



STACK OVERFLOW DEVELOPER SURVEY 2019

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November 11/2023

OUTLINE



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

EXECUTIVE SUMMARY



- Summary of data contextualization and analysis
- Methodology overview :
 - Data Collection
 - Data Analysis
 - Data Visualization
- Result presentation supported by graphical representation
- Discussion of findings
- Concluding remarks

INTRODUCTION



- The annual Developer Survey by Stack Overflow stands as the most extensive and inclusive survey capturing insights from individuals involved in coding globally.
- The outcomes may not uniformly reflect the entire diversity within the developer community.
- The survey aims to identify trends that can offer insights into the future directions of developers.
- A substantial participant pool of almost 90,000 developers contributed to the survey.
- It involves the profiling of developers on a global scale.

METHODOLOGY



- Data Collection :
 - APIs
 - Web Scrapping
 - Request Library
- Data Wrangling
- Exploratory Data Analysis :
 - Analyzing data distribution
 - Handling outliers
 - Correlation
- Data Visualization
 - Emphasize data distribution, relationships, composition, and comparison.
- Dashboard

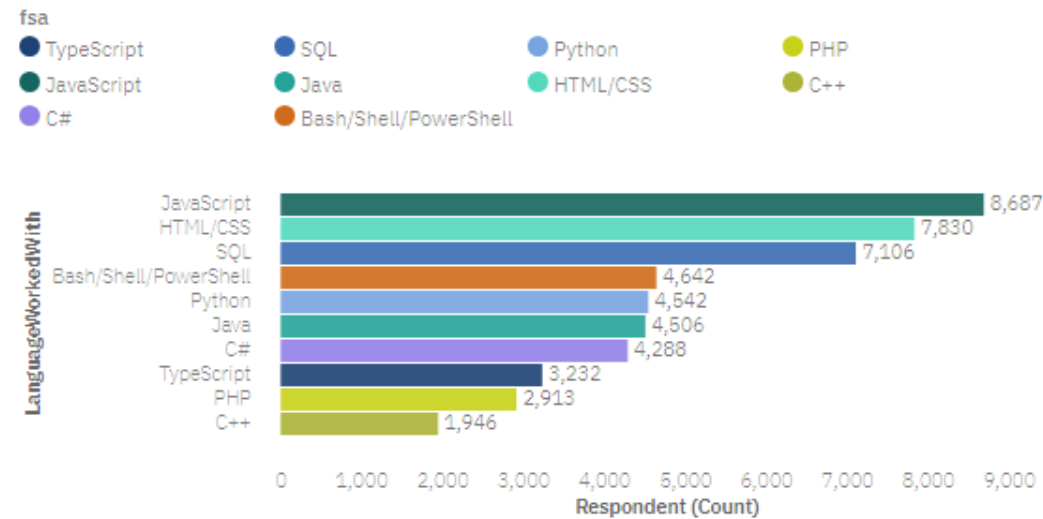


RESULTS

PROGRAMMING LANGUAGE TRENDS

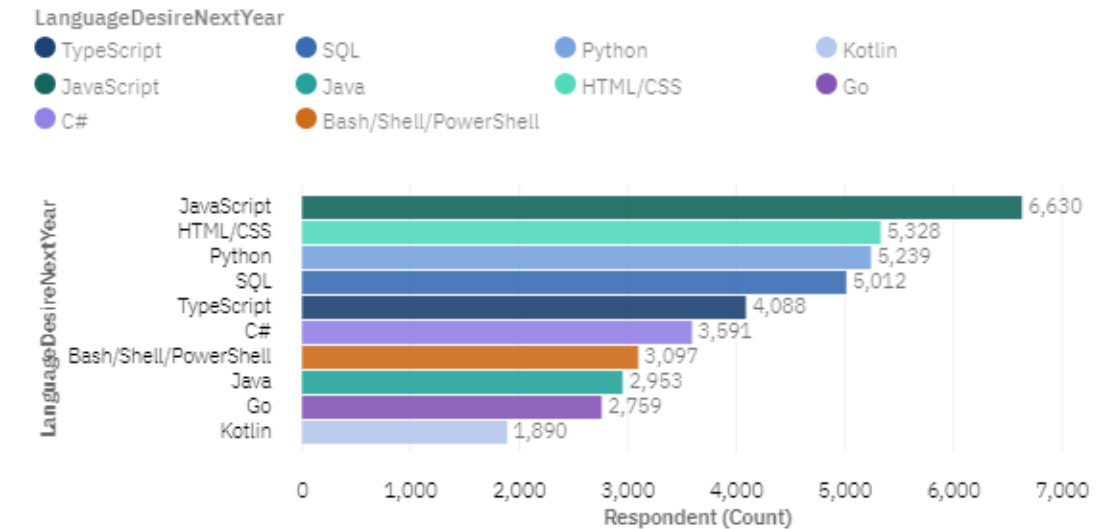
Current Year

Top 10 Language Worked With



Next Year

Top 10 Language Desire Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings :

- In 2019, JavaScript was the most popular and will remain so next year.
- Python fastest-growing.
- PHP and C++ will experience a decline in interest next year

Implications

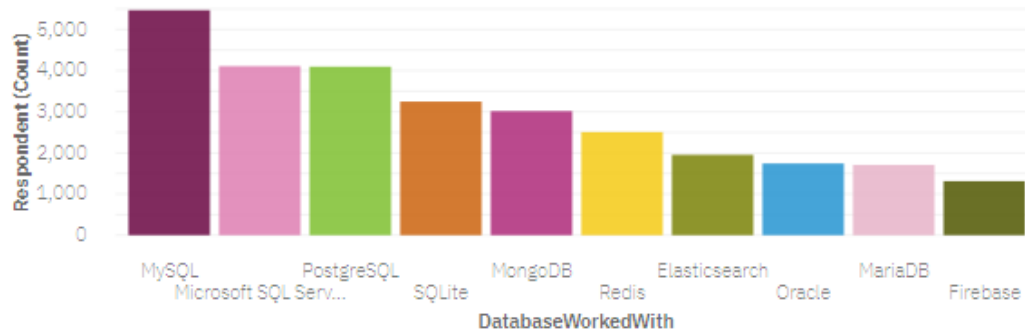
- Organizations and developers should **continue to prioritize JavaScript for web development** and related projects. Investments in training and resources for JavaScript development may yield long-term benefits.
- Organizations and developers may **consider enhancing their proficiency in Python** to capitalize on emerging opportunities in various domains such as data science, machine learning, and backend development.

DATABASE TRENDS

Current Year

Top 10 Database Worked With

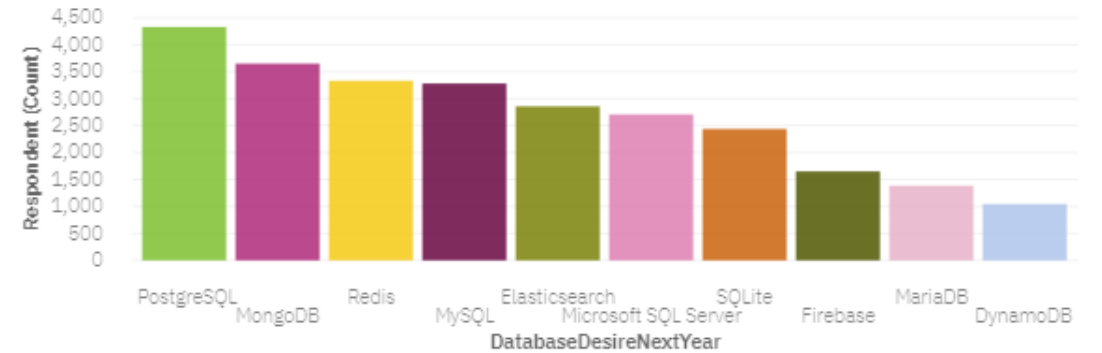
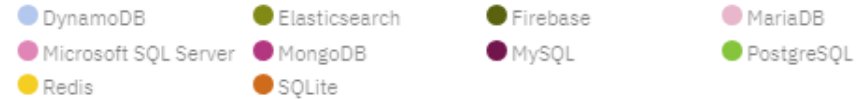
DatabaseWorkedWith



Next Year

Top 10 Database Desire Next Year

DatabaseDesireNextYear



DATABASE TRENDS – FINDINGS & IMPLICATIONS

Findings :

- MySQL is the predominant choice for databases.
- There is minimal enthusiasm for Microsoft SQL Server and SQLite.
- PostgreSQL and MongoDB are gaining popularity.

Implications :

- Widespread MySQL use may lead to a **robust community**, extensive documentation, and broad support.
- Limited exploration of Microsoft SQL Server might mean **missing out on its enterprise features**, and SQLite's simplicity might not meet certain complex requirements.
- Rising popularity PostgreSQL suggests that **more organizations are valuing PostgreSQL's** advanced features, scalability, and extensibility.

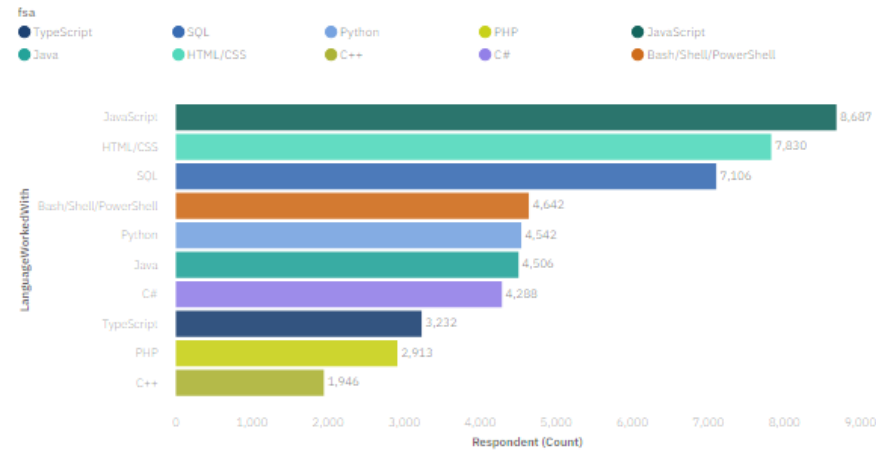
DASHBOARD



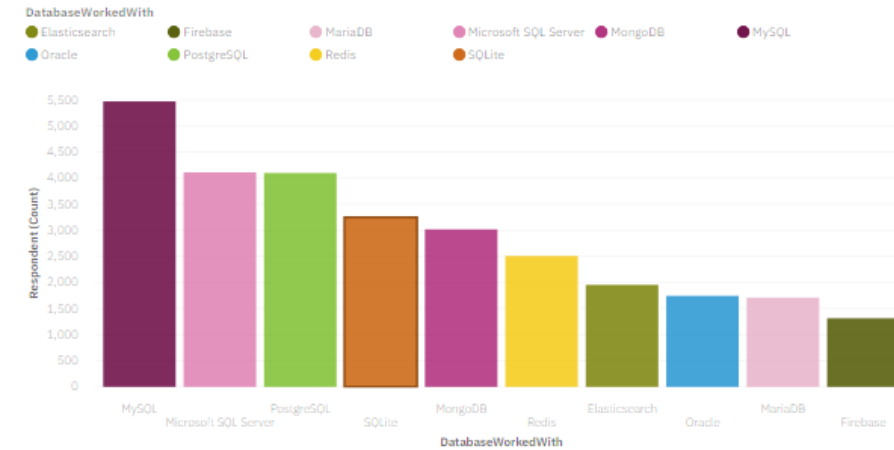
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CURRENT TECHNOLOGY USAGE

Top 10 Language Worked With



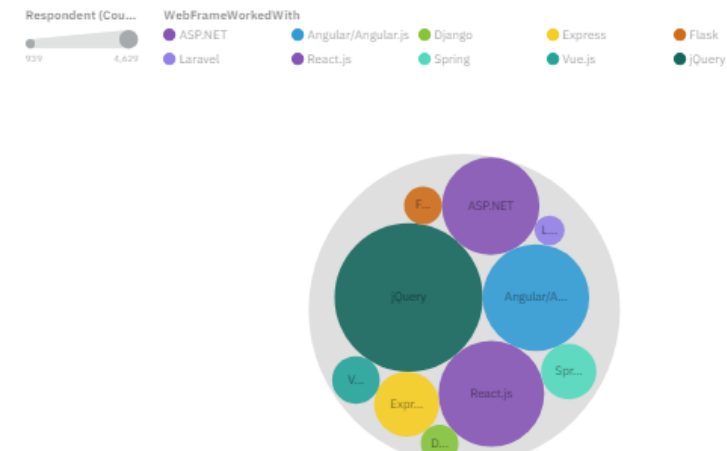
Top 10 Database Worked With



Platform Worked With

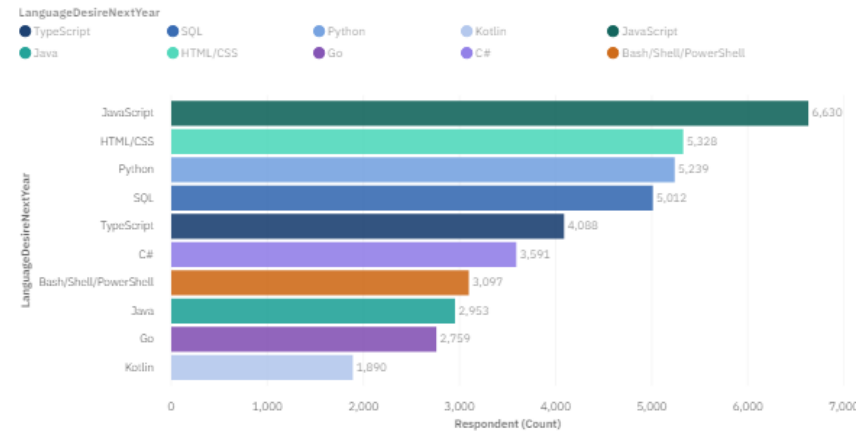


Top 10 Web Frame Worked With

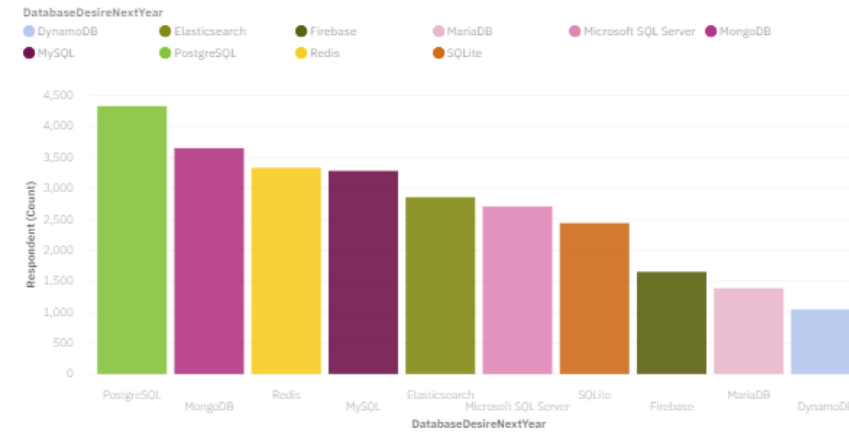


FUTURE TECHNOLOGY TREND

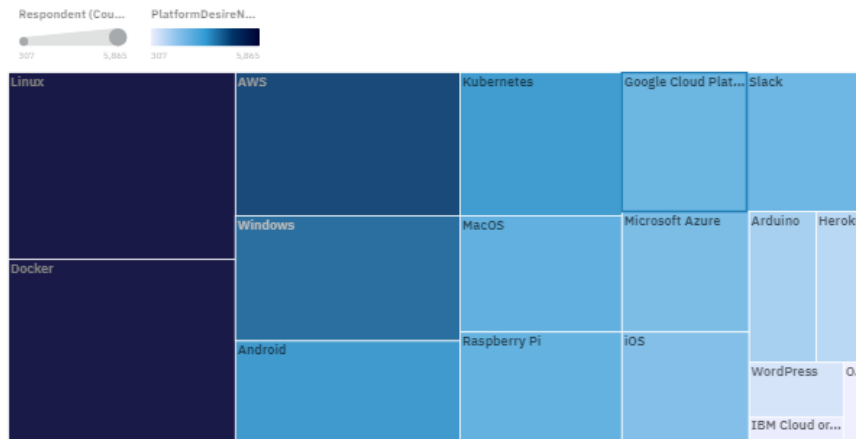
Top 10 Language Desire Next Year



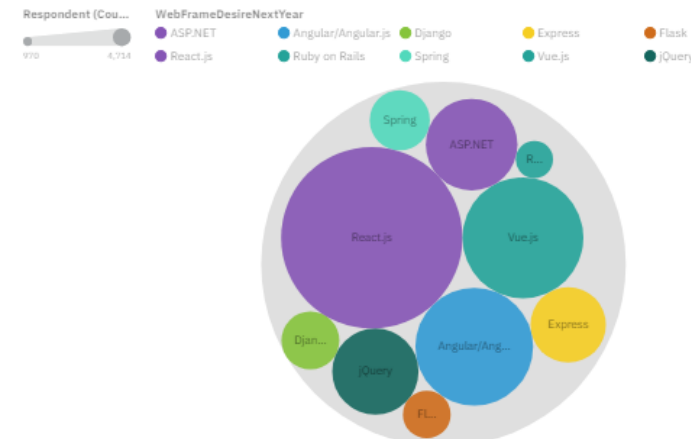
Top 10 Database Desire Next Year



Platform Desire Next Year



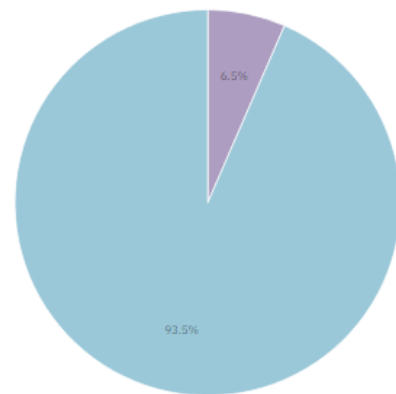
Top 10 Web Frame Desire Next Year



DEMOGRAPHICS

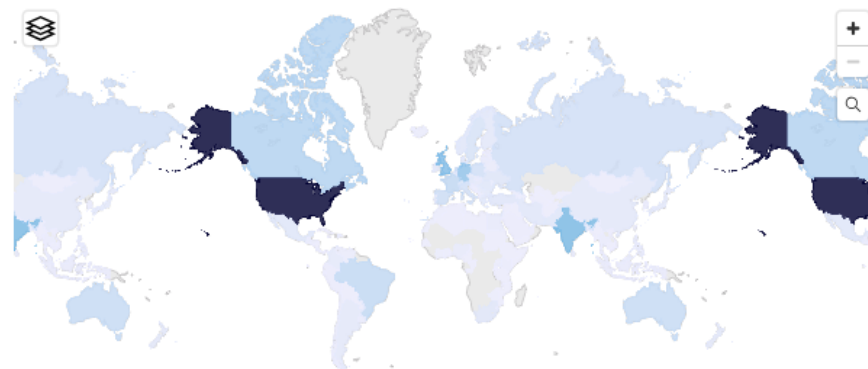
Respondent classified by Gender

Gender
Woman Man

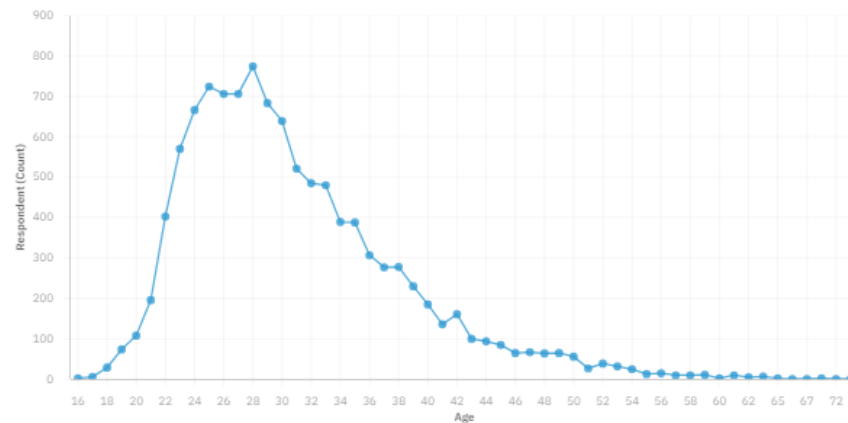


Respondent Count for Countries

Respondent (Cou...
1 3,000

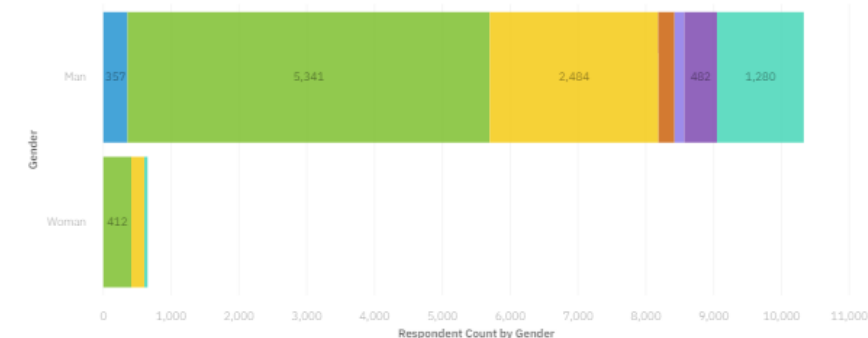


Respondent Count by Age



Respondent Count by Gender, classified by Formal Education Level

EdLevel
Associate degree Bachelor's degree (BA, BS, B.E... Master's degree (MA, MS, M.E... Other doctoral degree (Ph.D, E... Professional degree (JD, MD, e... Secondary school (e.g. Americ... Some college/university study ...





DISCUSSION

OVERALL FINDINGS & IMPLICATIONS

Findings :

- The majority of developers fall within the age range of 22 to 26 years old.
- JavaScript is extensively utilized.
- More than 90% of developers are male.
- Developers are primarily situated in developed nations.

Implications :

- Given the widespread use of JavaScript, developers might find it beneficial to enhance their proficiency in these languages to stay competitive in the job market.
- As developers are mainly located in developed countries, there could be implications for outsourcing, talent acquisition, and the distribution of technological advancements. Developing nations might face challenges in attracting and retaining skilled developers.
- Companies may need to tailor their work environments and benefits to attract and retain talent in the age of 22 to 26.

CONCLUSION

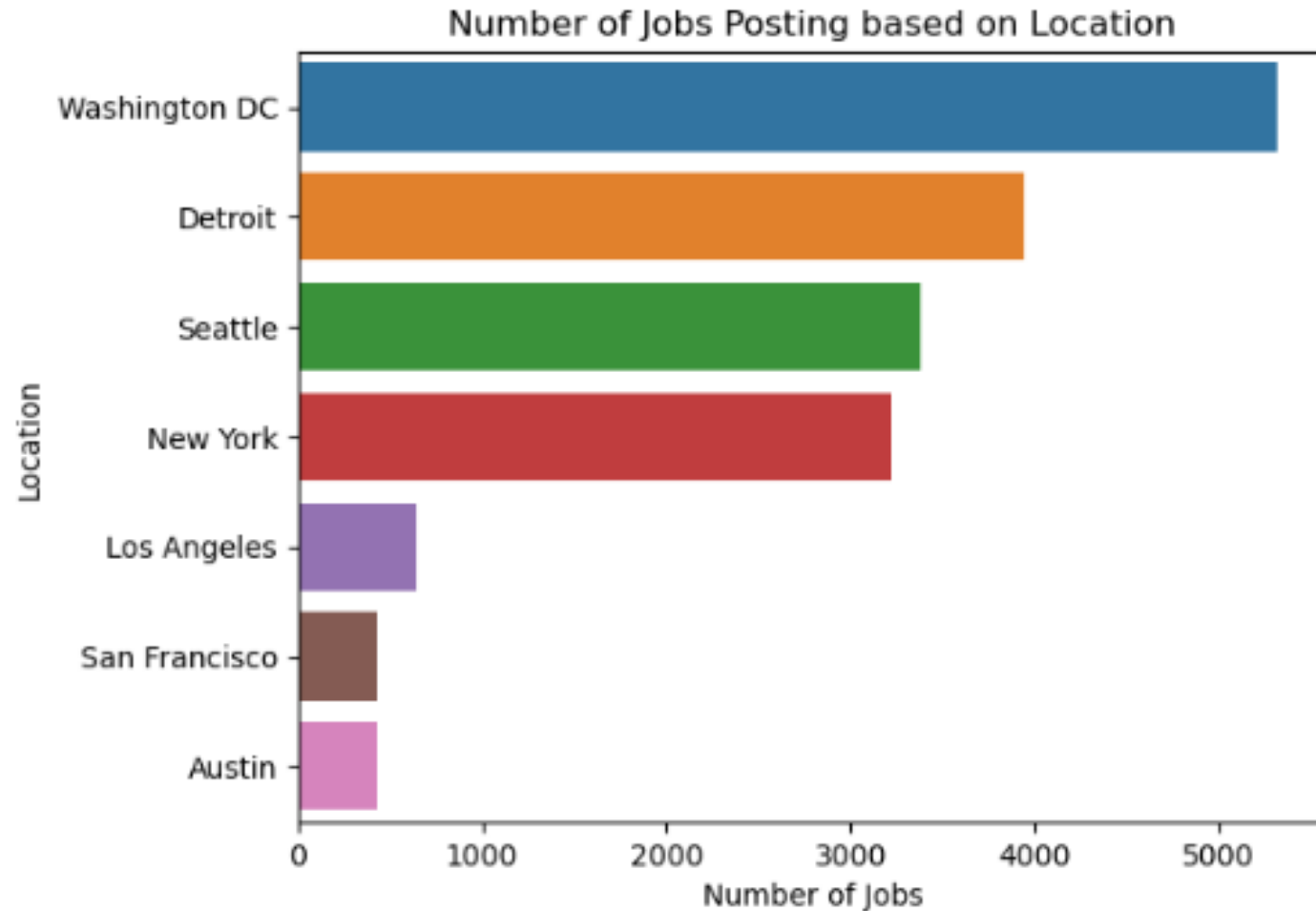


- **Diversify Programming Skills:** Prioritize JavaScript for web development and invest in Python proficiency for emerging opportunities in data science and backend development.
- **Strategic Database Choices:** Choose databases wisely. MySQL provides robust support, explore Microsoft SQL Server for enterprise features, and consider PostgreSQL for advanced capabilities.
- **Global Talent Dynamics and Age Factors:** Navigate global talent challenges, especially in developing nations. Tailor work environments to attract and retain developers aged 22 to 26, ensuring competitiveness in the job market.



APPENDIX

JOB POSTINGS



POPULAR LANGUAGES

