



STACK OVERFLOW DEVELOPER SURVEY 2019

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OUTLINE



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

EXECUTIVE SUMMARY



- **Research Objectives:** Goals and methodology.
- **Data Collection and Analysis:** Overview of data sources and analysis process.
- **Key Findings:** Highlighting major insights, trends, and results.
- **Implications:** Discussing the significance and potential impact of the findings.
- **Conclusions:** Summarizing the research outcomes and future considerations.

INTRODUCTION



- **The DATA:** The largest global survey of developers, conducted annually by Stack Overflow.
- **Key Insights:** Highlighting valuable trends and insights from a substantial sample of nearly 90,000 developers.
- **Predicting Trends:** Identifying emerging trends and characterizing the global developer community.

METHODOLOGY



- **Data Collection:** Gathering survey data through web scraping, APIs, and the Request library.
- **Data Wrangling:** Preparing and cleaning the data, including exploratory data analysis to understand data distribution, handle outliers, and explore correlations.
- **Data Visualization:** Utilizing data visualizations to highlight data distribution, relationships, and comparisons, as well as creating informative dashboards.

RESULTS

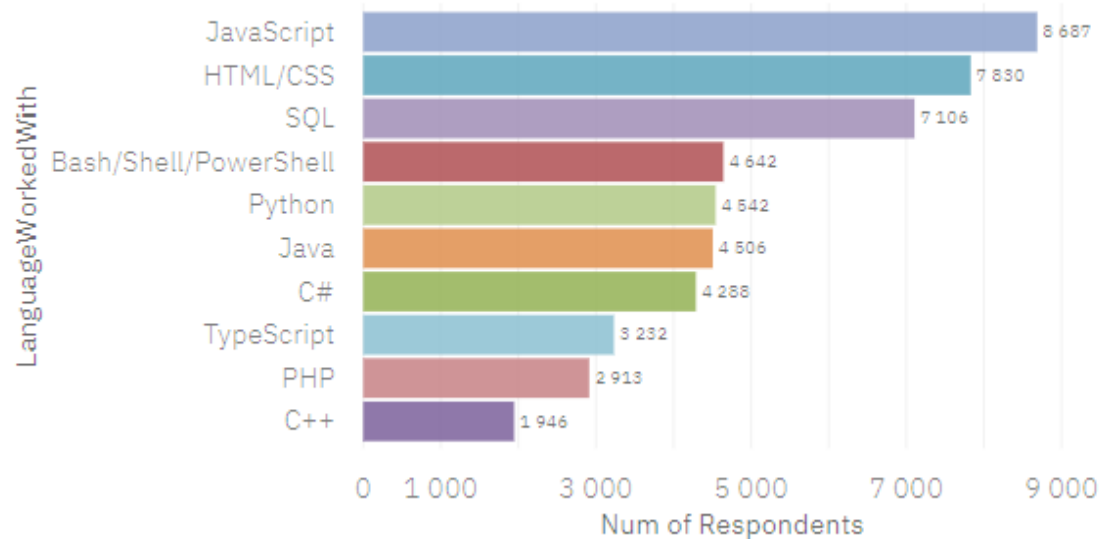
Our research has identified important trends in the world of development. We see a need for a more diverse and inclusive environment among developers. Additionally, with the emergence of new technologies and the growth of the open-source movement, the development industry continues to evolve. These findings can assist in decision-making and shaping future strategies in the software development field.

PROGRAMMING LANGUAGE TRENDS

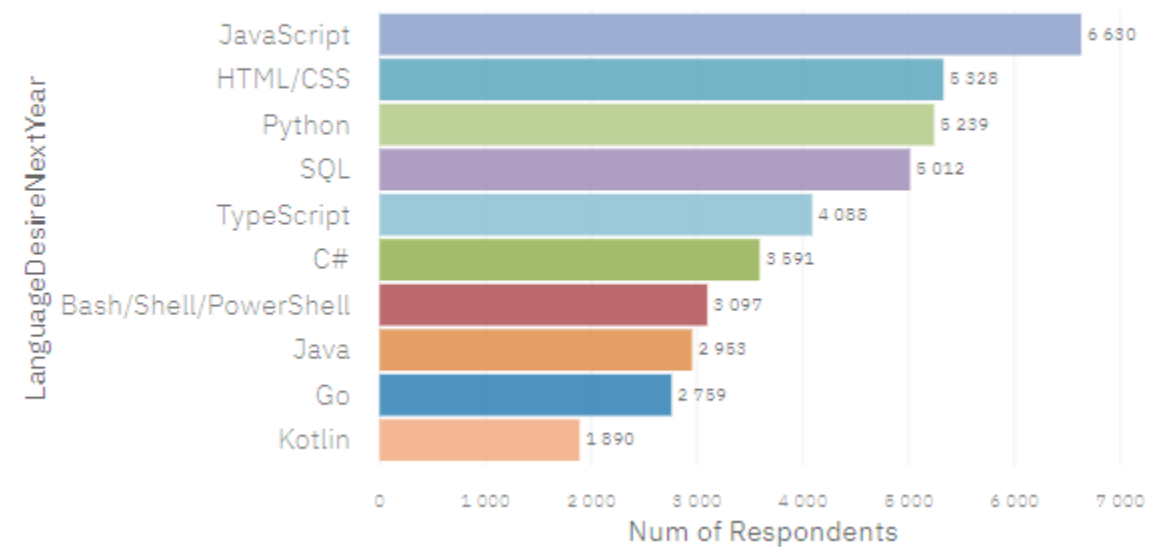
Current Year

Next Year

Top 10 LanguageWorkedWith



Top 10 LanguageDesireNextYear.



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript and HTML/CSS continue to be the most popular languages.
- Python is the fastest-growing language.
- There is significant interest in TypeScript.
- Go and Kotlin are newcomers, and developers are eager to learn them.

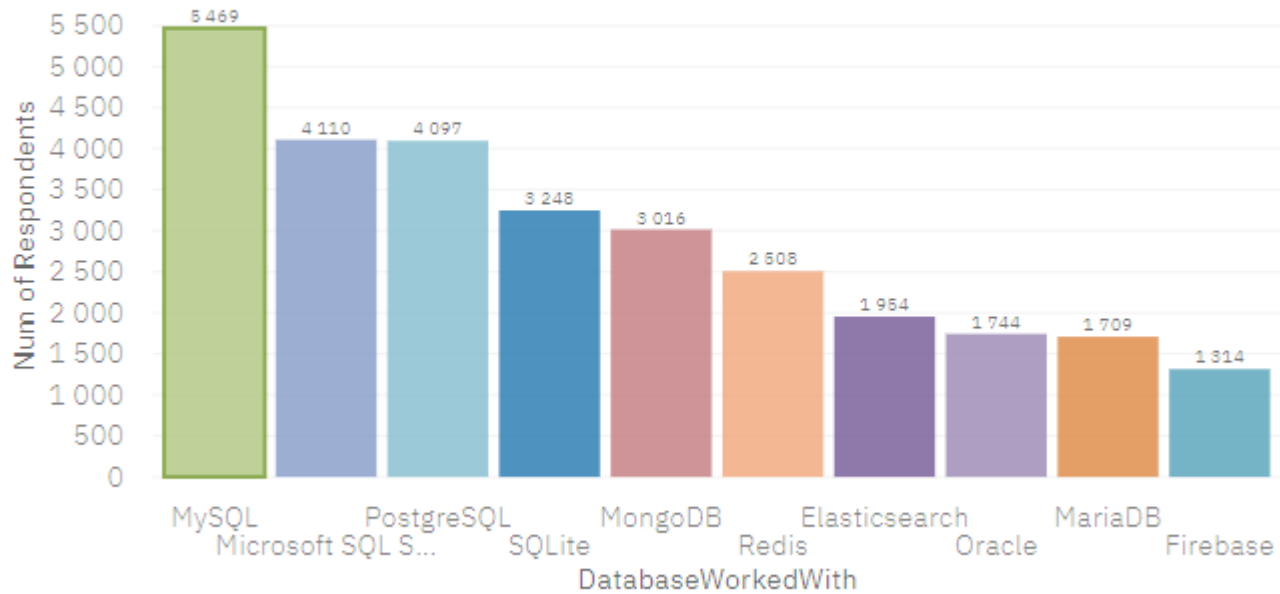
Implications

- Possible migration of developers from JavaScript to TypeScript.
- The growth of Python may indicate a need for more support for this language.
- The introduction of Go and Kotlin may require infrastructure updates and developer training.

DATABASE TRENDS

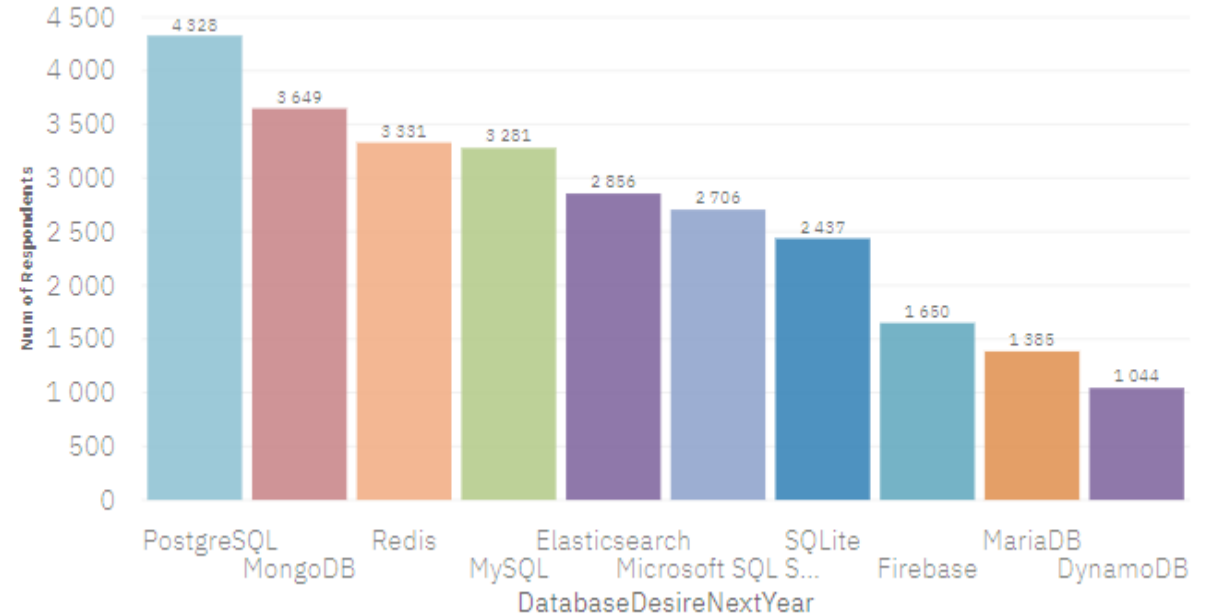
Current Year

Top 10 DatabaseWorkedWith



Next Year

Top 10 DatabaseDesireNextYear



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL is the most commonly used database.
- There is limited interest in Microsoft SQL Server and SQLite.
- There is a growing interest in PostgreSQL and MongoDB.
- Increasing interest in NoSQL databases.
- Rising interest in open-source software.

Implications

- Microsoft SQL Server and SQLite are losing market share.
- PostgreSQL and MongoDB are gaining traction in the market.
- Enterprise products are facing competition from open-source alternatives.

DASHBOARD



[Link to the Dashboard](#)

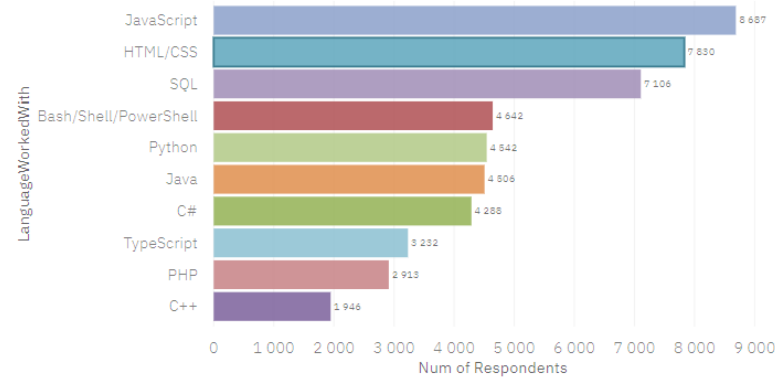
DASHBOARD TAB 1

Current Technology Usage

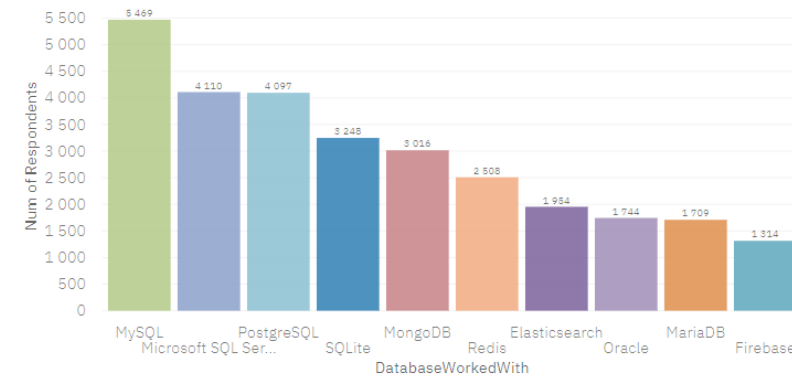
Future Technology Trend

Demographics

Top 10 LanguageWorkedWith



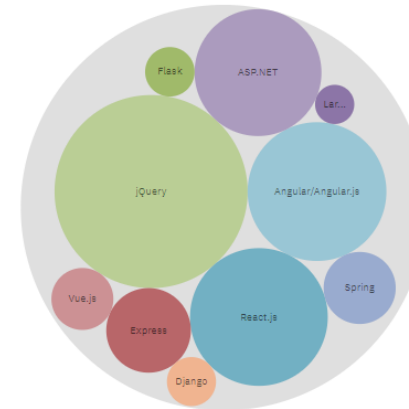
Top 10 DatabaseWorkedWith



PlatformWorkedWith



Top 10 WebFrameWorkedWith



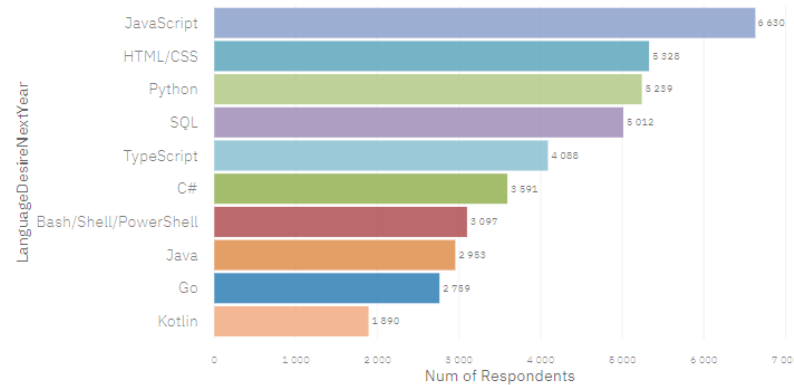
DASHBOARD TAB 2

Current Technology Usage

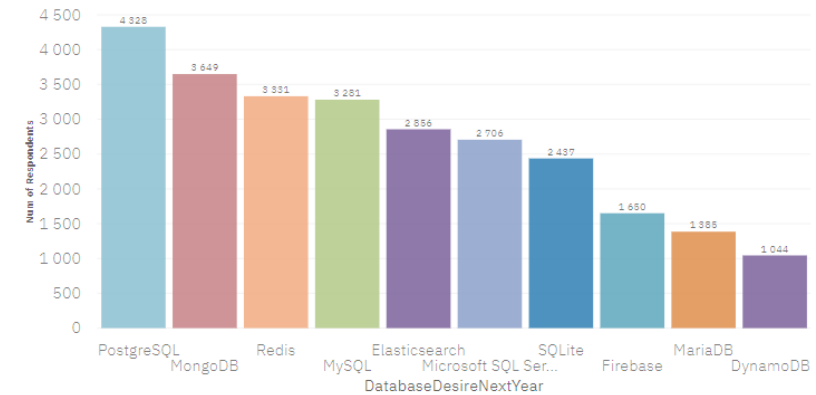
Future Technology Trend

Demographics

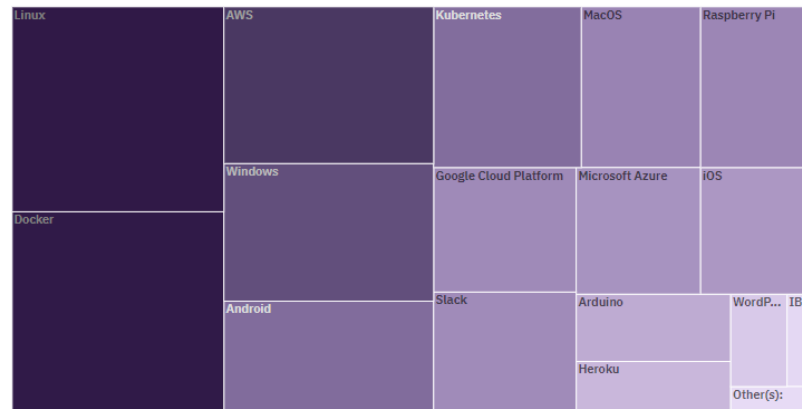
Top 10 LanguageDesireNextYear.



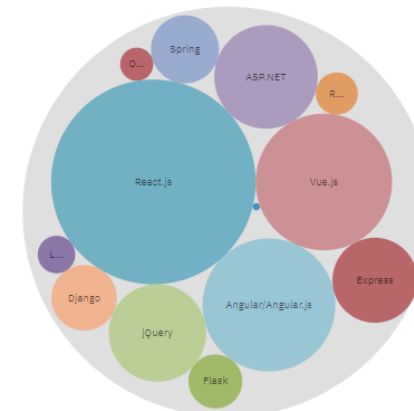
Top 10 DatabaseDesireNextYear



PlatformDesireNextYear



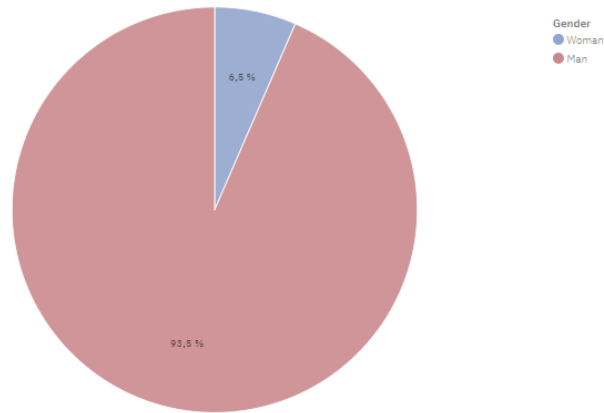
Top 10 WebFrameDesireNextYear



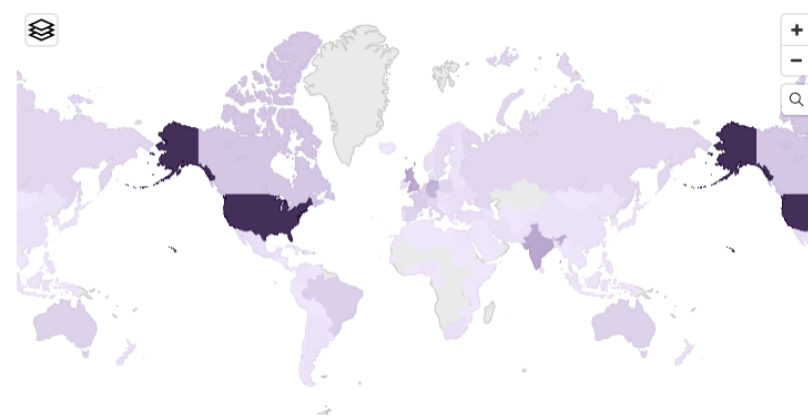
DASHBOARD TAB 3

Current Technology Usage Future Technology Trend Demographics

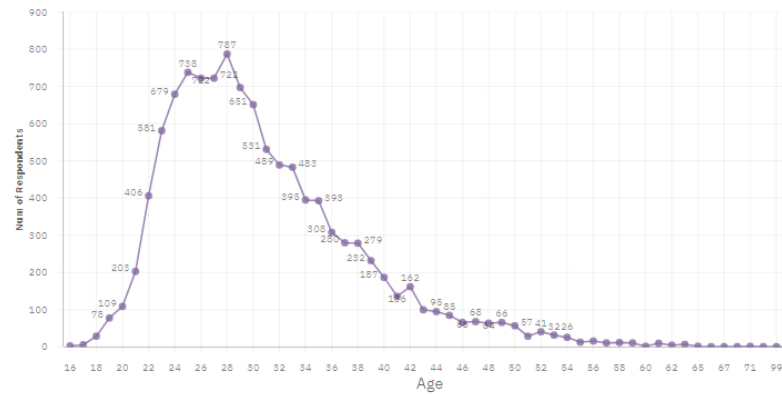
Respondent classified by Gender



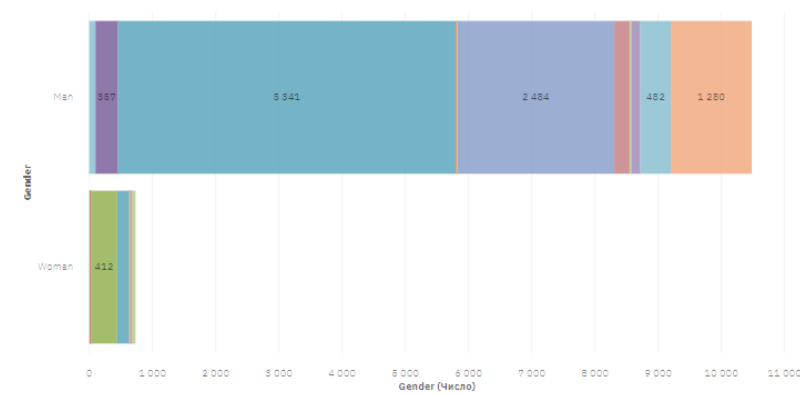
Respondent Count for Countries



Respondent Count by Age



Respondent Count by Gender, classified by Formal Education Level



DISCUSSION



- Transition to open-source.
- New emerging technologies.
- Education of future developers.

OVERALL FINDINGS & IMPLICATIONS

Findings

- JavaScript and TypeScript dominate.
- Over 90% of developers are young males.
- Developers primarily in developed countries.

Implications

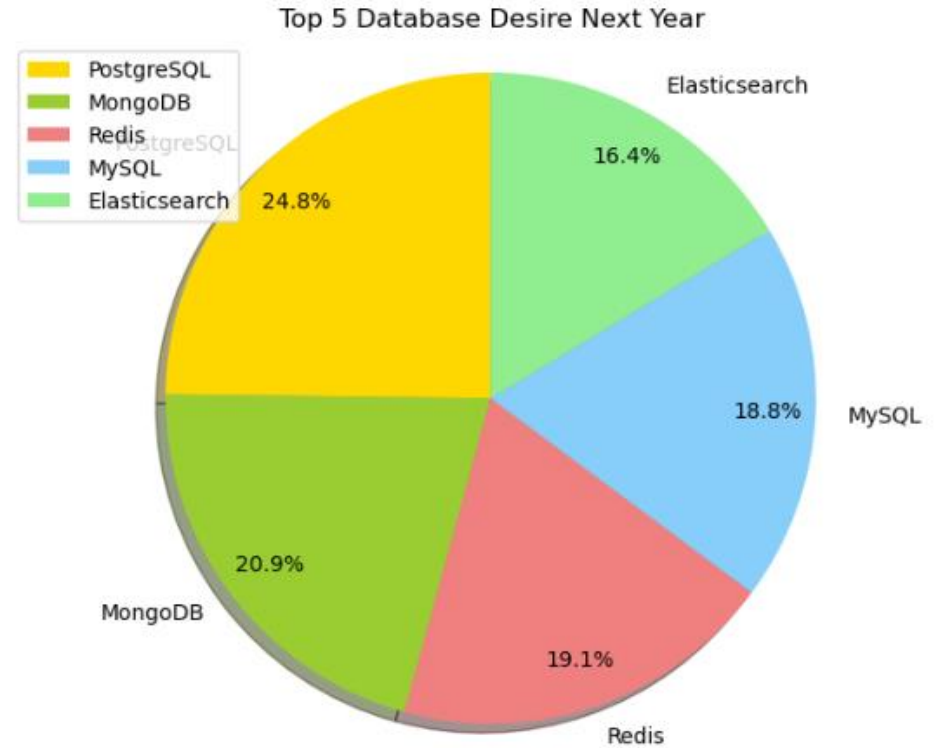
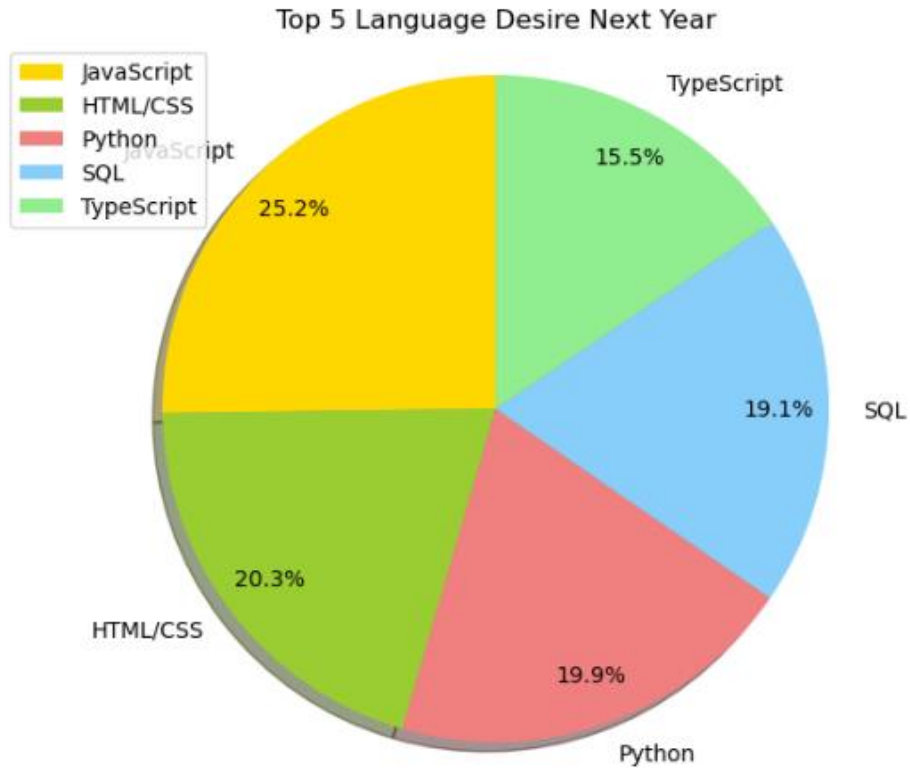
- Impact on web development trends.
- Considerations for demographic diversity.
- Education focus on young developers.

CONCLUSION

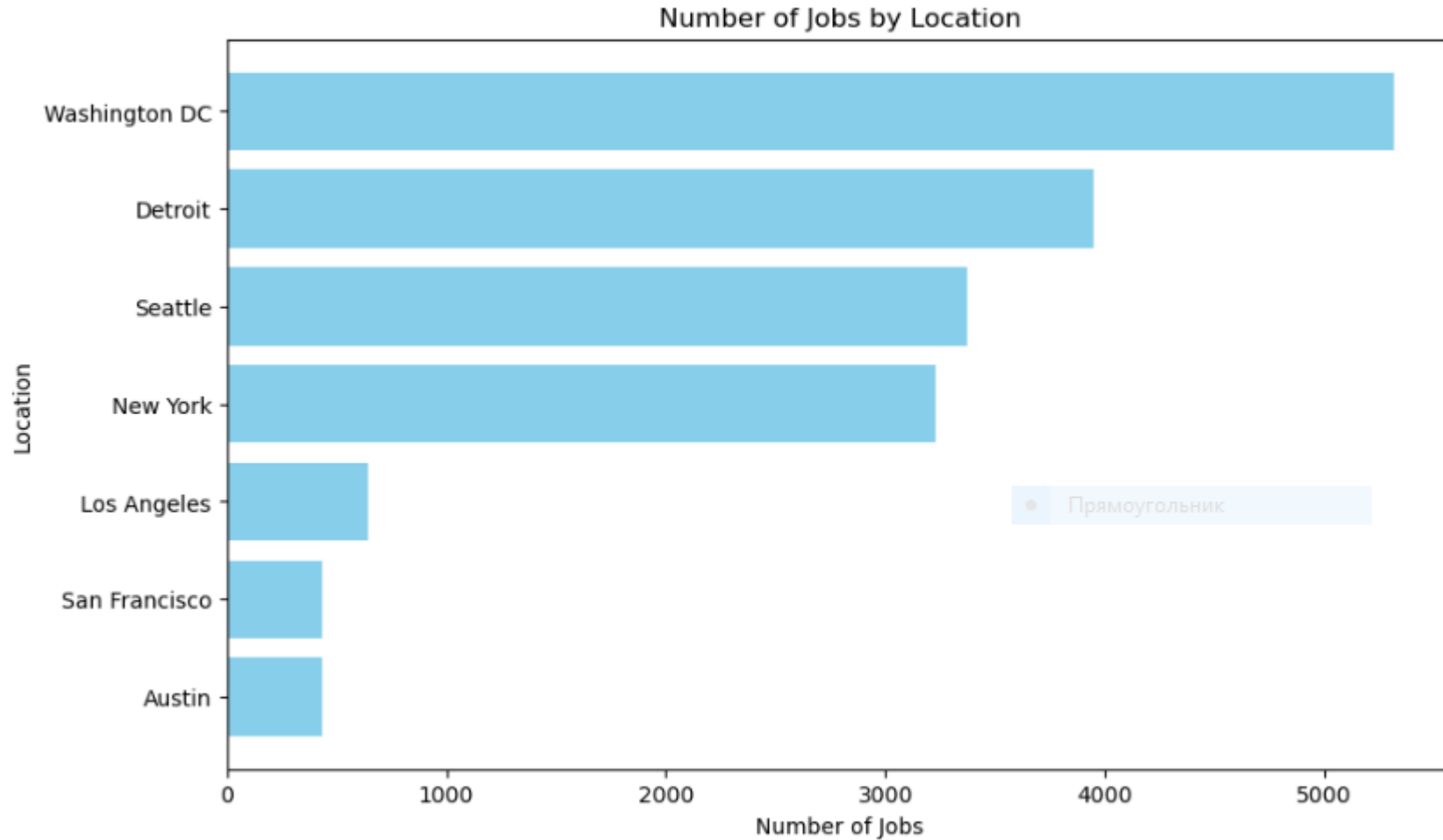


- **Educational Opportunities:** Despite the expanding tech market, there's a pressing need for enhanced educational programs, particularly in developing nations. Bridging this educational gap can unlock untapped potential.
- **Open-Source Dominance:** Open-source technologies continue to gain prominence. Embracing these trends can help organizations stay competitive and innovative in the evolving tech landscape.
- **Gender Disparity:** The tech industry exhibits a significant gender disparity, with a predominance of male developers. Achieving gender balance remains an essential goal for the field.

APPENDIX



JOB POSTINGS



POPULAR LANGUAGES

