



TECHNOLOGY TREND REPORT

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12.12.2024

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OUTLINE



- Executive Summary
- Introduction
- Methodology
 - Programming Languages Trends
 - Database Trends
- Job Postings vs. Skills/Language
- Dashboards (Current Technology, Future Trends, Demographics)
- Insights from Dashboards
- Overall Findings and Implications
- Conclusion

EXECUTIVE SUMMARY



- Key Findings:
 - Current programming languages show a strong preference for Python and JavaScript.
 - Future trends predict an increased demand for Go and Rust.
 - PostgreSQL dominates database usage and future demand, reflecting industry reliability preferences.
- Implications:
 - Developers and companies need to adapt to changing trends in technology preferences.



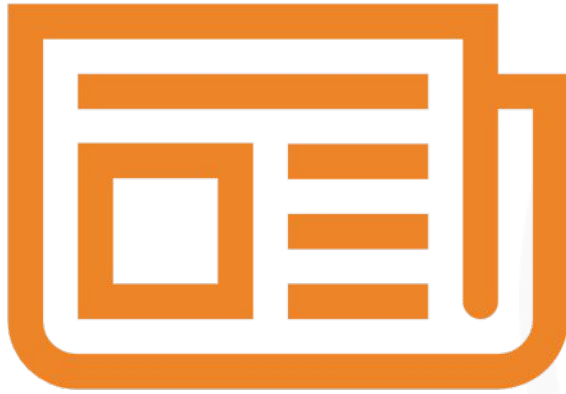
INTRODUCTION



- Report's Purpose:
 - Analyze and visualize current and future trends in technology usage to guide decision-making.
- Target Audience:
 - Industry professionals (HR, IT managers, developers).
 - Educators and students in technology fields.
- Value:
 - Highlights emerging trends and areas for skill development.
 - Provides data-driven recommendations for hiring and strategy planning.



METHODOLOGY



- **DATA COLLECTION & WRANGLING**

- Modified Jobs API
- Programming language salaries from Web Scraping
- Modified Stack Overflow Survey Dataset

- **DATA ANALYSIS & VISUALIZATION**

- Cleaning and normalizing data for analysis
- Exploring the data through different visualizations
- Doing analysis of the data to create meaningful visualizations
- Creating dashboards with visualizations of relevant data

RESULTS

If you want to
know the future,
look at the past.

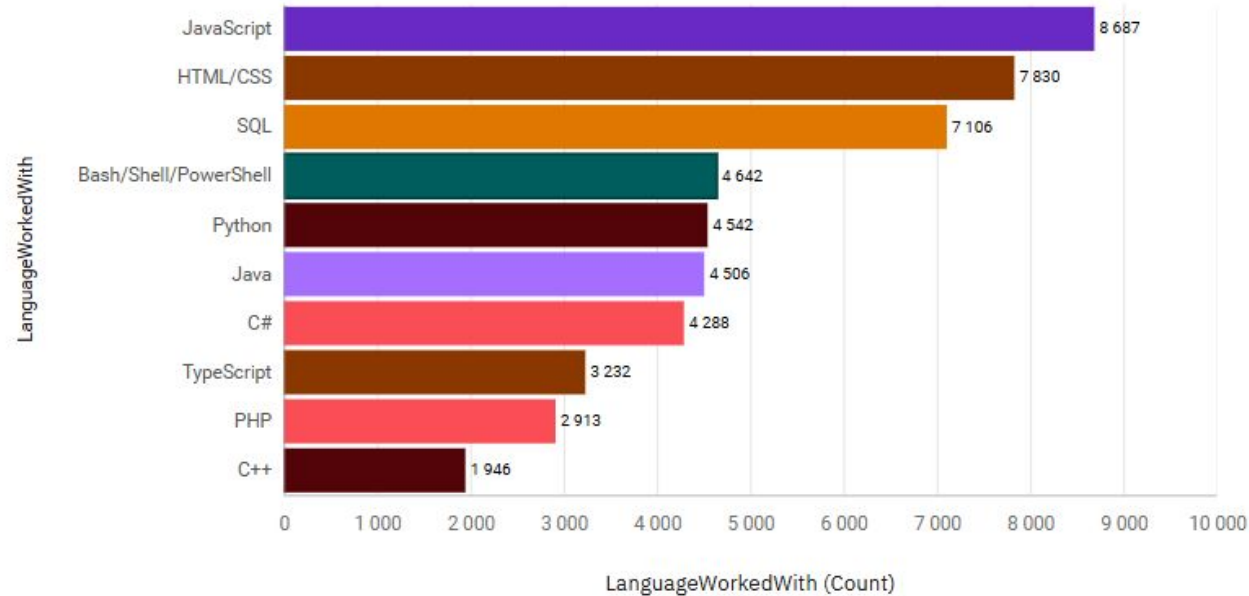
Albert Einstein

PROGRAMMING LANGUAGE TRENDS

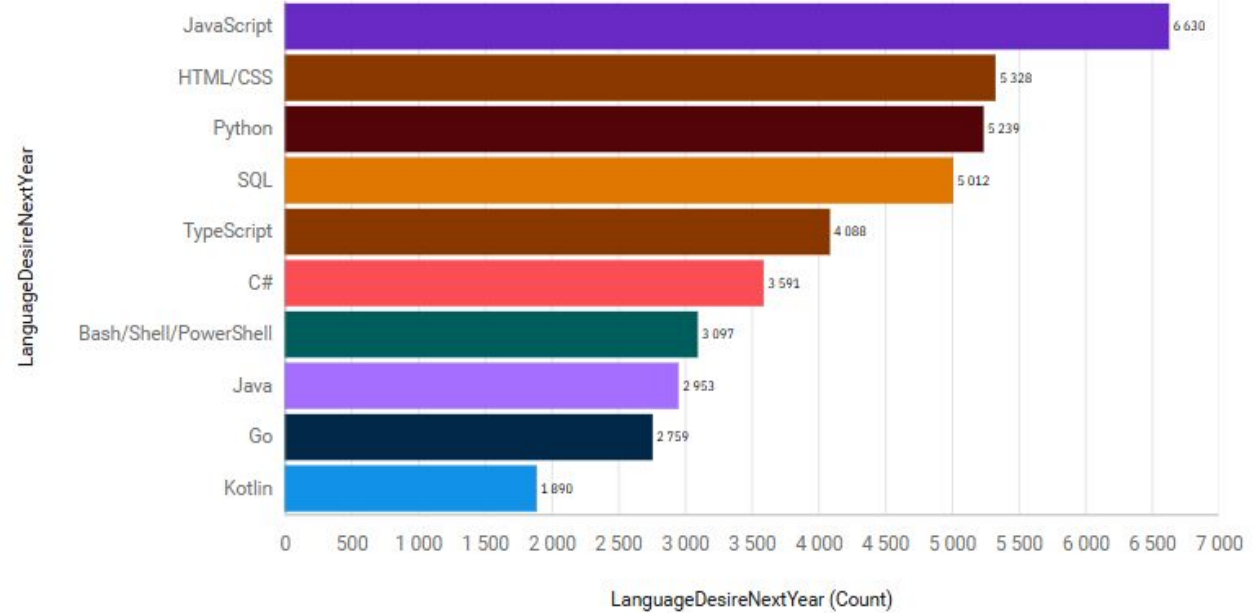
Current Year

Next Year

Top 10 Programming Languages Most Used



Top 10 Language Want To Work With



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript is top trending language in the world
- Python and TypeScript are becoming more and more popular
- HTML/CSS and SQL still has great portion in language usage trend

Implications

- Web developments and Web developers are still in high demands
- JavaScript and TypeScript are crucial to learn for developers
- Python is the new trending language, especially popular in AI fields

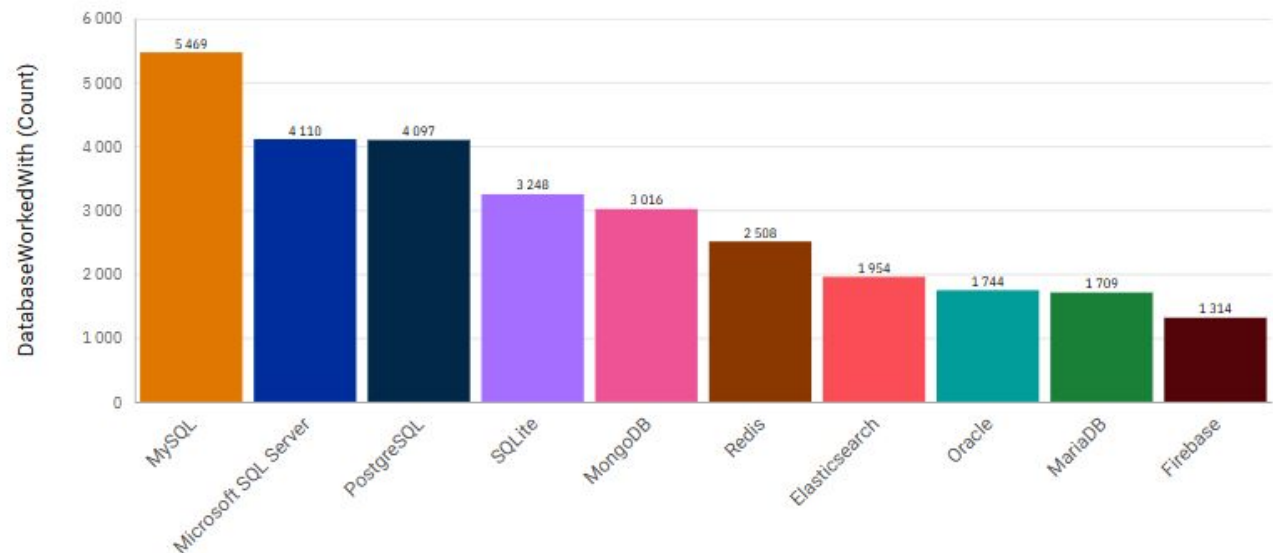


DATABASE TRENDS

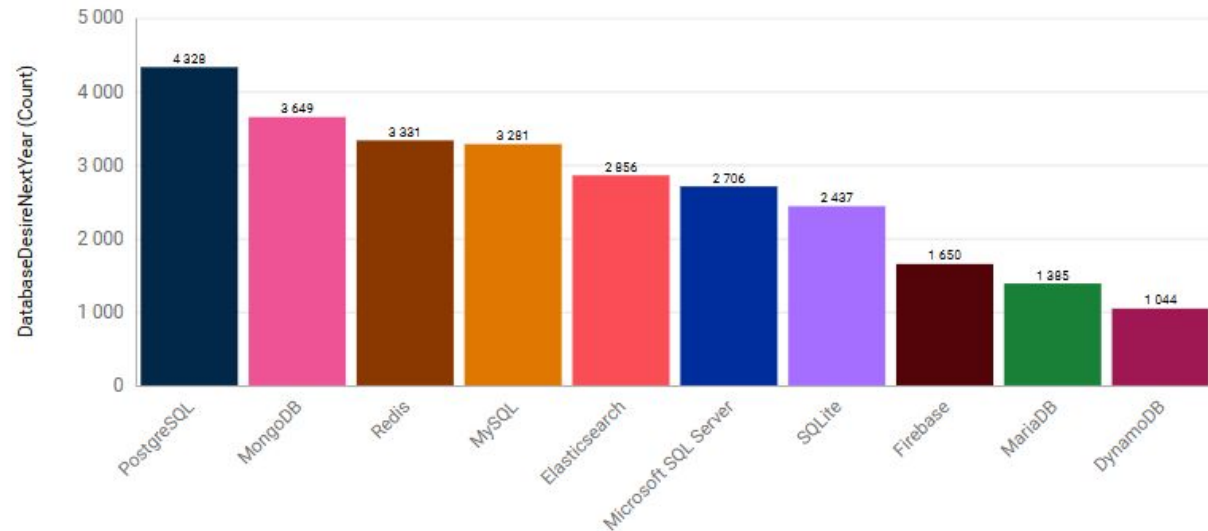
Current Year

Next Year

Top 10 Databases Used



Top 10 Database Want To Work With



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

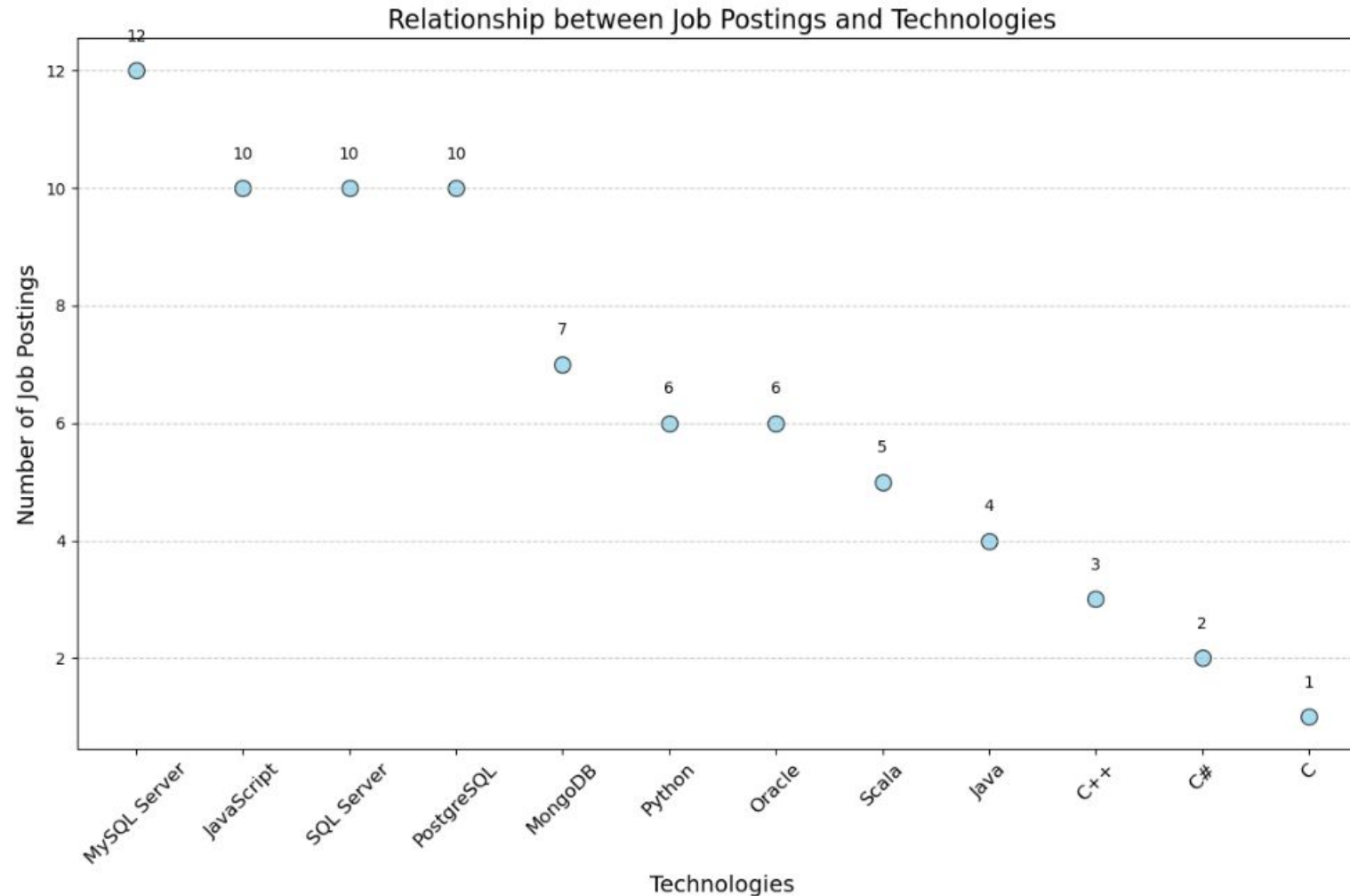
- NoSQL (Non-relational) databases are increasing in interest such as MongoDB and DynamoDB
- Relational Databases are still popular
- Services are increasing in popularity such as Elasticsearch and Firebase
- Data stores are increasing in demand such as Redis
- Oracle is not in the top 10 most desired
Developers losing interest in Microsoft SQL Server

Implications

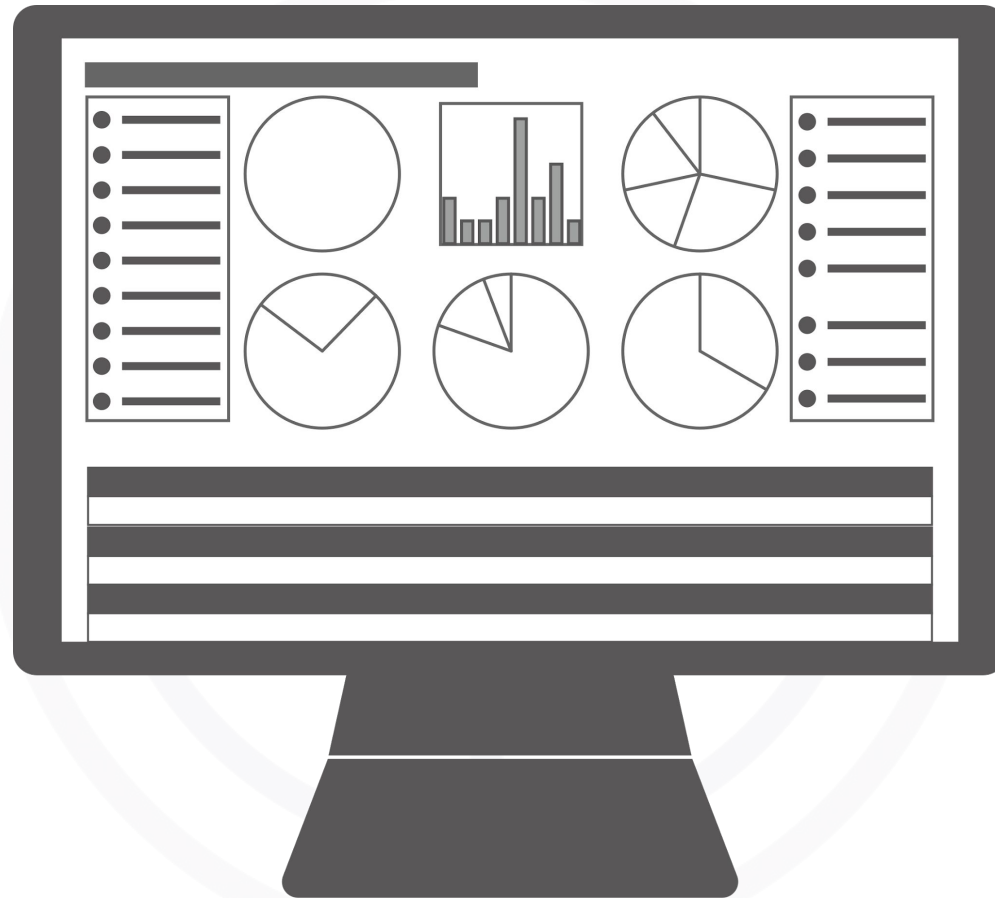
- PostgreSQL has more features and makes working with SQL easier, which shows a similar trend as with programming languages that simplicity and ease of use are important
- With more complex data the freedom that NOSQL provides is very alluring
- PaaS tools are gaining in popularity, again to simplify the developers life



Relationship between job postings and skills or languages (job-postings.xlsx)



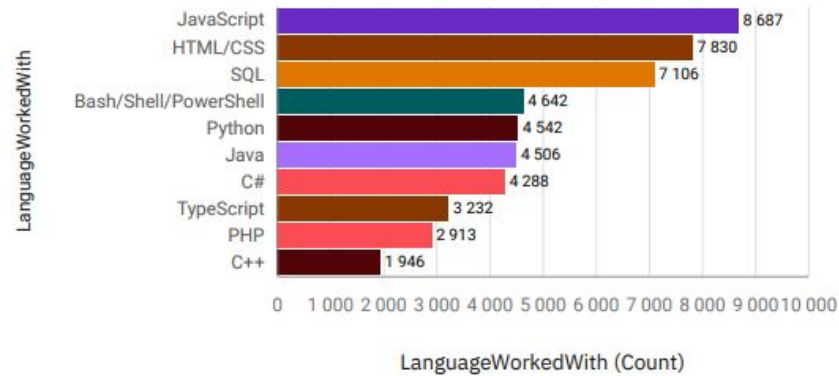
DASHBOARD



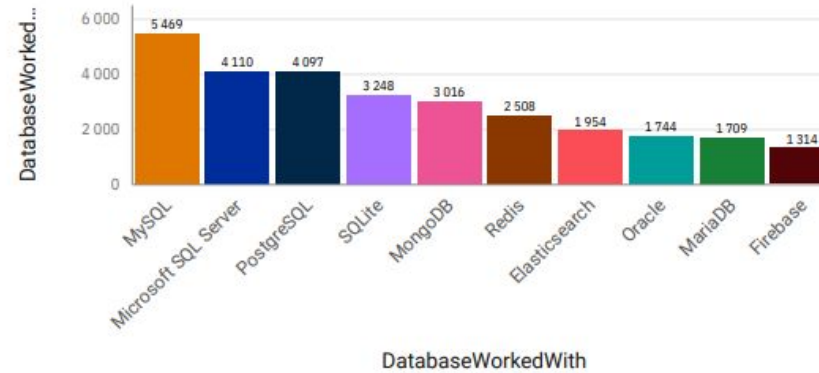
DASHBOARD TAB 1

Current Technology Usage

Top 10 Programming Languages Used



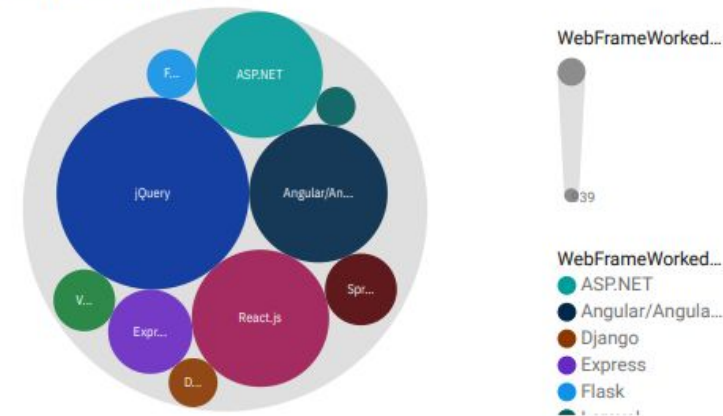
Top 10 Databases Used



Top 10 Platform Used



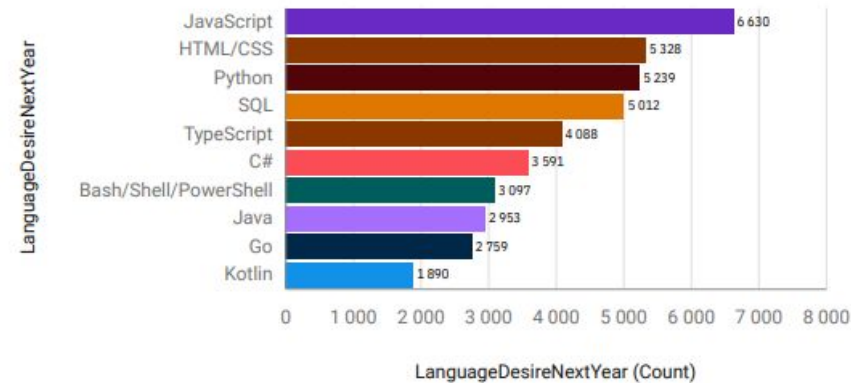
Top 10 WebFrame Used



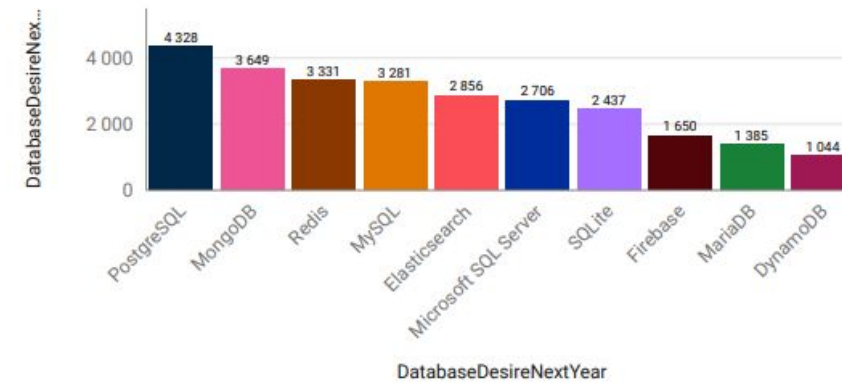
DASHBOARD TAB 2

Future Technology Trend

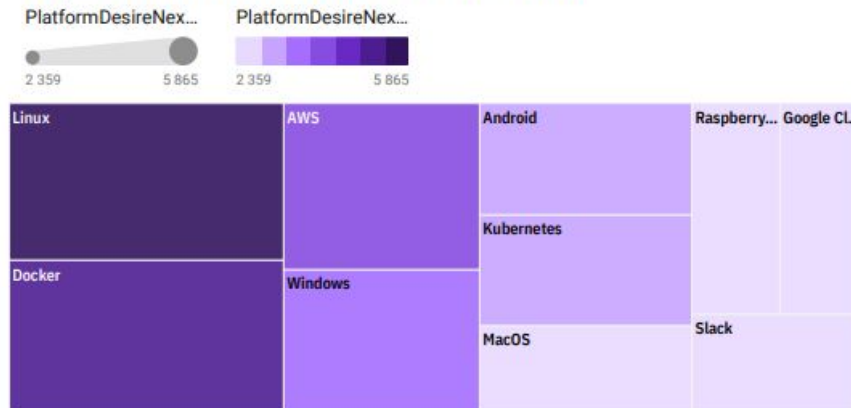
Top 10 Language Want To Work With



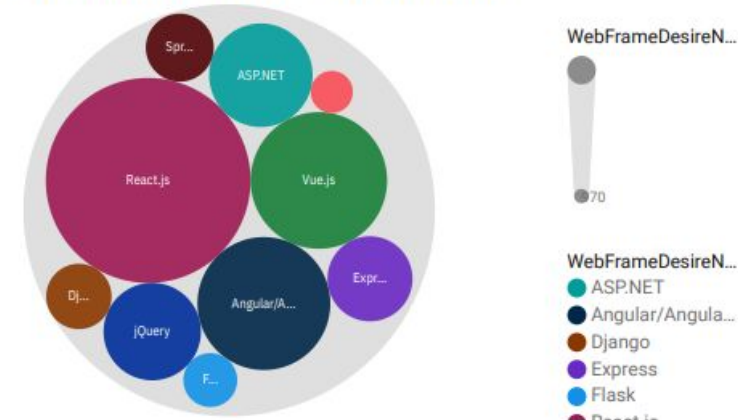
Top 10 Database Want To Work With



Top 10 Platform Want To Work With



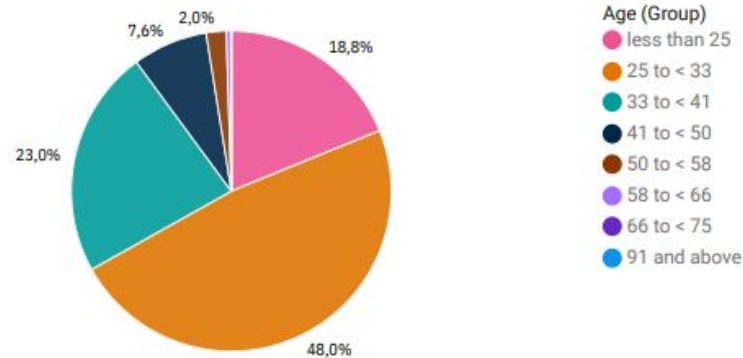
Top 10 Webframe Want To Work With



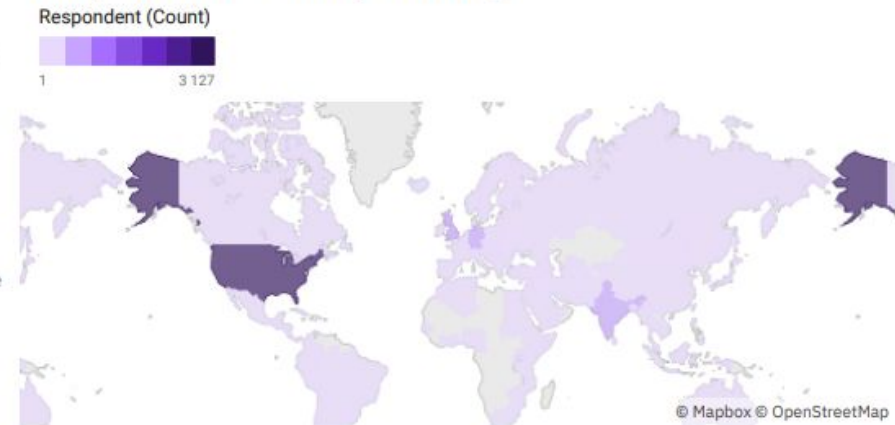
DASHBOARD TAB 3

Demographics

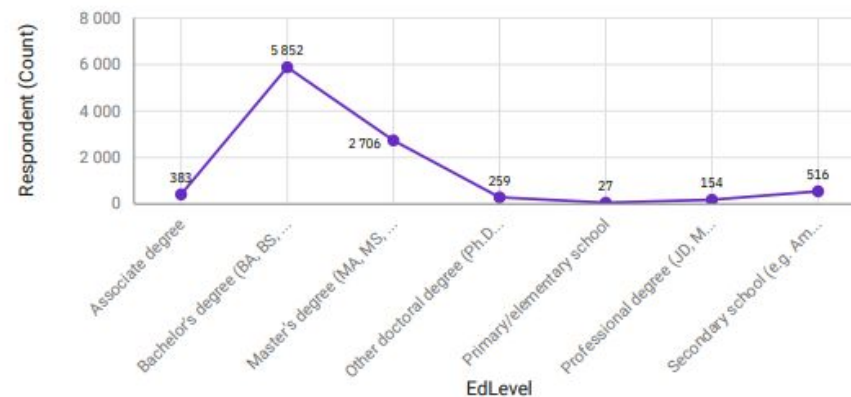
Respondent Distribution by Age



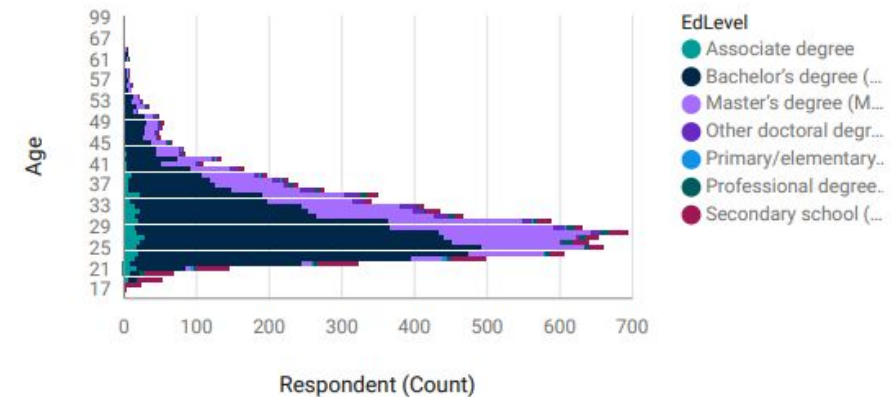
Respondent Count by Country



Respondent Distribution by Formal Education Level



Respondent Count by Age and Education Level



Insights from Dashboards



- **Programming Languages:** Strong dominance of Python and JavaScript across demographics.
- **Databases:** PostgreSQL remains the top choice, with increasing interest in cloud-native databases.
- **Demographics:** Younger developers favor emerging technologies, while experienced developers prefer stability.

OVERALL FINDINGS & IMPLICATIONS

Findings

- Most of the respondents were between the ages of 25-33
- Most of the respondents are from developed english speaking nations
- The most important factor for a Job is the Languages and Technologies used
- Demand for Python and PostgreSQL aligns with industry trends

Implications

- Upskilling in key areas can boost employability and project success
- Gender and Age should not be one of the concerns or benefits of Employment
- Educational institutions should align curriculums with industry trends

CONCLUSION



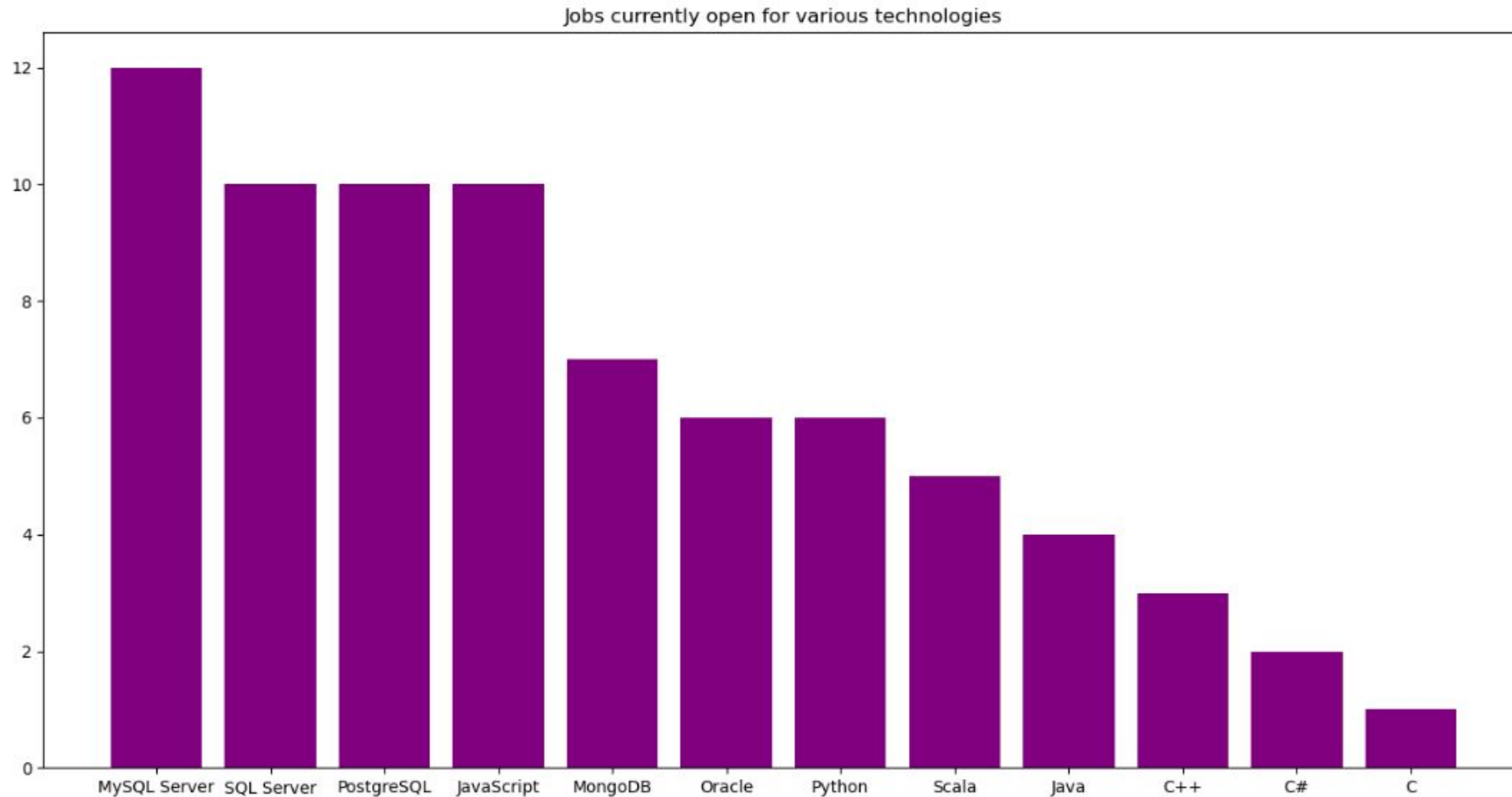
- The analysis highlights current and future trends in programming languages and database usage.
- Provides actionable insights for hiring, training, and strategic planning.
- Emphasizes the importance of adapting to technological shifts for competitive advantage.



APPENDIX



JOB POSTINGS (job-postings.xlsx)



POPULAR LANGUAGES (popular-languages.csv)

