



# Technology trends and Analysis Presentation

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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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- Trends in programming Languages and database
- Demographics Survey
- Technology gap in countries
- Gender Gap in jobs

# INTRODUCTION

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- Analyzing the trends in software development

## Purpose

- Identify skill requirements for future
- What are the top programming languages in demand?
- What are the popular IDEs

Audience: Human Resource and IT Head

# METHODOLOGY

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## 1-Data collection Sources

A- Stack Overflow Developer 2019 Survey

B- Github Job postings

C-Programming languages Annual Salary

## 2-Data Exploration

## 3-Data cleaning

## 4-Data visualization

## 5-Presentation

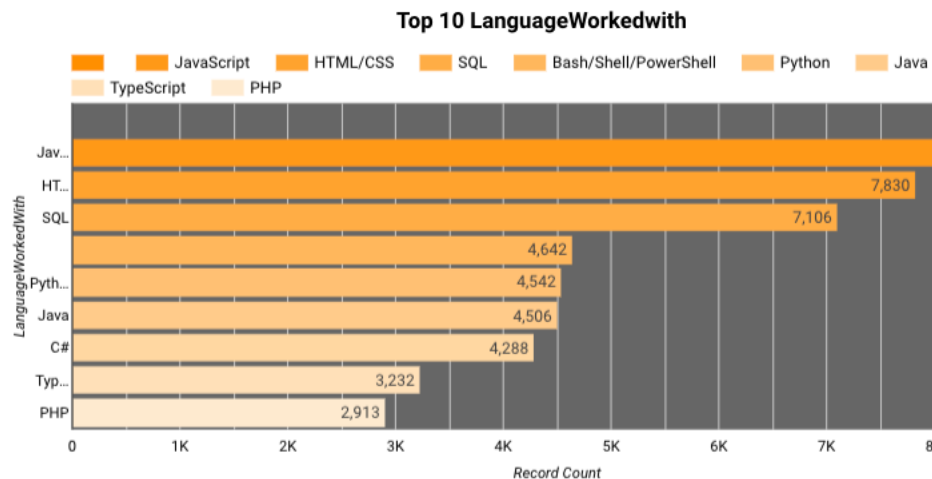
# RESULTS

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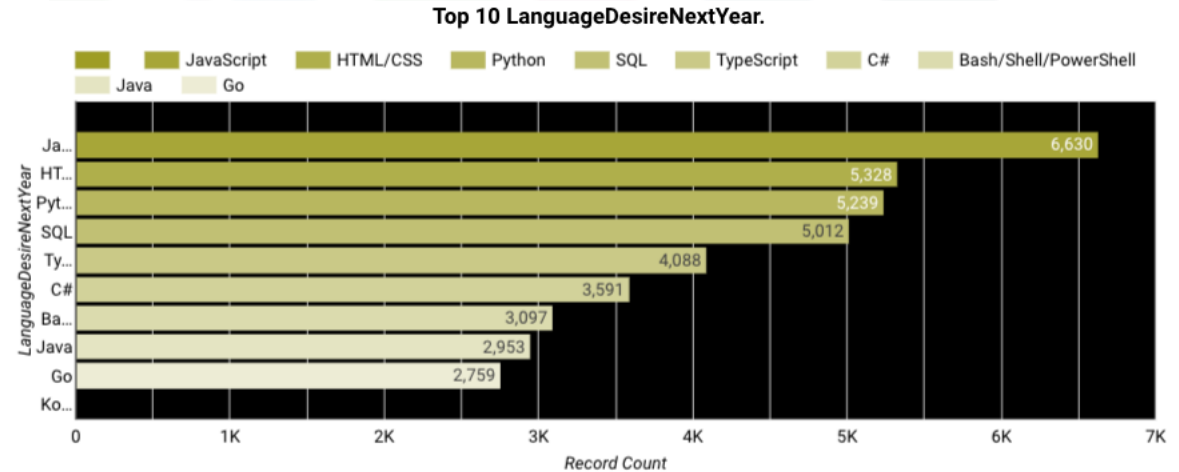


# PROGRAMMING LANGUAGE TRENDS

- Current Year



- Next Year



# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- JavaScript is the most commonly used programming language currently.
- HTML and SQL are also widely used.
- Python, Java, C# are very popular

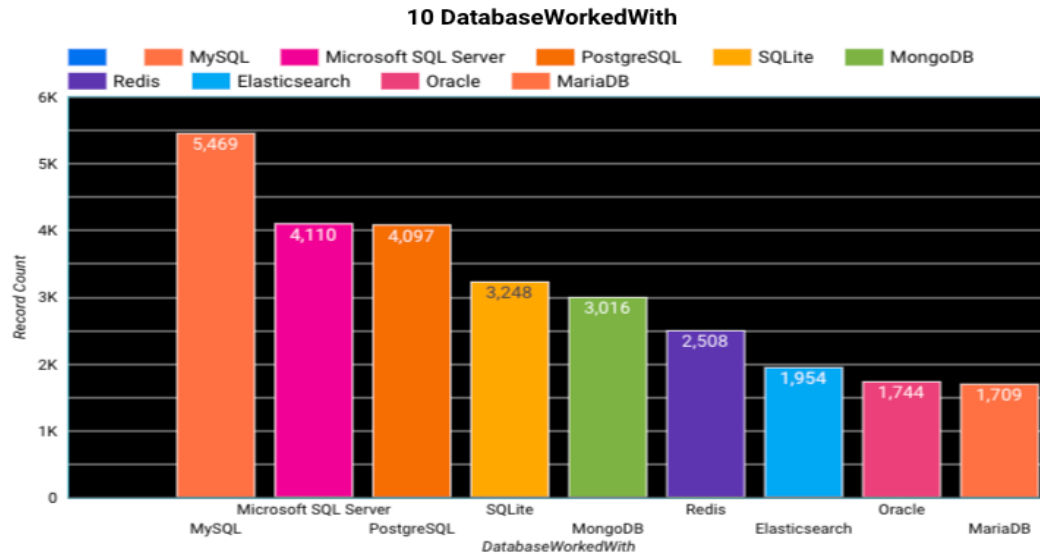
## Implications

- Organizations should focus on supporting JavaScript, as it's the most used language
- Investing in Python and SQL skills can be beneficial due to their widespread usage.
- Diverse languages indicate that using multiple technologies can be beneficial.

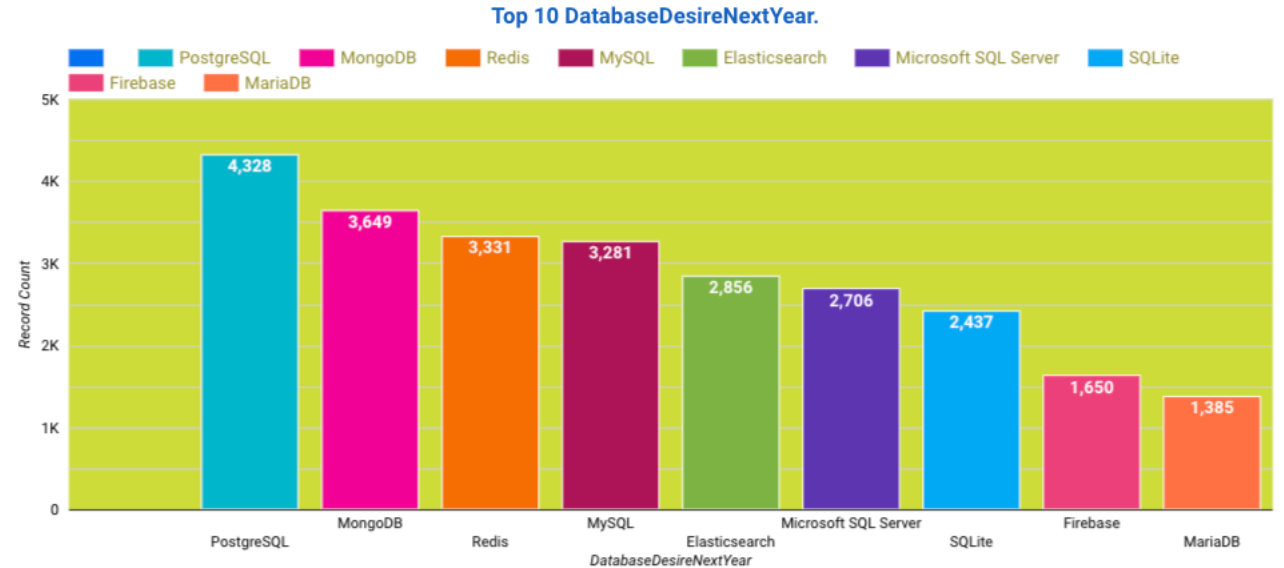


# DATABASE TRENDS

Current Year



Next Year



# DATABASE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- **SQL** is the the most relational database use to manage and manipulate relational databases
- **Microsoft SQL** is also a secondary database, often used for analyzing unstructured and complex data
- **PostgreSQL, SQLite, and MongoDB** are very popular tools used to handle and analyze different and complex data structure.

## Implications

**MySQL** is one of the most popular relational database management systems, widely used in web applications and supported by a large community

**Microsoft SQL** Server offers a comprehensive set of tools for database management, integration, and business intelligence, making it suitable for enterprise environments.

**PostgreSQL, SQLite, and MongoDB** allows organizations to address a wide range of data management needs, from handling complex queries and structured data to managing lightweight, embedded databases, and processing large volumes of unstructured data.

# DASHBOARD

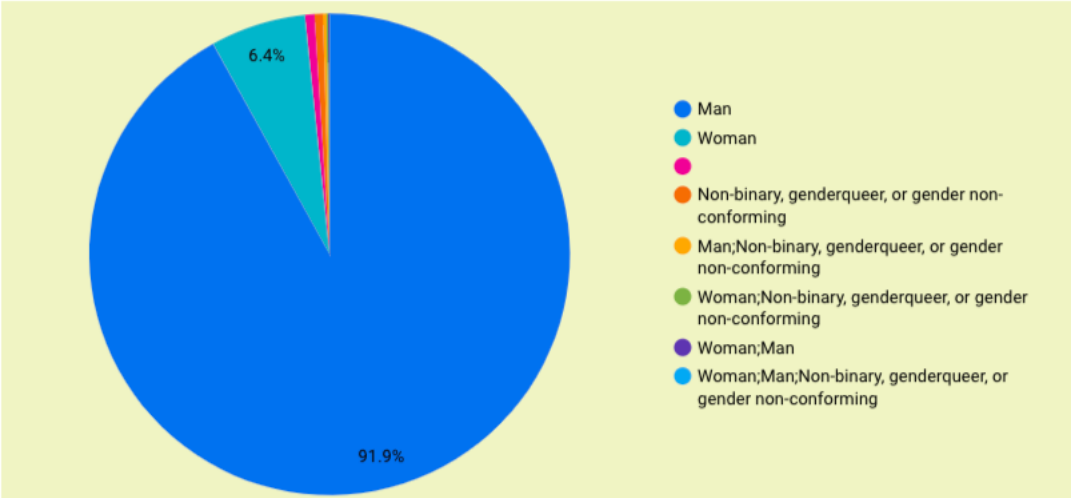
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# DASHBOARD TAB 3

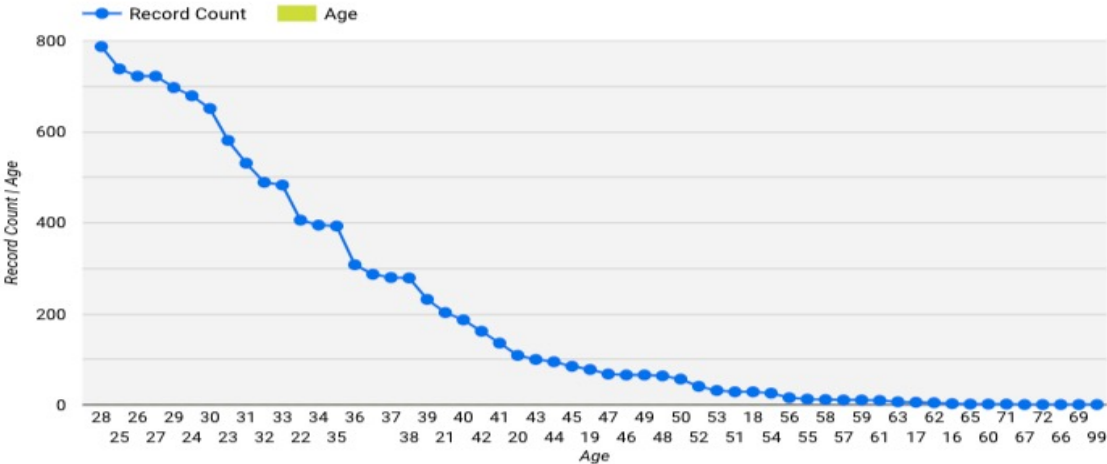
Respondent classified by Gender.



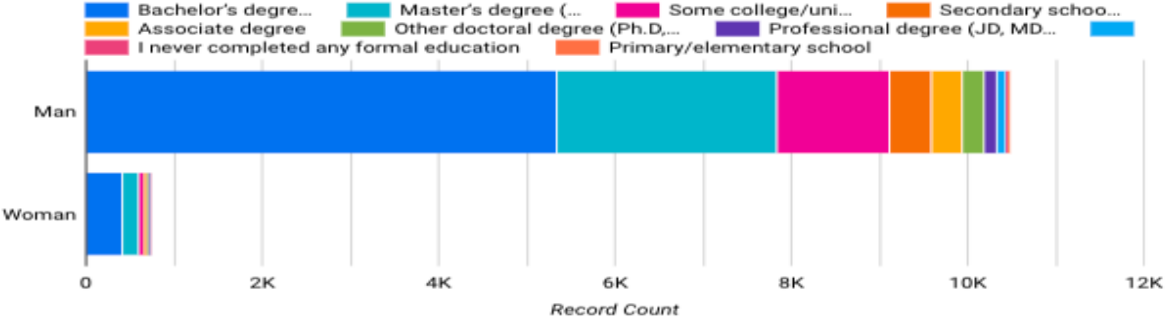
Respondent Count for Countries



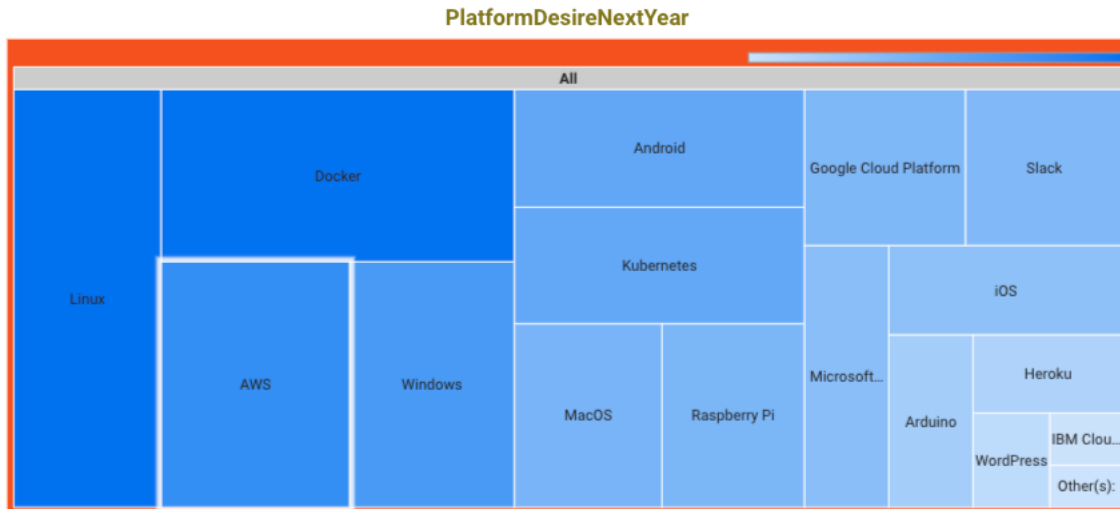
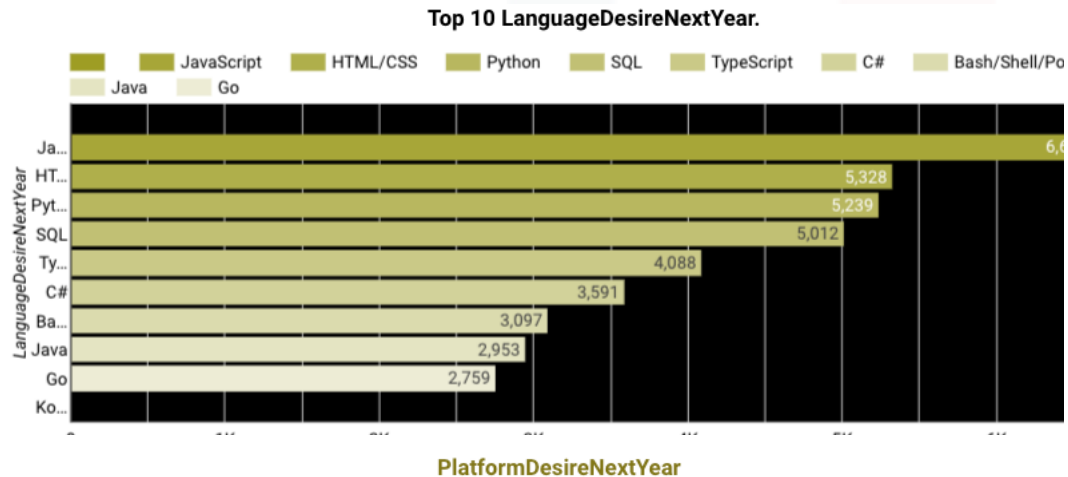
Respondent Count by Age



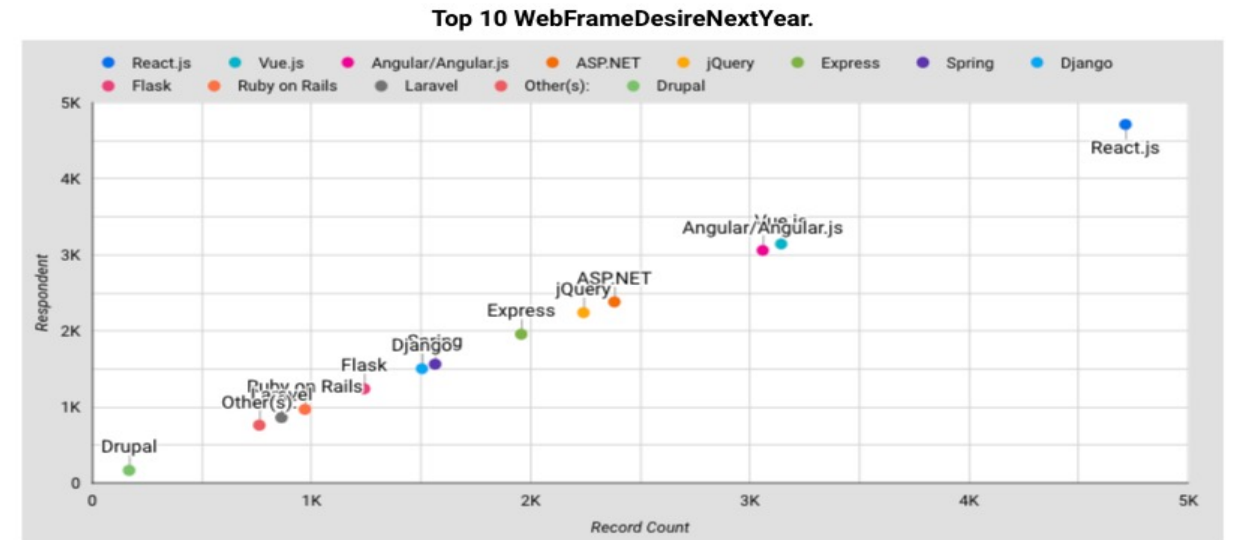
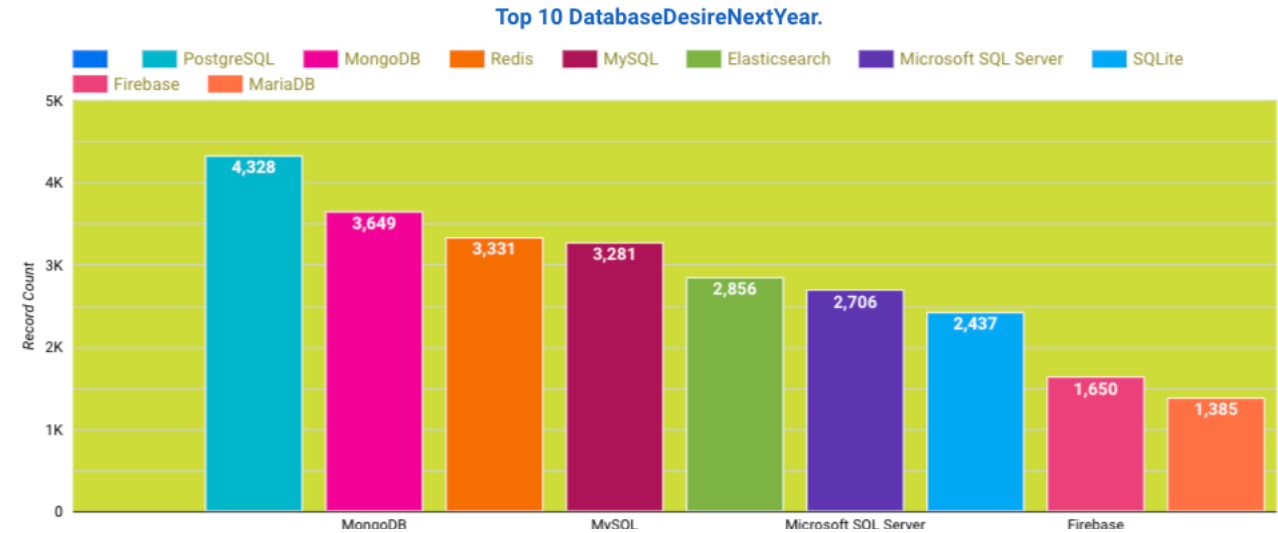
Respondent Count by Gender, classified by Formal Education Level



# DASHBOARD TAB 2

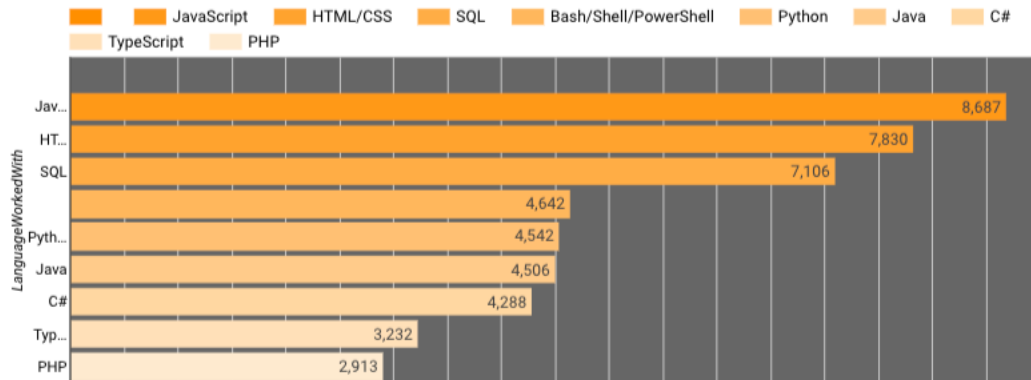


IBM Developer

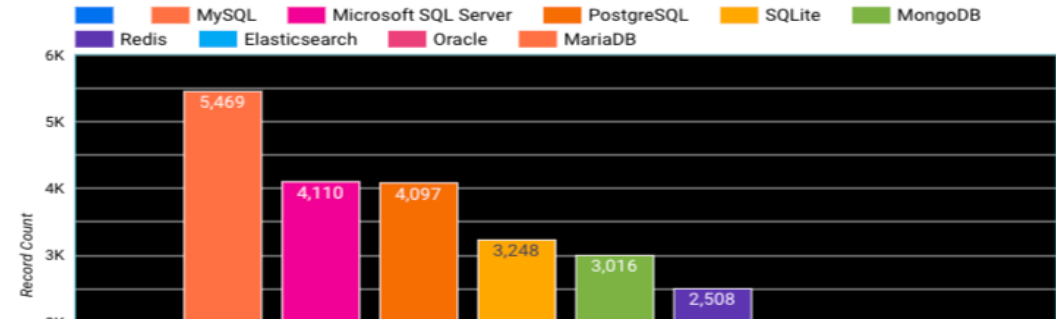


# DASHBOARD TAB 1

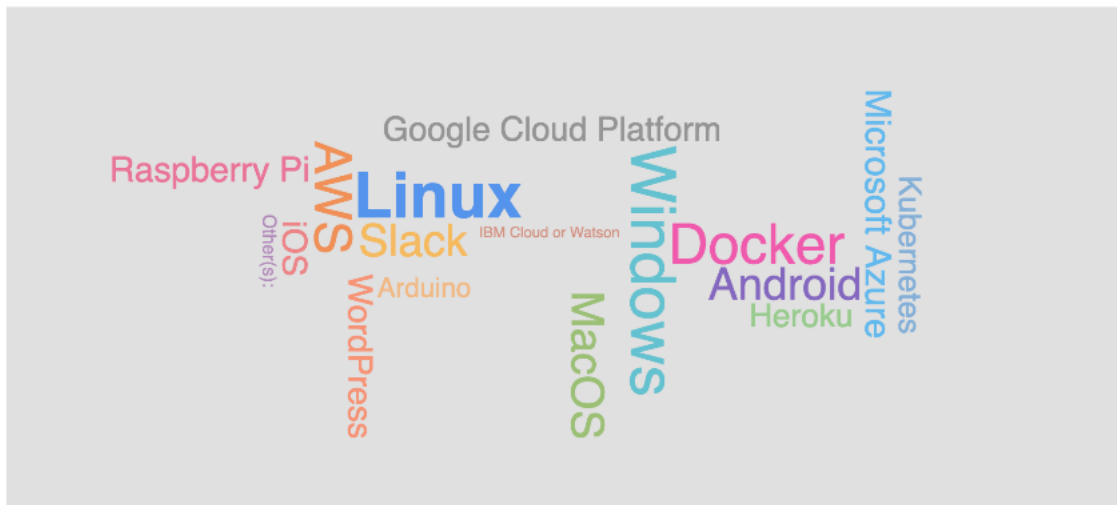
Top 10 LanguageWorkedWith



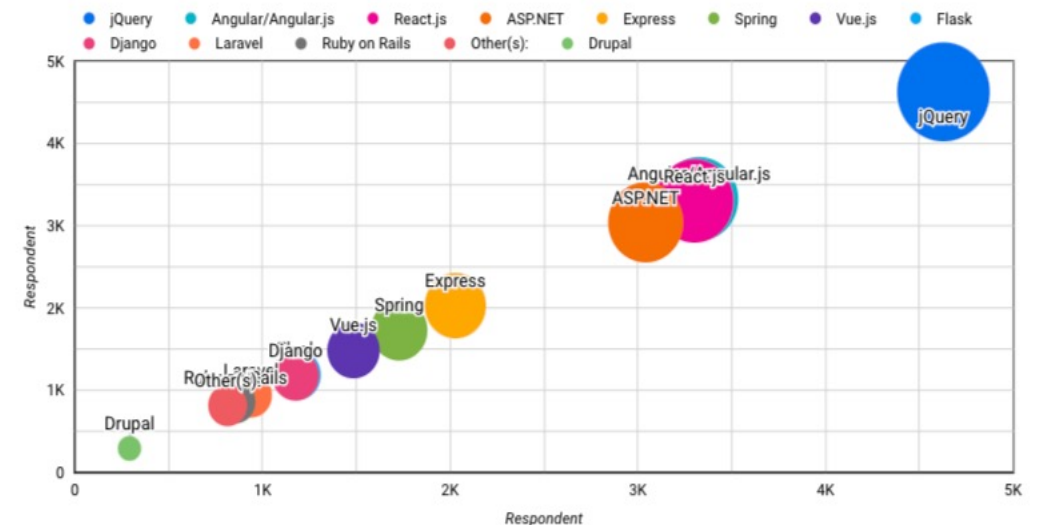
10 DatabaseWorkedWith



PlatformWorkedWith



Top 10 WebFrameWorkedWith



# DISCUSSION

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- Technology Trends now and future
- Update Skills to adapt new technology and face challenges
- Bridge divide of technology gaps in developing countries.
- Bridge the tech divide in less developed areas.
- Eliminate all types of discrimination in employment.

# OVERALL FINDINGS & IMPLICATIONS

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## Findings

- Fast changing technology every year
- Concentration on several countries such as USA and India
- Platforme like AWS, Docker are growing

## Implications

- Companies must be flexible and adjust quickly to changes.
- Extend technology access to less developed countries.
- Consider the effects on hiring practices.
- Move to Faster Deployment of Apps, Cloud, and AI



# CONCLUSION

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## 1-Technology Trends for Current and Next Year:

**A-Programming Languages:** Continual evolution with languages like Python, JavaScript, phyton...

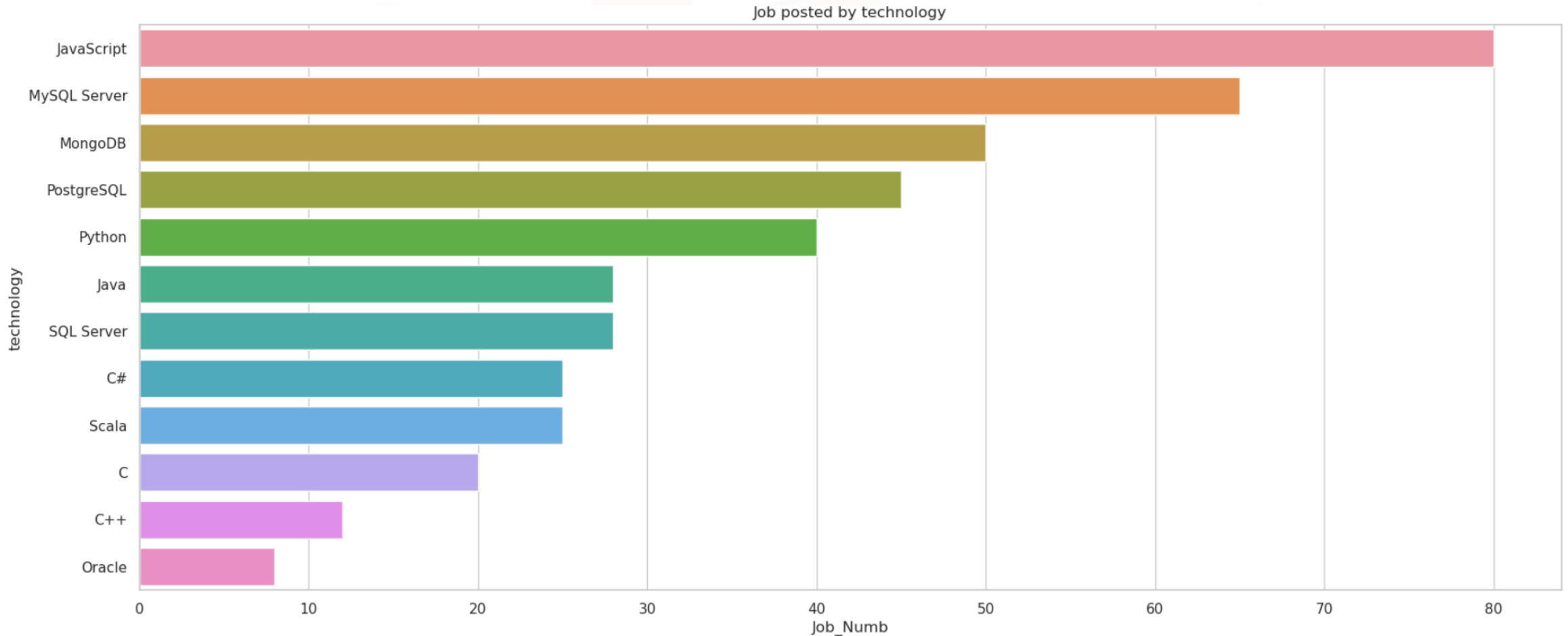
**B-Databases and Platforms:** Increasing adoption of cloud databases (e.g., AWS RDS, Google Cloud Spanner) and platforms (e.g., Kubernetes, serverless architectures).

**C-Stay current with trends, upgrade skills to remain competitive in the market**

# APPENDIX



# JOB POSTINGS



# POPULAR LANGUAGES

