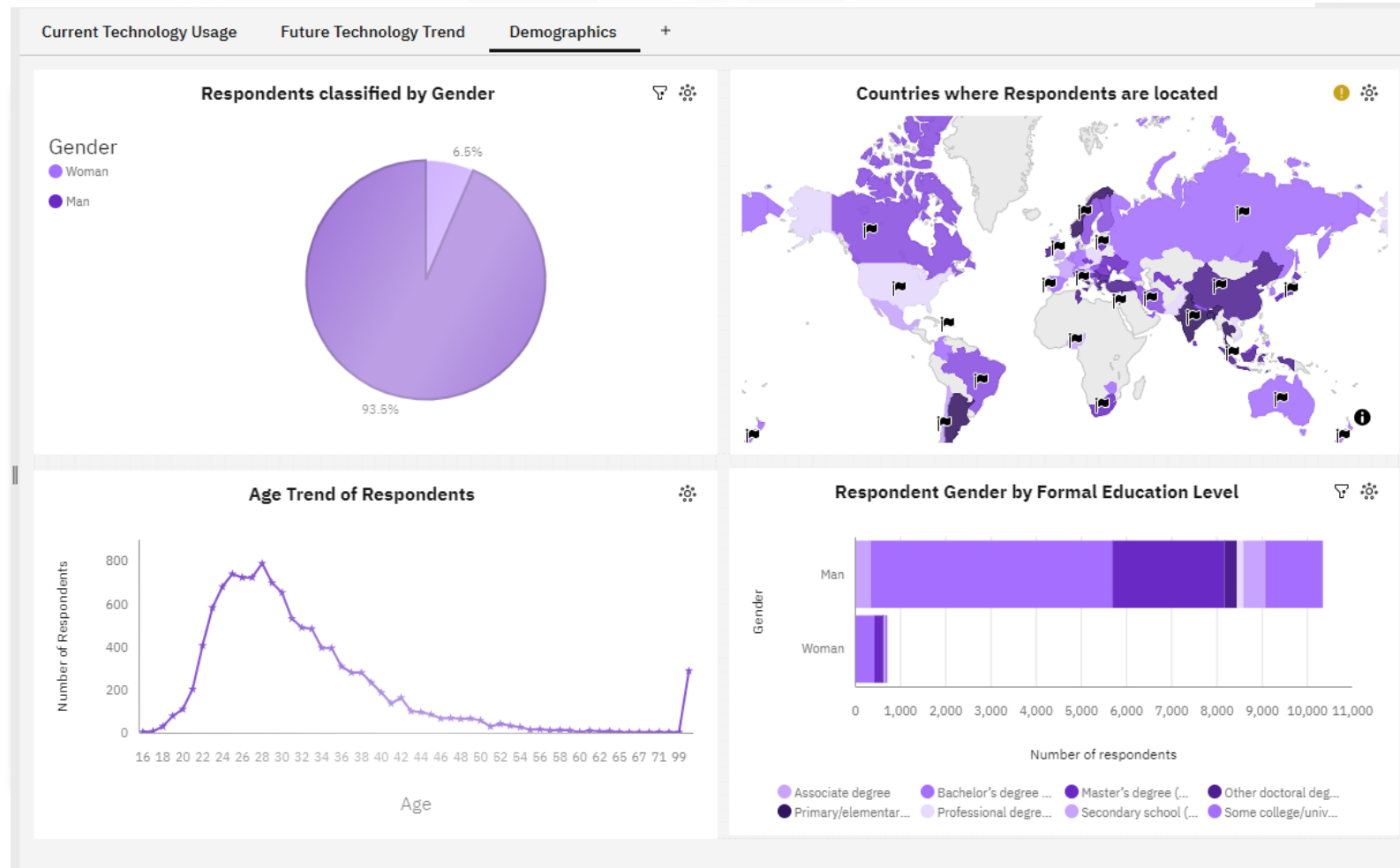
DASHBOARD TAB 1



DASHBOARD TAB 2



DASHBOARD TAB 3



DISCUSSION



- **Current Technology Usage:** The dominance of JavaScript and SQL highlights the ongoing importance of web development and data management in the industry. The prevalence of MySQL and PostgreSQL further underscores the reliance on relational databases.
- **Future Technology Trends:** The interest in learning Python and MongoDB suggests a shift towards data science and NoSQL databases, reflecting the industry's evolving needs. The preference for platforms like Linux and Docker indicates a move towards more flexible, scalable, and cloud-based environments.
- **Gender and Educational Insights:** The gender distribution shows a significant male dominance in the tech industry, which could impact the types of technologies that are prioritized. The correlation between educational background and technology preferences highlights the importance of targeted educational programs to meet industry demands.

OVERALL FINDINGS & IMPLICATIONS

- **Programming Trends** highlight the sustained dominance of JavaScript in web development, reflecting its critical role in both front-end and full-stack applications. The growing interest in Python signals a significant shift towards data-driven roles, emphasizing the need for skills in data science, machine learning, and automation. The continued importance of SQL underscores the foundational role of relational databases, making it an essential skill for backend development.
- In terms of **Database Trends**, MySQL and PostgreSQL remain the databases of choice for many professionals, reaffirming the importance of relational databases in maintaining structured data environments. However, the rising interest in MongoDB illustrates an increasing demand for NoSQL databases, driven by the need for more flexible and scalable solutions in handling unstructured data.
- The analysis of programming and database trends reveals critical insights into the current state and future direction of technology in the industry.
- This trend aligns with the broader industry movement towards cloud computing and big data applications.
- Overall, these trends suggest that while traditional technologies remain relevant, there is a growing emphasis on adapting to new tools and methodologies that can handle the complexities of modern data environments.
- This shift presents both opportunities and challenges for professionals and organizations, who must balance the mastery of established technologies with the adoption of emerging ones to stay competitive.

CONCLUSION



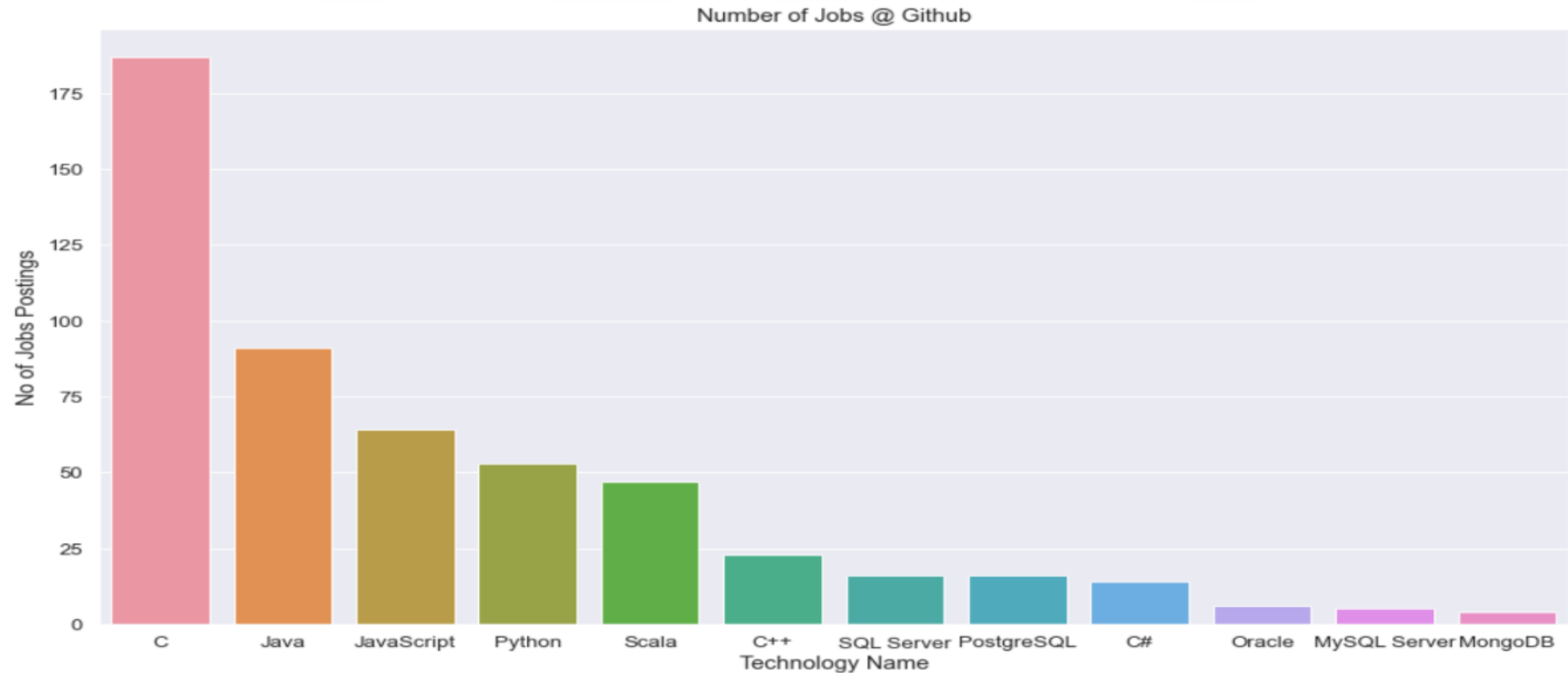
- The data reveals a strong foundation in traditional web development and database technologies, with a clear trend towards newer, more flexible technologies such as Python, MongoDB, Linux, and Docker.
- These trends suggest that the tech industry is evolving towards a more data-centric and cloud-based approach, with a growing emphasis on open-source tools.
- The demographic insights further highlight the need for continued efforts in diversifying the tech workforce and tailoring educational initiatives to meet future demands.

APPENDIX



- Include any relevant additional charts, or tables that you may have created during the analysis phase.

JOB POSTINGS



POPULAR LANGUAGES

