STACK OVERFLOW DEVELOPER SURVEY 2025

Author name: Prashanth B

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OUTLINE

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- Methodology
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- Discussion
  - Findings & Implications
- Conclusion
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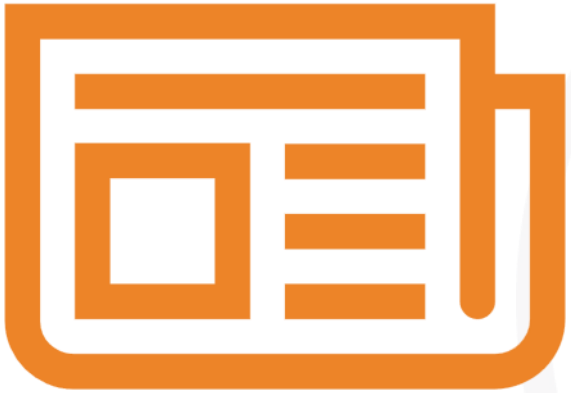
EXECUTIVE SUMMARY

- Contextualized recent global technology trends to identify dominant programming languages and databases.
- Methodology description
  - Data gathering
  - Data analysis.
  - Data Visualizations.
- Presented results using clear graphs and dashboard highlighting trends
- Discussed major findings and their real –world implications for hiring, upskilling and tech adoption.
- Concluded with strategic insights based on the analyzed data

INTRODUCTION

- Stack Overflow's annual Developer Survey is the world's largest and most detailed study of coding professionals.
- The 2023 survey includes responses from nearly 65000 developers globally.
- While comprehensive, results may not represent the entire developer population evenly.
- It also offers insights into the demographics and characteristics of the global developer community.
- The survey highlights key trends to predict where developers are heading:
  - Shifting preferences in programming languages and databases
  - Emerging focus on cloud, AI, and full-stack capabilities.

METHODOLOGY

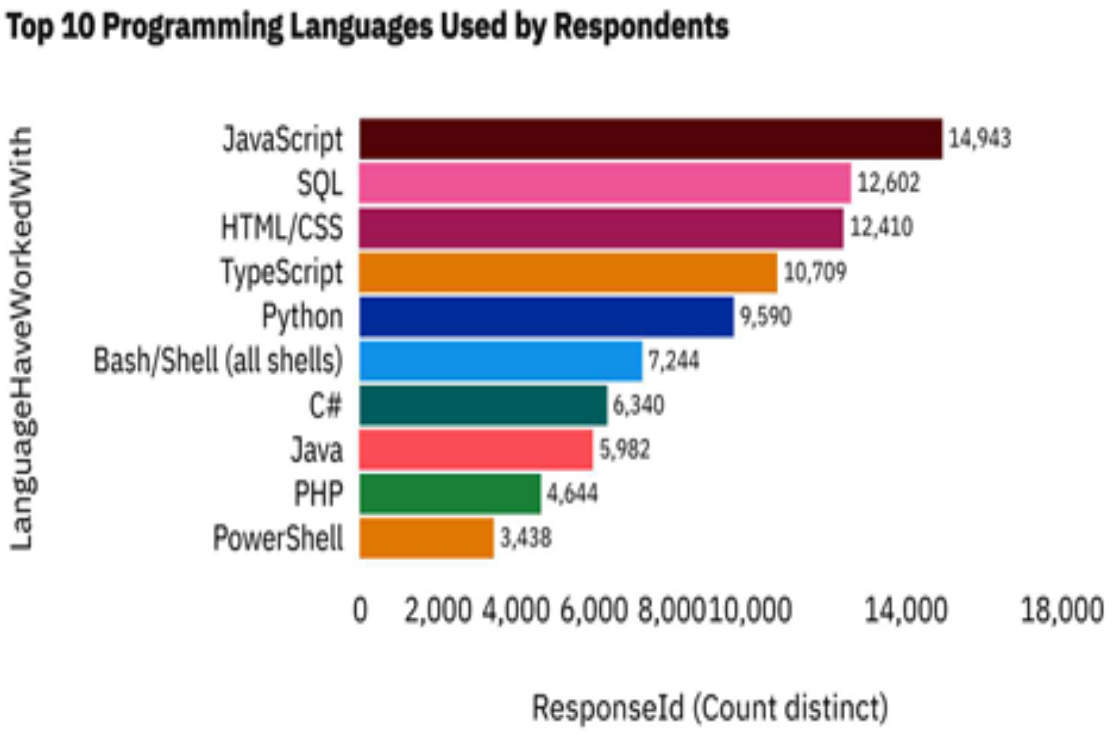


- Collected survey data and explored content structure.
- Used web scraping and APIs (via requests library) for data extraction
- Performed data wrangling and cleaning to prepare for analysis
- Exploratory Data Analysis(EDA)
  - Analyzed data distribution and relationships
  - Identified patterns and correlations
- Visualization & Dashboarding
  - Created visualizations to compare and highlight key trends
  - Built dashboards to present insights clearly and interactively.

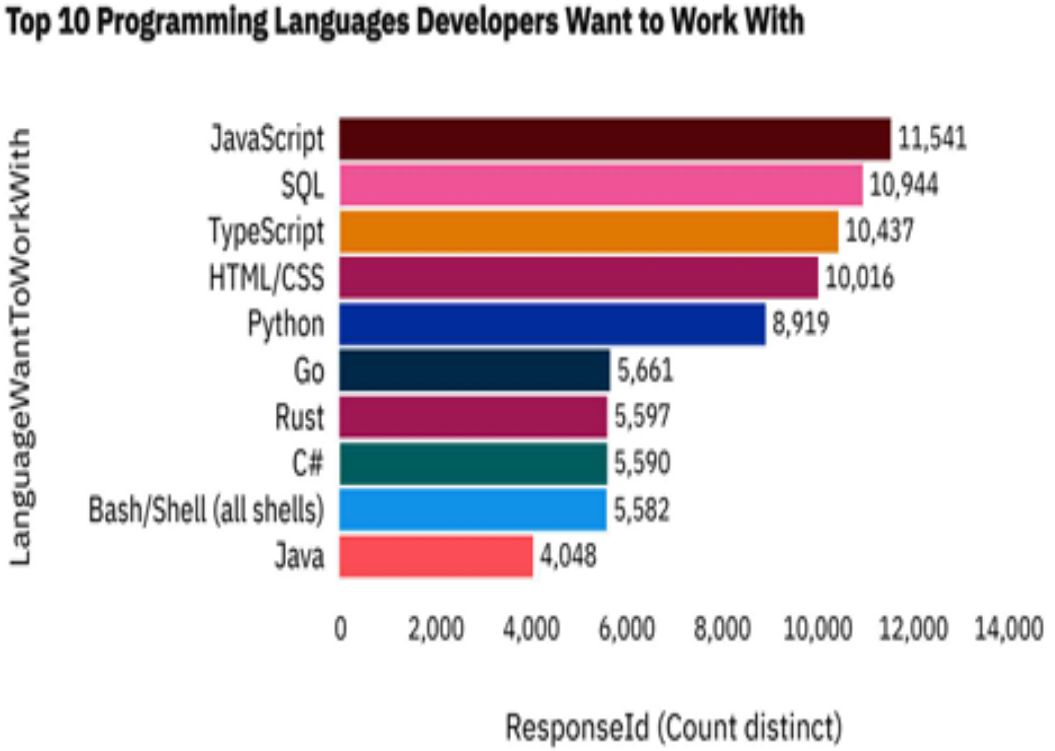
RESULTS

PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

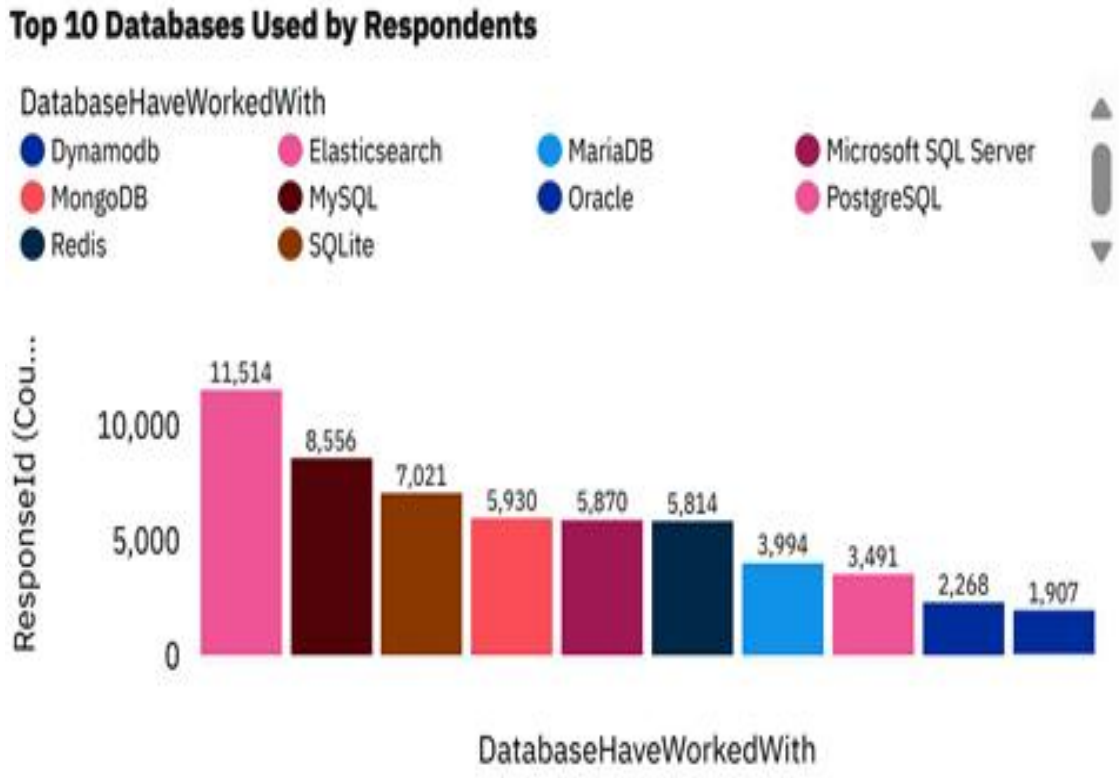
- **JavaScript, SQL**, and **HTML/CSS** lead in both usage and future interest.
- **TypeScript** shows strong alignment between current use and future trend.
- **Go and Rust** emerge as high-interest languages despite lower current adoption.

Implications

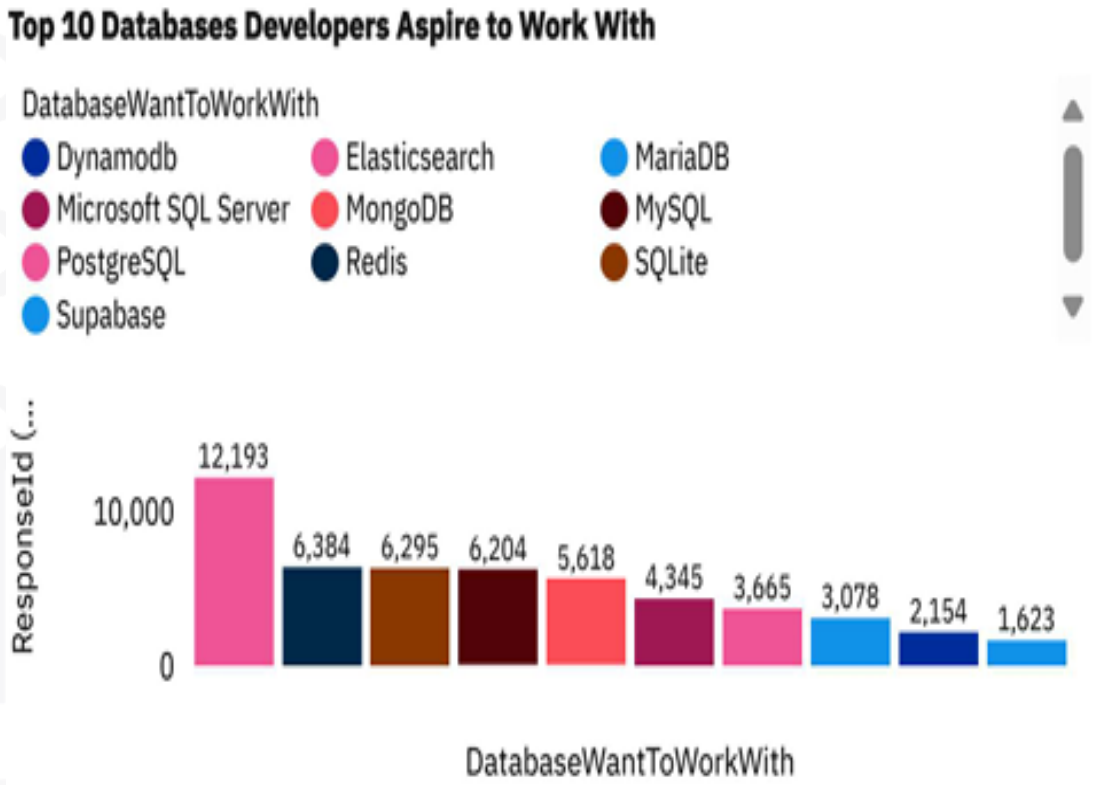
- Maintain focus on **JavaScript** and **SQL** for core development roles.
- Invest in **TypeScript** for scalable fronted architecture.
- Prepare for rising demand **in Go and Rust** for performance-critical systems.

DATABASE TRENDS

Current Year



Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- **PostgreSQL** leads in both current usage and future interest.
- **MongoDB** and **SQLite** remain widely used in demand
- **Supabase** shows rising interest despite low current adoption.

Implications

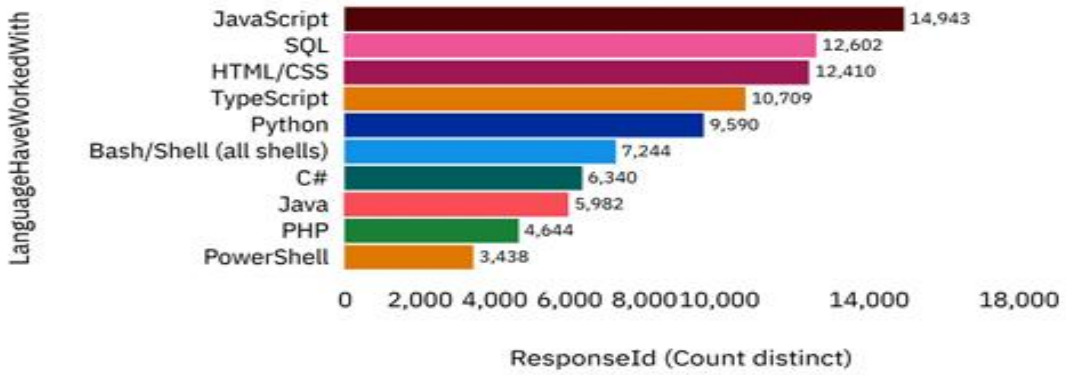
- Prioritize **PostgreSQL** for scalable, future-ready systems.
- Continue leveraging **MongoDb/SQlite** for flexible application.
- Monitor **Superbase** as a growing open-source alternative to Firebase.

DASHBOARD

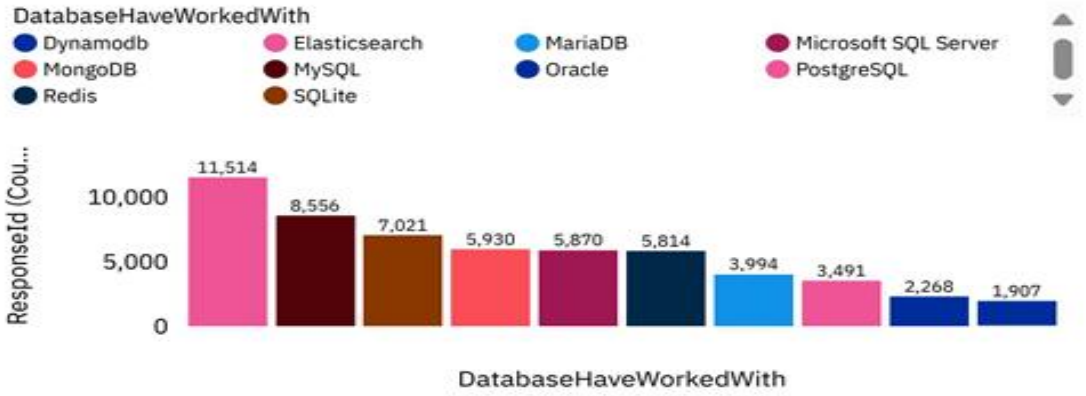
ibm-data-analyst-capstone/6-Dashboard-with-Cognos-Dashboard-Embedded-(CDE).pdf at main · Prashanthbnaik/ibm-data-analyst-capstone

CURENT TECHNOLOGY USAGE

Top 10 Programming Languages Used by Respondents

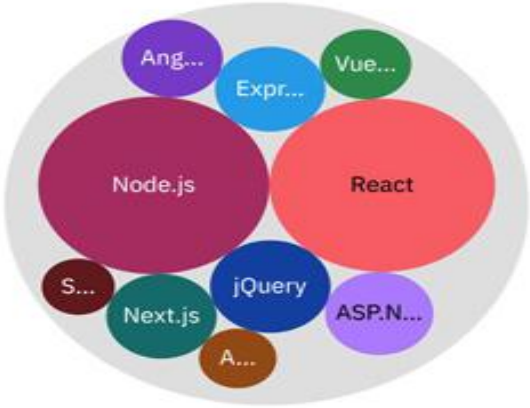


Top 10 Databases Used by Respondents



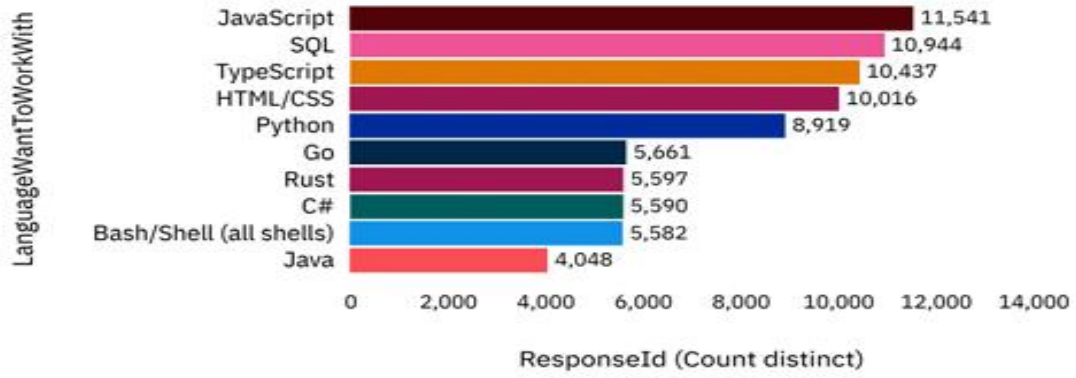
Top 10 Platforms Used by Respondents

Top 10 Web Frameworks Used by Respondents

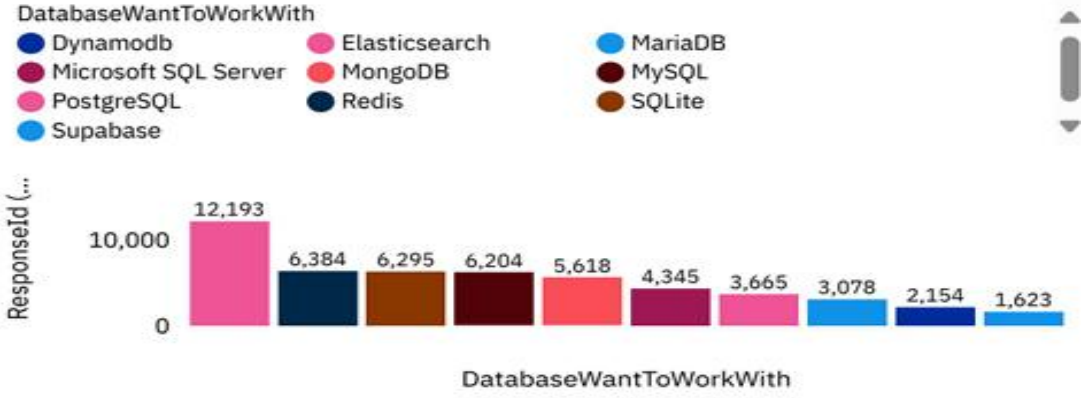


FUTURE TECHNOLOGY TREND

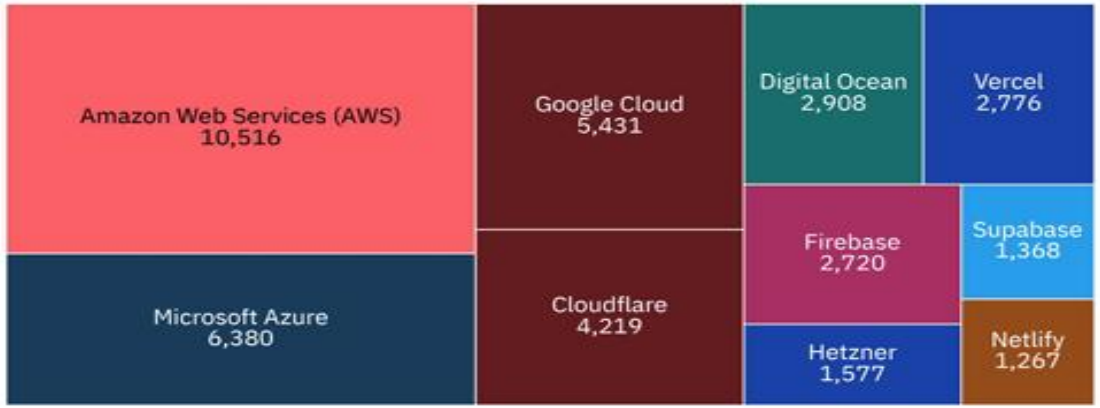
Top 10 Programming Languages Developers Want to Work With



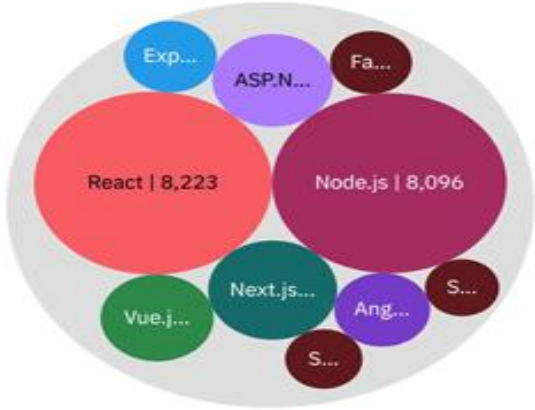
Top 10 Databases Developers Aspire to Work With



Top 10 Platforms of Future Interest Among Respondents

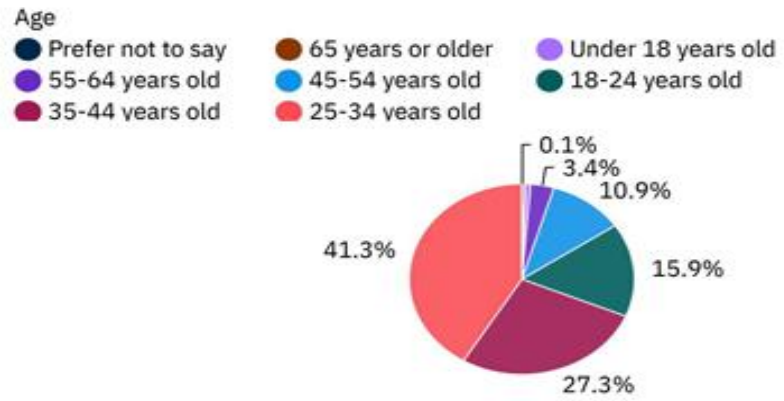


Top 10 Web Frameworks Developers Want to Learn or Use



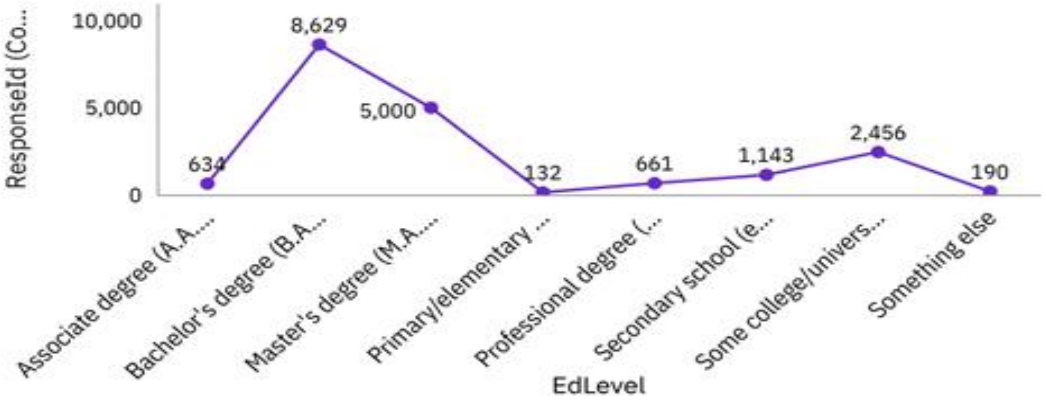
DEMOGRAPHICS

Age Distribution of Survey Respondents

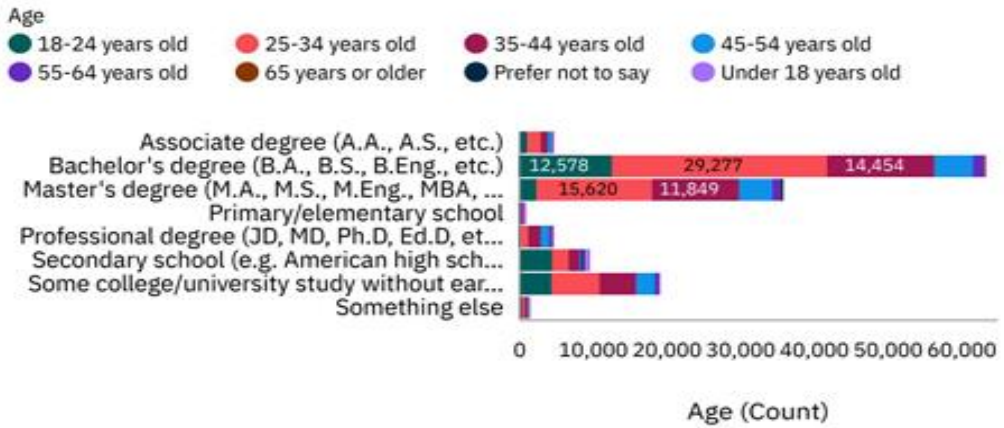


Geographic Distribution of Respondents by Country

Formal Education Levels Among Respondents



Age-Wise Distribution of Respondents by Education Level



DISCUSSION

OVERALL FINDINGS & IMPLICATIONS

Findings

- **JavaScript, SQL**, and **PostgreSQL** dominate both current use and future interest.
- Developers are increasingly drawn to modern tools like **Rust,Go**, and **Supabase**.
- The Majority of responders are young(25-34) and highly educated, shaping future tech trends.

Implications

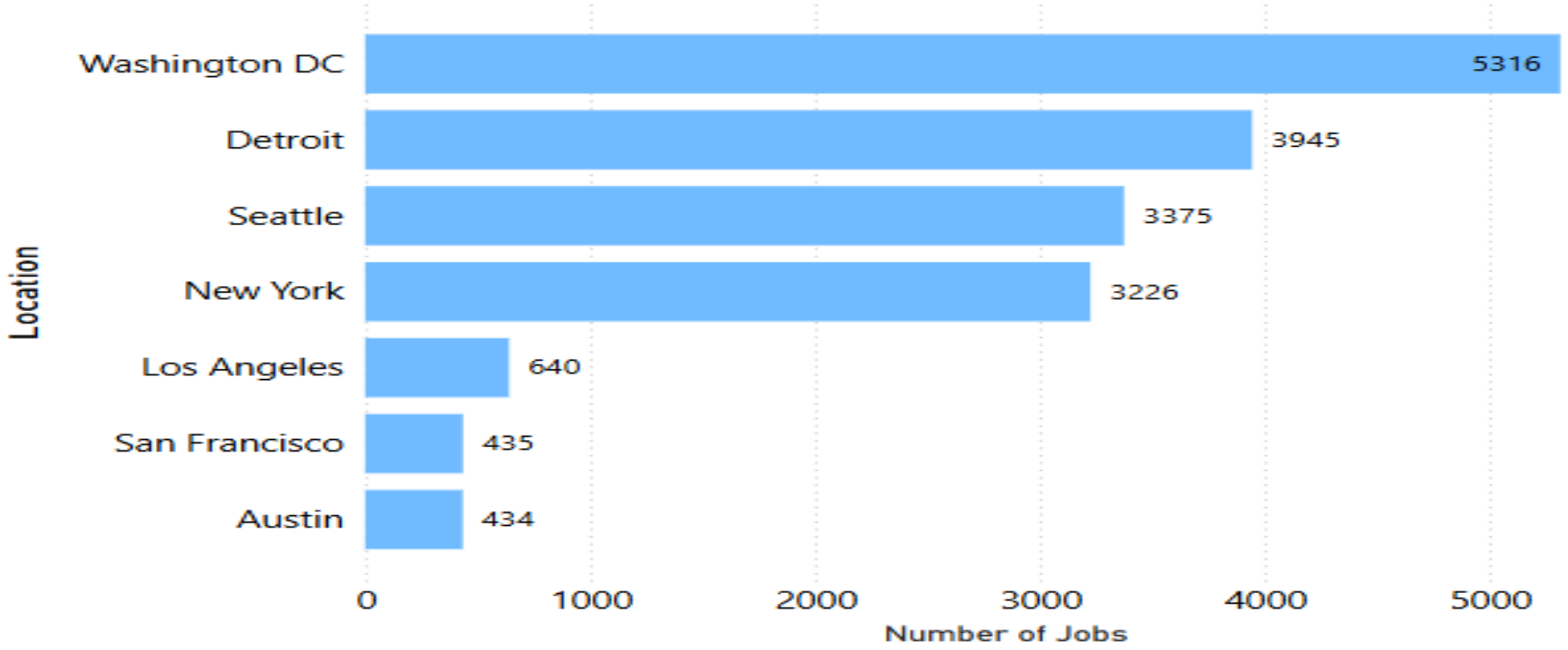
- Organizations should continue investing in core technologies while preparing for emerging ones.
- Upskilling in **Rust, Go,** and **cloud-native tools** can future-proof development teams.
- Hiring and training strategies should align with the preferences of a younger, tech-savvy workspace.

CONCLUSION

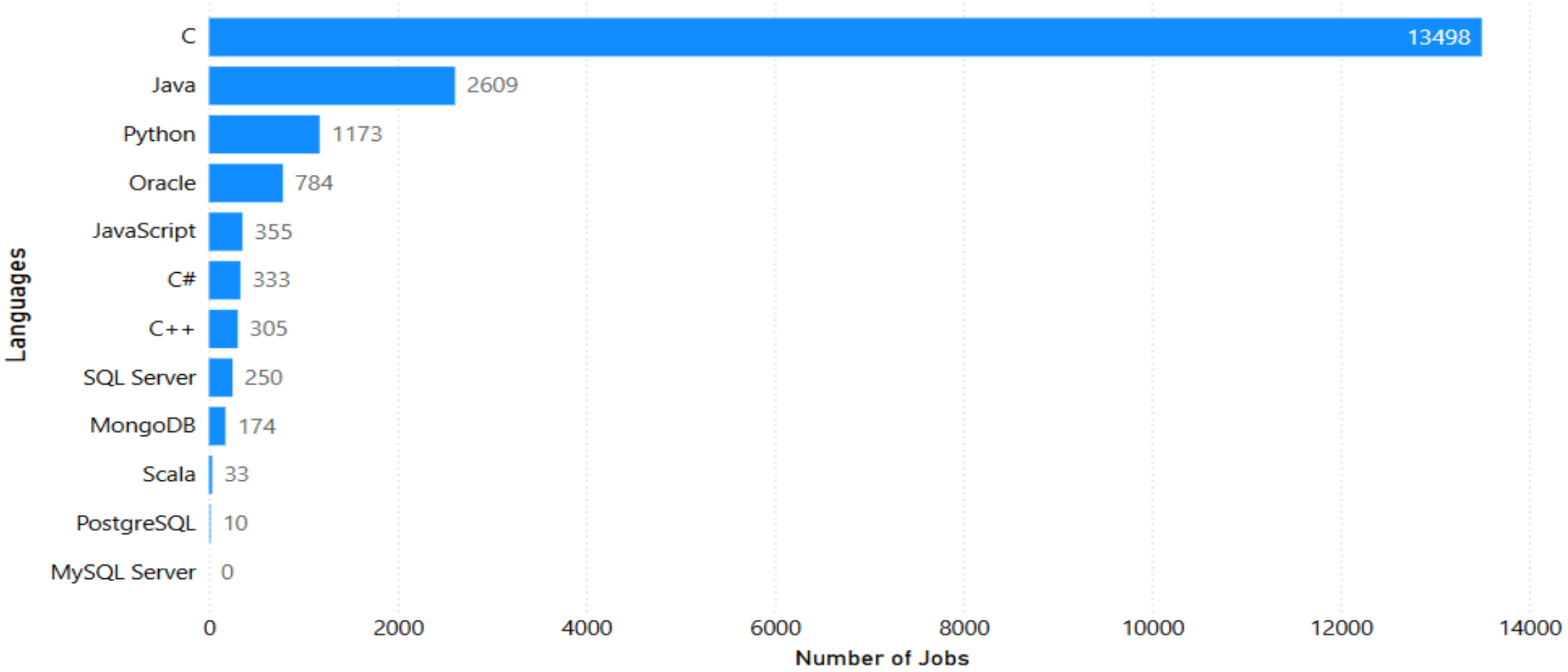
- Core technologies like **JavaScript, SQL**, and **PostgreSQL** remain foundational across development roles.
- Emerging tools such as **Rust, Go**, and **Supabase** indicate a shift toward a performance and developer-centric platforms.
- Demographic trends highlight a young, educated developer base driving innovation and adoption.
- Continues learning and strategic tech adoption are essential to stay competitive in a rapidly evolving landscape.

APPENDIX

JOB POSTINGS



POPULAR LANGUAGES



AGE DISTRIBUTION BOX PLOT