



2019 StackOverFlow Developers Survey

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19th July, 2024

OUTLINE



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EXECUTIVE SUMMARY



- The Developer Landscape: Trends, Technologies, and Insights
- Main findings:
 - Dominance of cloud platforms, containerization, and JavaScript.
 - Rise of Python, TypeScript, and modern databases.
 - Gender disparity and educational background of developers.
- Implications for businesses and developers:
 - Adapting to new technologies, skill development needs, and workforce diversity challenges.

INTRODUCTION



- Understanding the Developer Ecosystem
- Purpose
 - To analyze trends and provide insights into the developer landscape.
- Importance
 - For businesses making technology decisions.
 - For developers navigating the evolving landscape.
 - For fostering a more diverse and inclusive tech ecosystem.

METHODOLOGY



- Data Source and Collection
 - 2019 StackOverFlow Developer survey.
 - Sample size : 11398 number of respondents.
 - Demographics : Over 90 countries, United States (27.4%) followed by India, China and Brazil.
- Data collection method used
 - Online survey
- Key Variables
 - Software Development preferences currently used and planned for use next year:
 - Database technologies
 - Programming languages
 - Software development platforms
 - Web frameworks
 - Developer age, gender, Education and geographic location

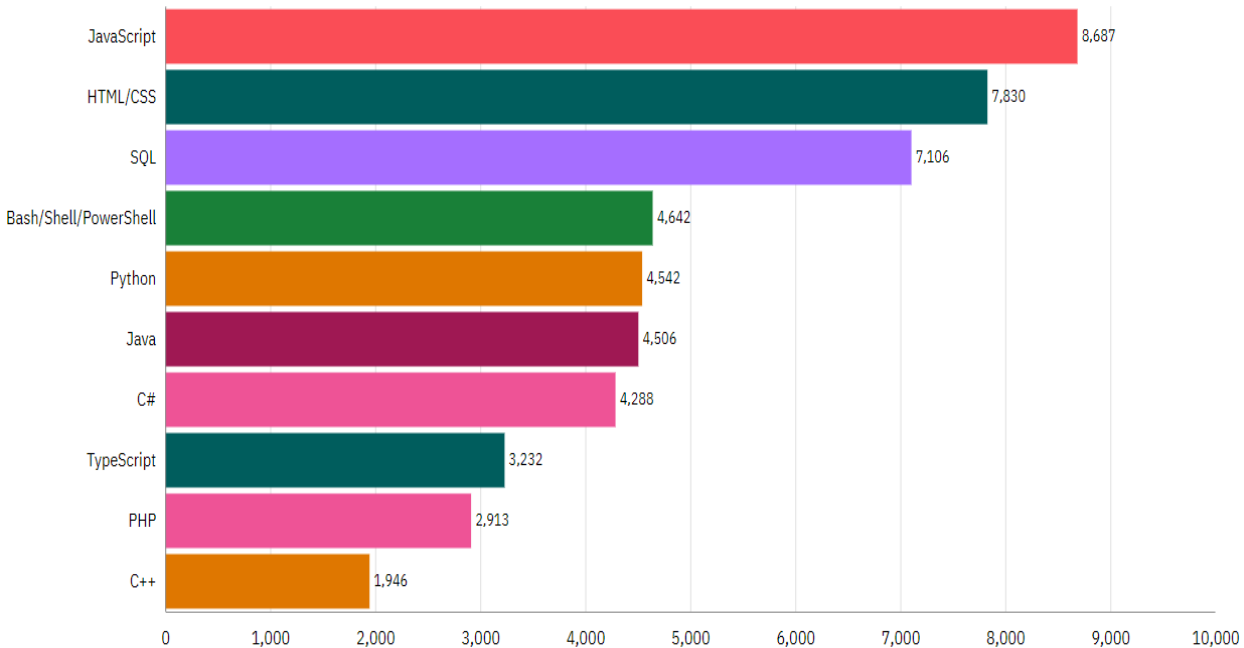
RESULTS



PROGRAMMING LANGUAGE TRENDS

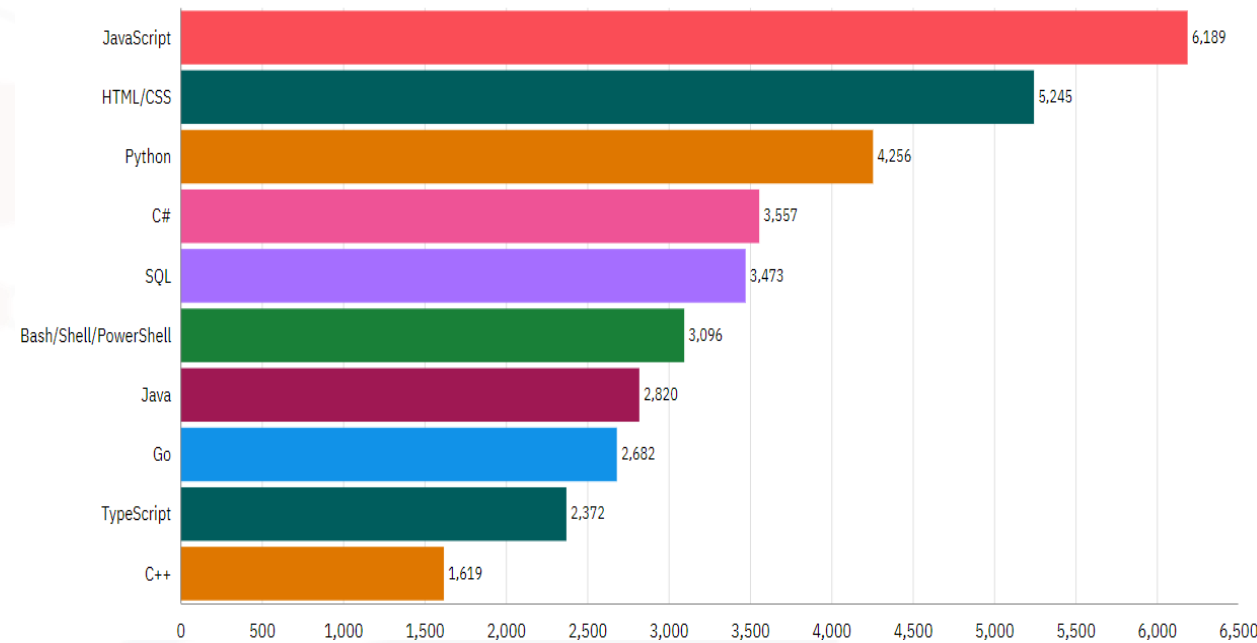
Current Year

Top 10 Languages Used



Next Year

Top 10 Languages Desired Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript and HTML/CSS ~ the most frequently used (33.3 % of the total) and desired languages (32.4 % of the total).
- Python ~ seeing growing adoption (9.1 % to 12 % of the total as a desired language).
- Go's Emerging Presence in desired languages
- SQL and C# retain popularity.

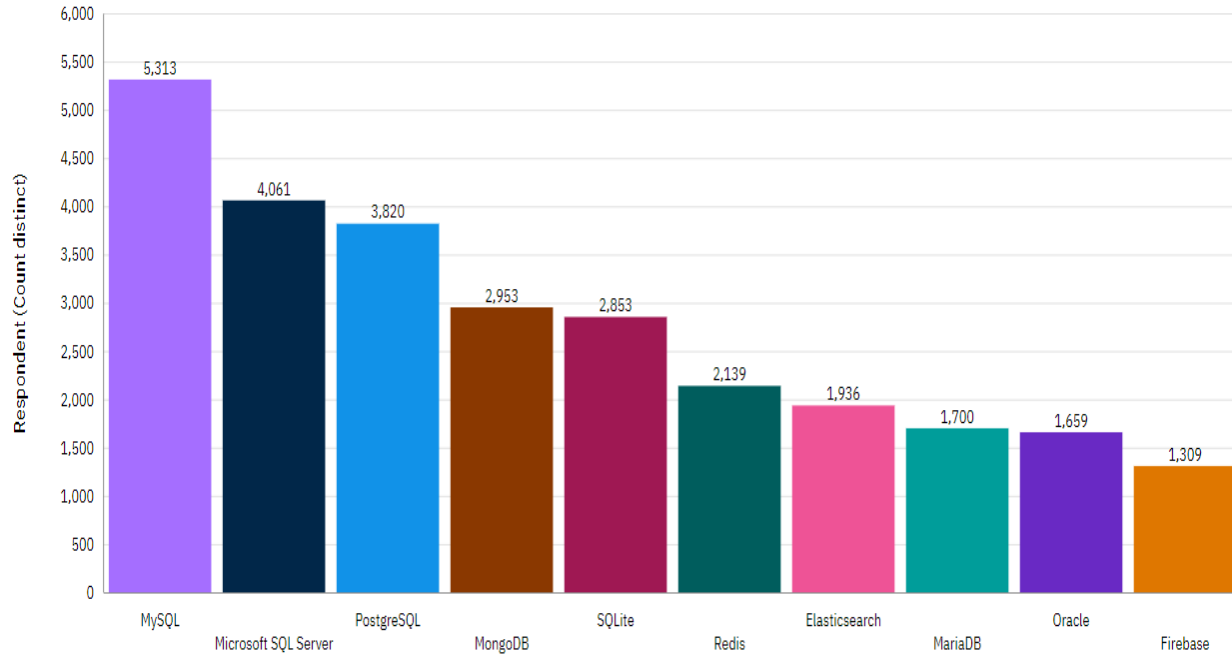
Implications

- Web development ~ a core programming domain.
- Versatility in data science, machine learning, and web development.
- Go's efficiency and concurrency capabilities, increasing interest in its use for building scalable and performant systems.
- Continued relevance
 - SQL for relational databases management and manipulation
 - C# for windows development

DATABASE TRENDS

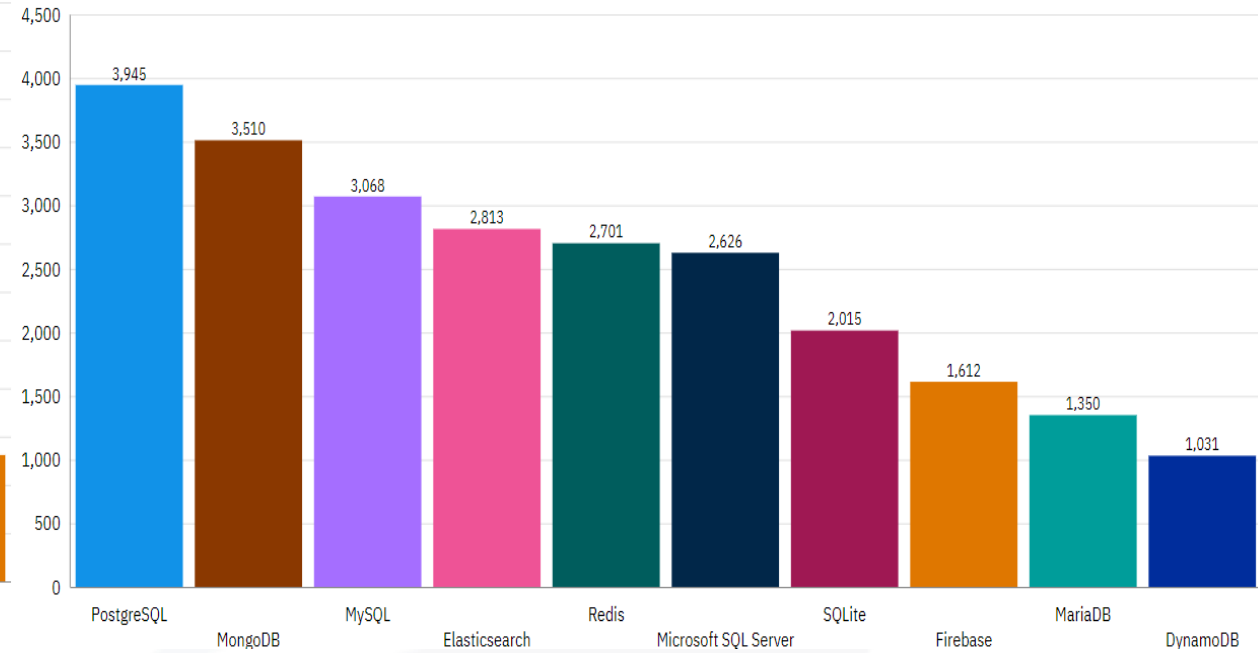
Current Year

Top 10 Databases Used



Next Year

Top 10 Databases Desired Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL ~ most used Database (19.2 % of the total)
- PostgreSQL (16 %) and MongoDB (14.2 %) ~ most desired databases (30.2 % of the total).
- Firebase is gaining traction (4.7 % usage to 6.5 % desired of the total) .
- Elasticsearch and Redis are gaining popularity
- Ratio of RDBMS to No SQL databases dropped from 1.55 in usage to 1.35 as desired.

Implications

- Widespread adoption in existing projects.
- Appeal for future projects. Reputation for reliability and advanced features.
- Continued adoption of cloud-based data solutions.
- Efficient search and data caching solutions require these tools.
- Gain in the popularity of No SQL Databases ~ a shift towards flexible and scalable data models.

DASHBOARD

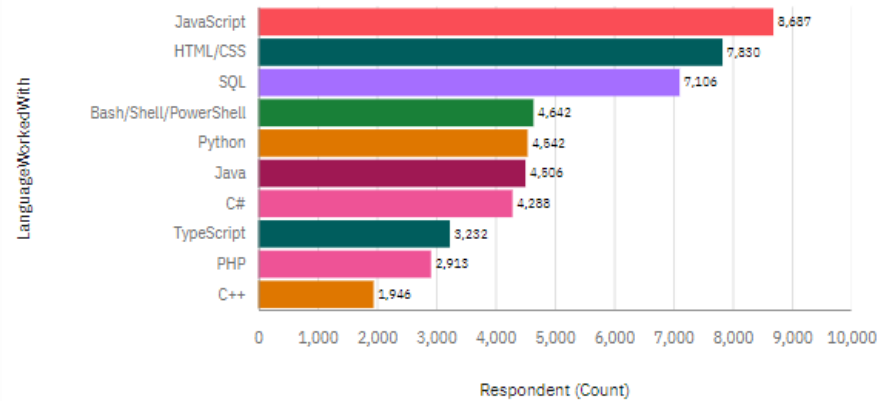


https://github.com/bajwasarim/2019-Stack-Overflow-Developer-Survey/blob/fe34c8577bd6a3b7bfe450d0559b63aa79c5a910/2019%20StackOverFlow%20Developer%20Survey_Dashboard.pdf

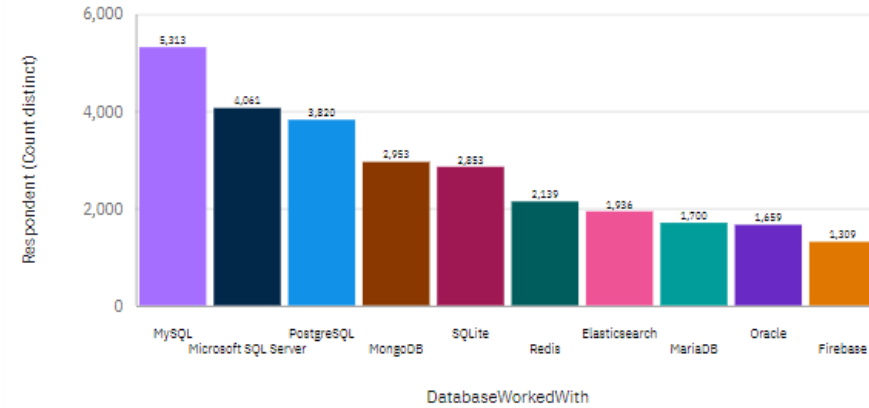
DASHBOARD TAB 1

Current Technology Usage

Top 10 Languages Used



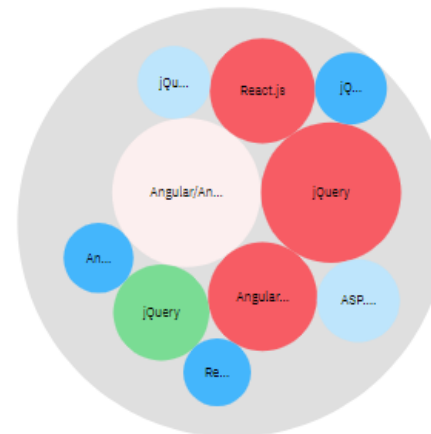
Top 10 Databases Used



Platforms Used



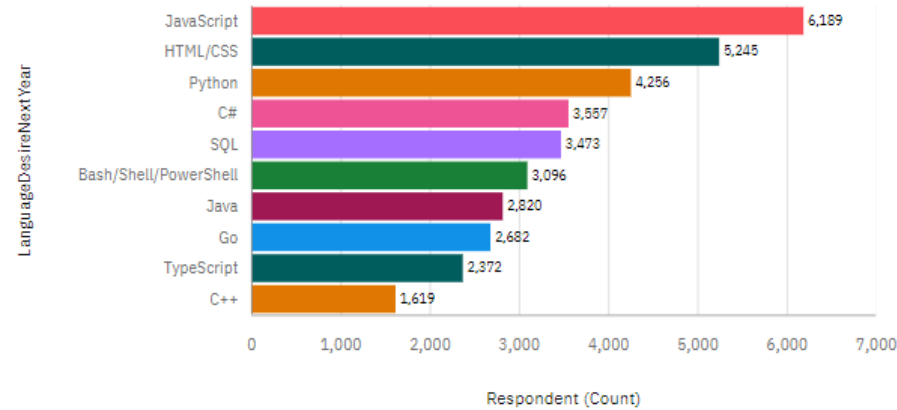
Top 10 WebFrames Used



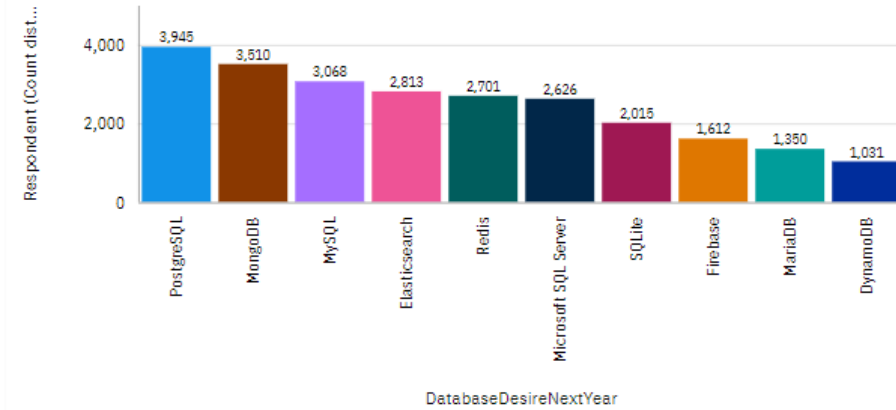
DASHBOARD TAB 2

Future Technology Trend

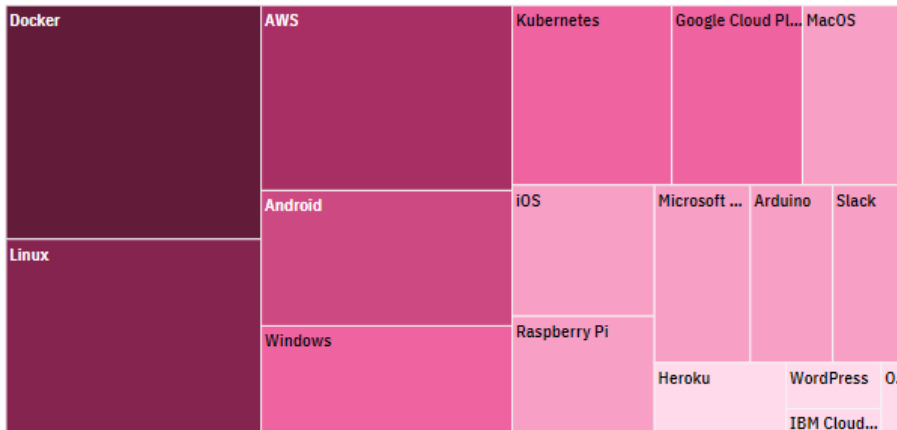
Top 10 Languages Desired Next Year



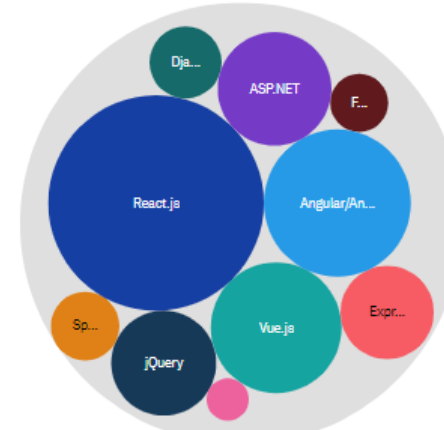
Top 10 Databases Desired Next Year



Platforms Desired Next Year



Top 10 WebFrame Desired Next Year

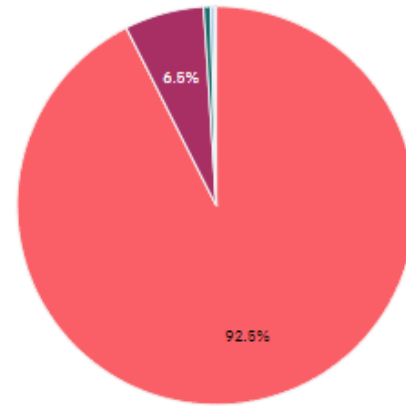


DASHBOARD TAB 3

Demographics

Respondent by Gender

- Gender
- Man
 - Woman
 - Non-binary, genderqu...
 - Man;Non-binary, gend...
 - Woman;Non-binary, g...
 - Woman;Man
 - Woman;Man;Non-bin...



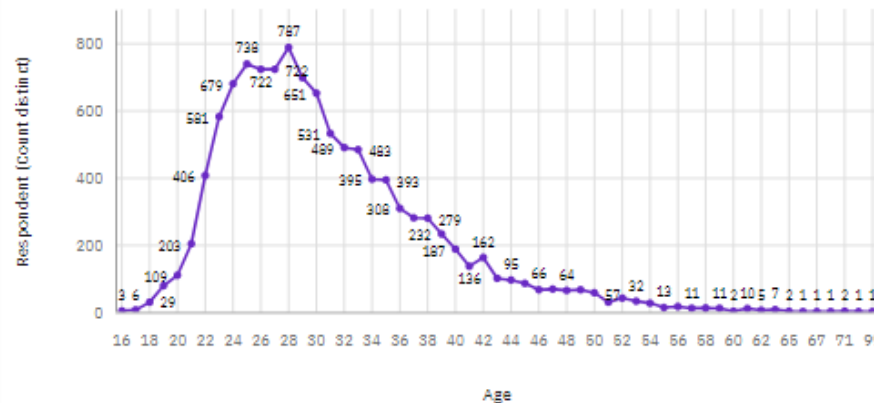
Respondent by Country

Respondent (Cou...

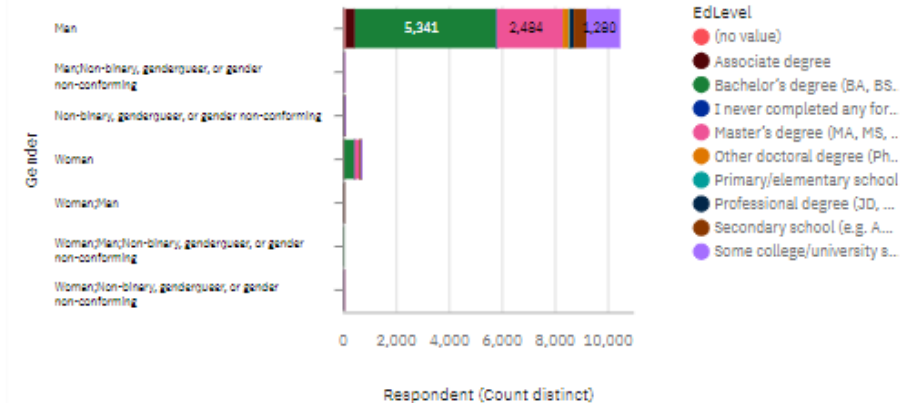


Mapbox OpenStreetMap

Respondent by Age



Respondent Count by Gender, classified by Formal Education Level



DISCUSSION



- Programming Languages Trends
 - JavaScript's dominance.
 - Python's growing popularity.
 - The rise of TypeScript.
 - Steady use of established languages like Java and C#.
- Database Trends
 - The ongoing prominence of SQL and NoSQL databases.
 - Rising interest in Elasticsearch and Redis for search and data caching.
- Consolidated Trends
 - Cloud computing dominance.
 - Containerization and orchestration adoption.
 - Linux's continued importance.
 - Prevalence of mobile platforms.

OVERALL FINDINGS & IMPLICATIONS

Findings

- Cloud computing, containerization, and Linux remain key.
- The developer community is predominantly male, with a strong emphasis on formal education.
- Shift towards modern technologies.
- Continued focus on web development.

Implications

- Developers need to be familiar with these technologies to succeed in the modern development landscape.
- Need for greater diversity and inclusion in the tech industry, and developers need formal education to succeed.
- Developers need to stay current with new technologies and adapt their skills to embrace emerging trends.
- It remains a vital domain, making it essential for developers to hone their web development skills.

OVERALL FINDINGS & IMPLICATIONS

Findings

- Growing importance of data management.
- Developers need diverse skillsets.
- Mobile development (Android and iOS) continues to be important.
- United States accounts for most developers (27.4% of the total)

Implications

- Developers need to prioritize data management skills to handle the growing volume and complexity of data.
- The evolving tech industry requires developers to possess a broad range of skills and adaptability to succeed.
- Skills to create applications for both Android and iOS platforms are in demand.
- The US tech industry is a major player in the global developer landscape, influencing trends and attracting talent.

CONCLUSION



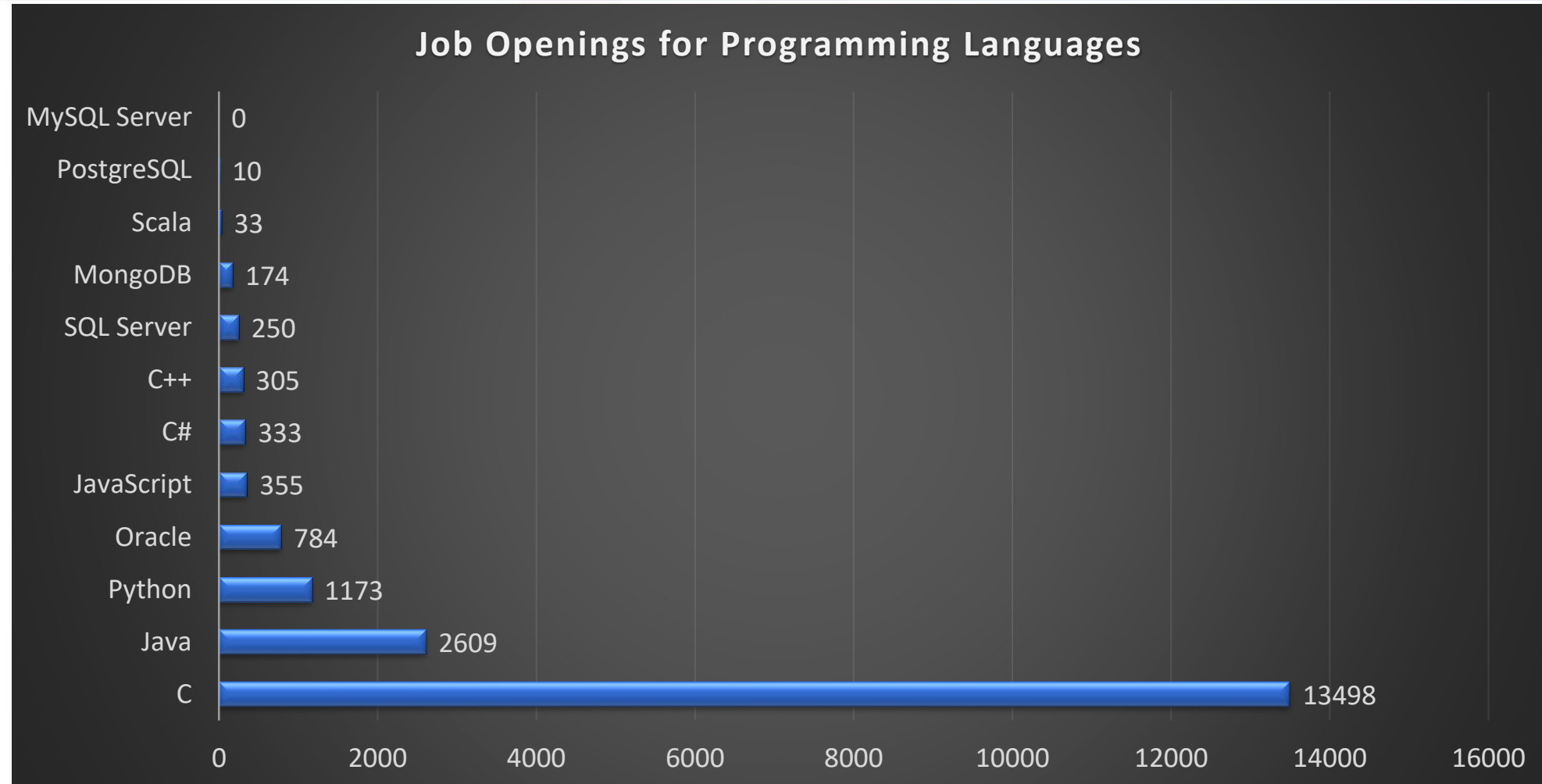
- Implications for businesses and developers
 - Investing in cloud technologies and containerization.
 - Focusing on JavaScript, Python, and related skills.
 - Adopting modern databases.
 - Addressing the gender gap in tech.
- Potential opportunities
 - Growth in specialized fields like data science, AI, and cloud security.
 - Demand for skilled developers in emerging markets.

APPENDIX



- Data of Top 10 Most Job Openings for Programming Languages
- Programming Languages popularity according to Avg Annual Salary

JOB POSTINGS



POPULAR LANGUAGES

