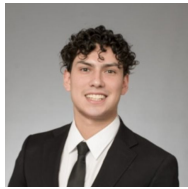


2022 Stack Overflow Developer Survey: Report



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06.15.2025

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OUTLINE



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

EXECUTIVE SUMMARY



- Current Technology usage
 - Top 10 current Programming languages
 - Top 10 current Databases
 - Top 10 current Platforms
 - Top 10 current Frameworks
- Future Technology use
 - Desired Programming Languages
 - Desired Databases
 - Desired Platforms
 - Desired Frameworks
- Demographics
 - Age Distribution
 - Respondent location
 - Formal Education level

INTRODUCTION



- Purpose
 - Identify current and future tech trends from the 2022 Stack Overflow Developer Survey.
- Focus
 - Developer programming languages, Database, platforms & Frameworks
- Target Audience
 - Internal Stakeholders
 - Developers following industry demands
 - Individuals interested in tech trends
- Value
 - Supports data driven decisions for tech hiring
 - Shifts in tech use and skills
 - Identifying emerging technologies.

METHODOLOGY

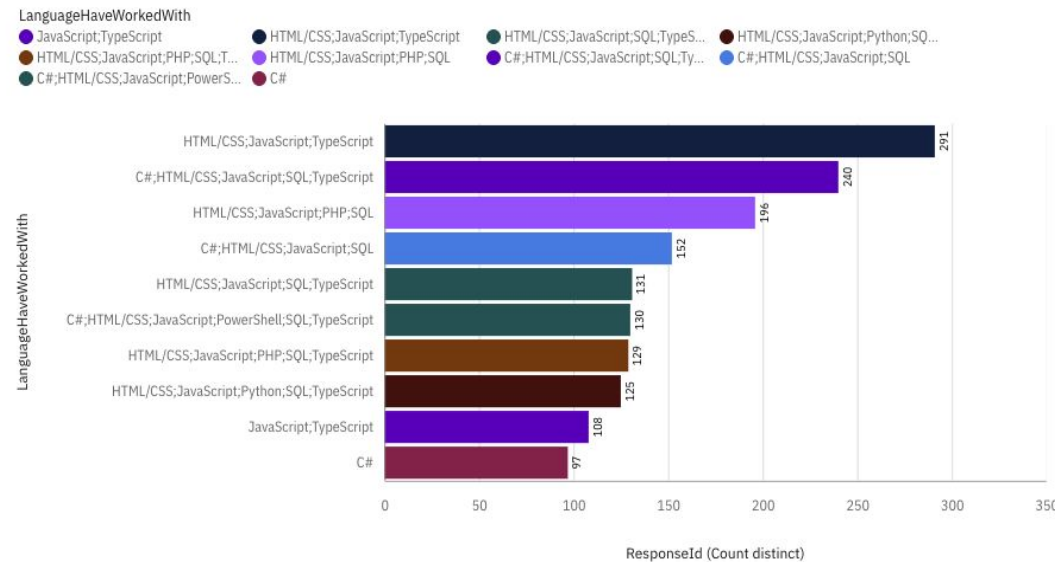


- Dataset: Stack Overflow Developer Survey 2022 (provided by IBM)
- Data Collection
 - Web Scraping (BS4)
 - APIs
- Data Wrangling (SQL & Python)
 - Normalizing & handling outliers
 - Removing missing values & duplicates
 - Used pandas & numpy libraries
- Data visualization
 - Created visualizations using Python (seaborn & matplotlib)
 - Used IBM Cognos Analytics to create dashboards

PROGRAMMING LANGUAGE TRENDS

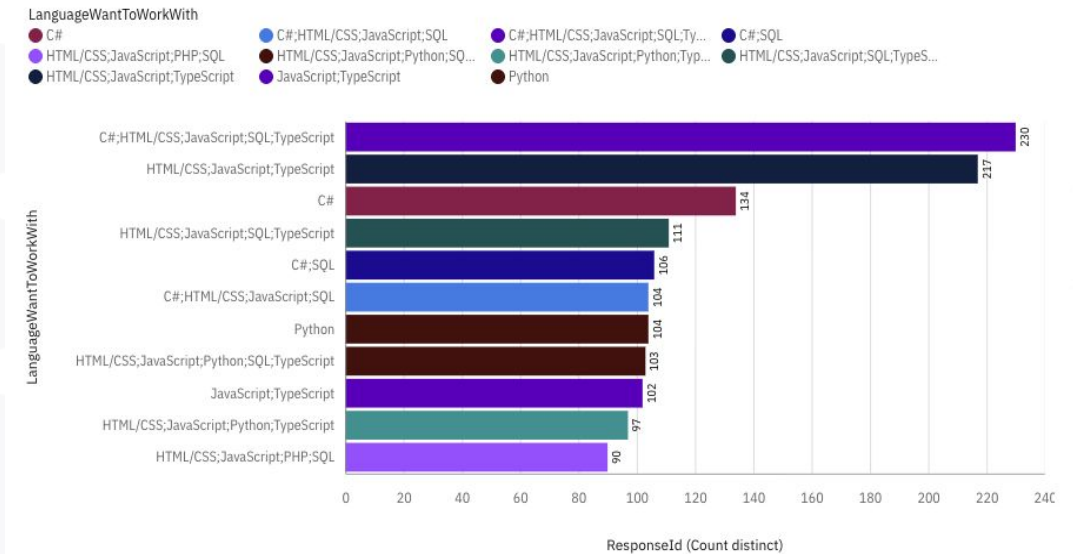
Current Year

Top 10 LanguageHaveWorkedWith.



Next Year

Top 10 LanguagesWantToWorkWith.



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- Java, HTML/CSS, Typescript are most used languages and continue to be most desired
- C# emerges as most desired language for the future
- Increasing desire to work with Python
- SQL remains as a highly used and desired language

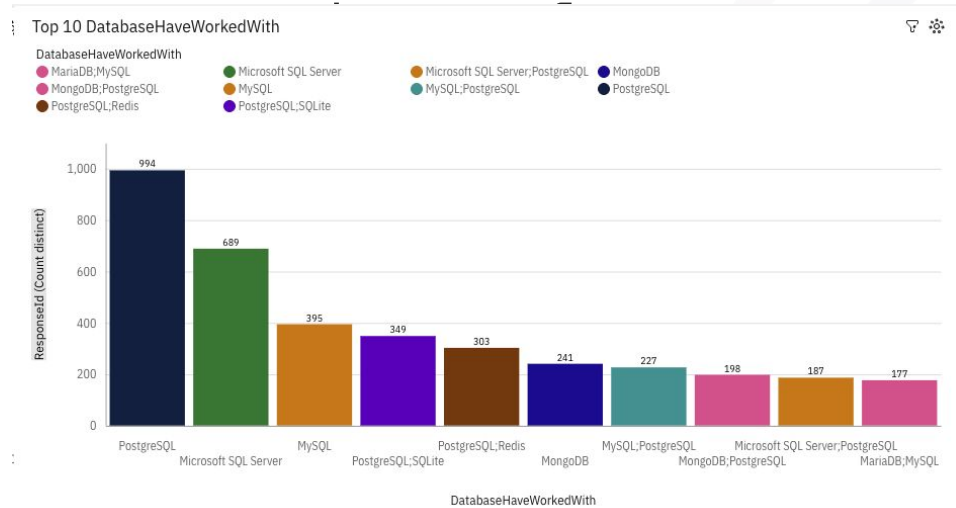
Implications

- The usage of Java, HTML and Typescript demonstrate the industry standard for web-development languages.
- There is a shift in the industry towards the usage of C# and the performance capabilities.
- SQL popularity highlights the need for data management and analysis.

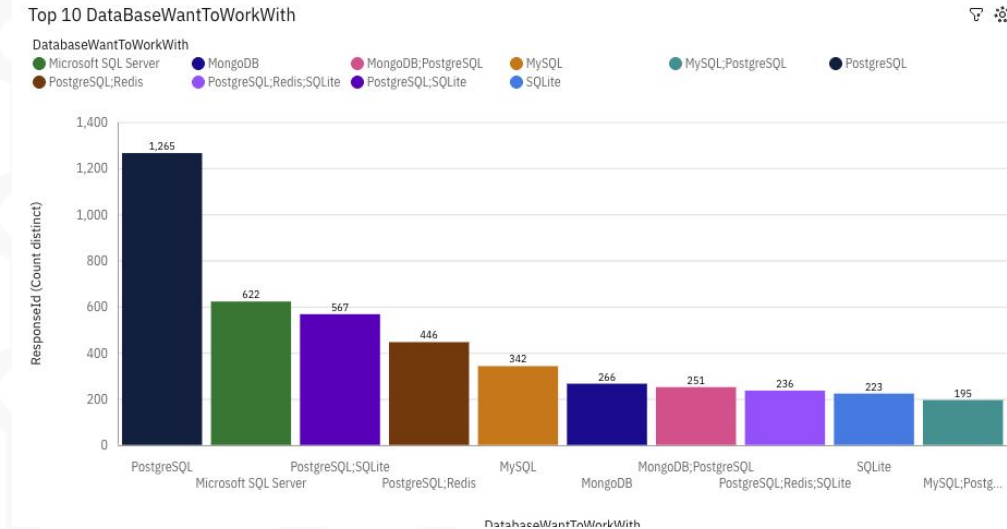


DATABASE TRENDS

Current Year



Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- PostgreSQL is the most popular language
- Growth in future of SQLite
- MongoDB is the top NOSQL database
- MySQL is falling in the top database rankings
- Increases responses for use of databases

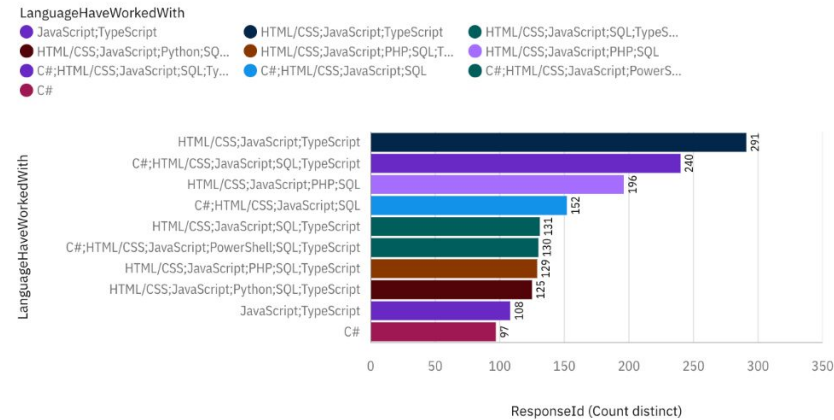
Implications

- Popular databases like PostgreSQL and Microsoft SQL demonstrate high use of relational databases for developers
- There were more responses for databases wanted to be worked with than current uses showing increase demand.
- Variety of databases shows the importance of choosing best platforms to fit individual project needs.
- MongoDB remains as the industry standard for NOSQL databases.

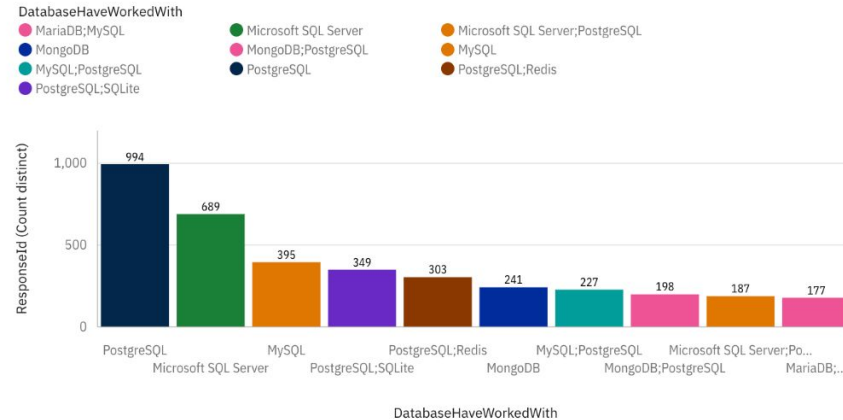


Current Trends

Top 10 LanguageHaveWorkedWith.



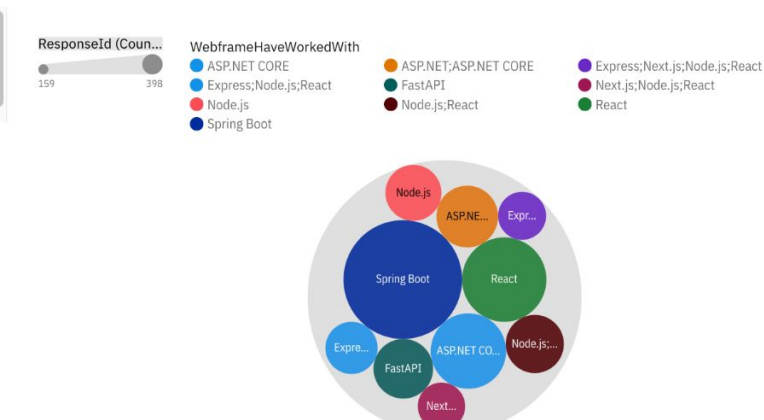
Top 10 DatabaseHaveWorkedWith



Top 10 PlatformHaveWorkedWith

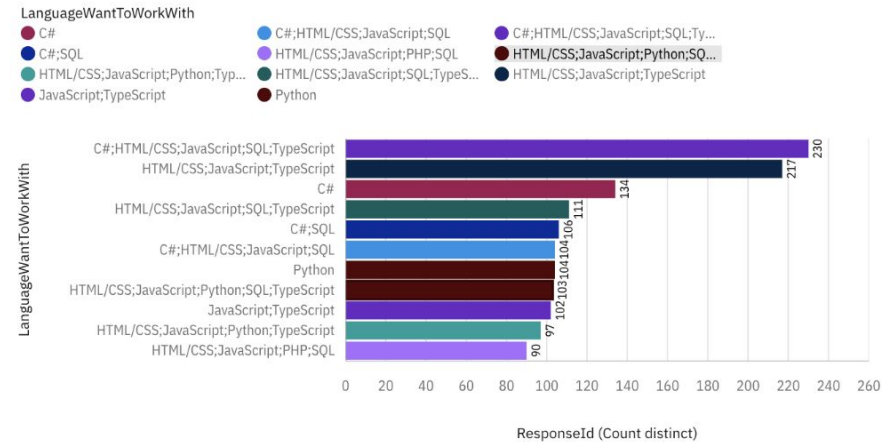


Top 10 WebFrameHaveWorkedWith

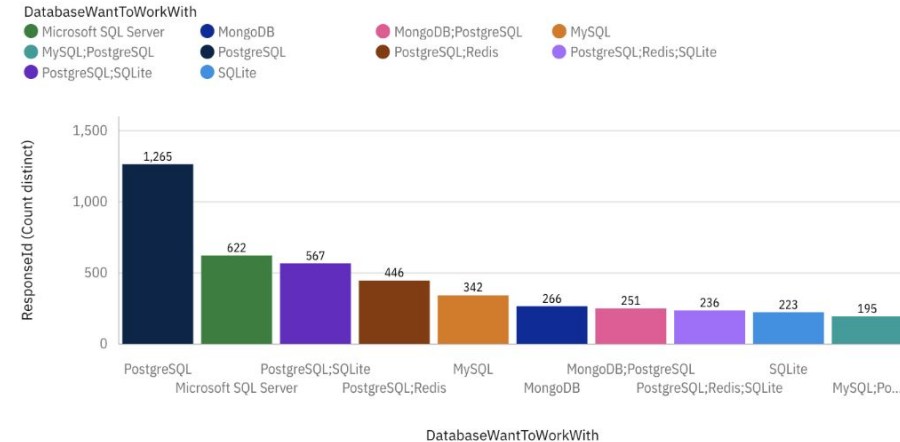


Future Trends

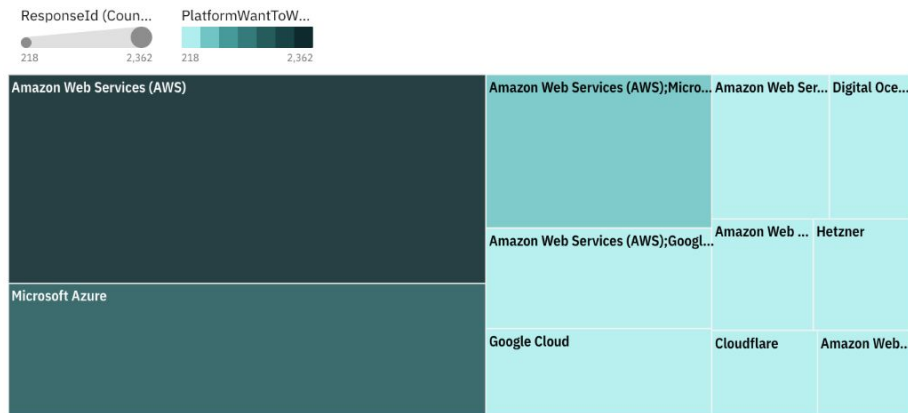
Top 10 LanguagesWantToWorkWith.



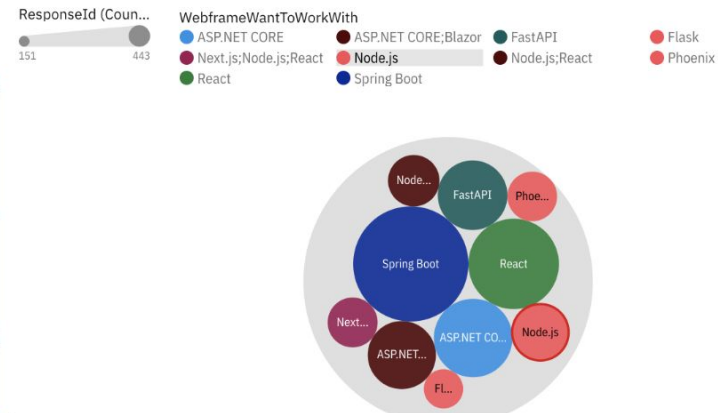
Top 10 DataBaseWantToWorkWith



PlatformWantToWorkWith hierarchy colored by PlatformWantToWorkWith and sized by ResponseId

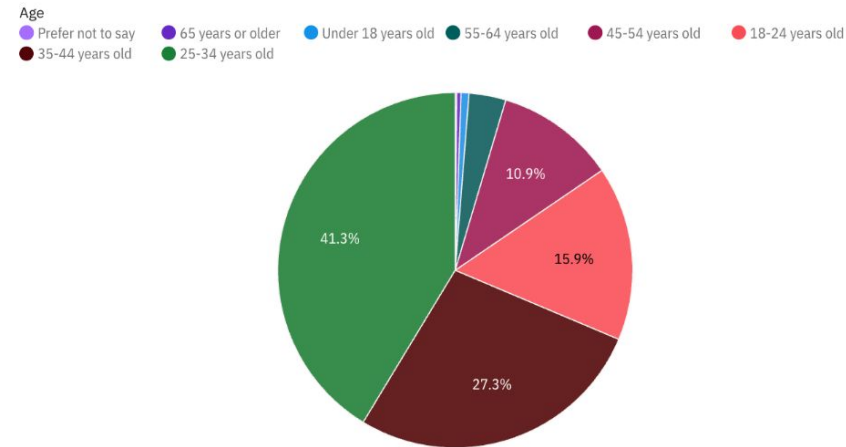


Top 10 WebFrameWantToWorkWith

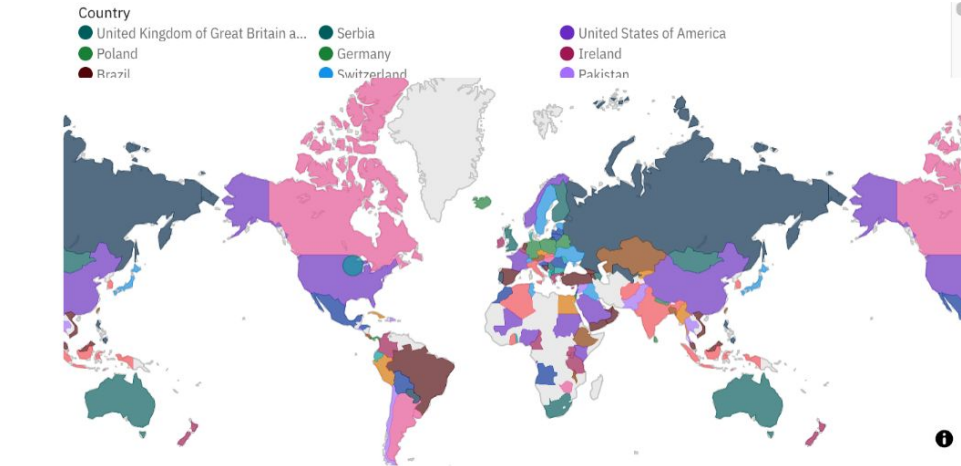


Demographics

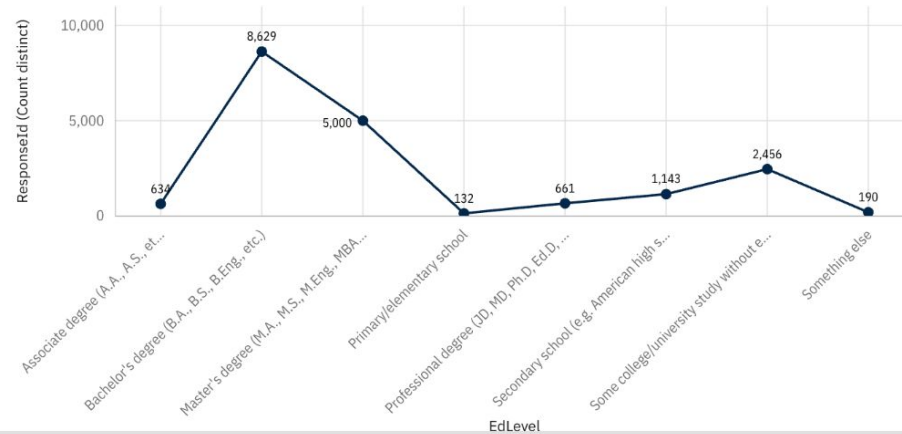
Respondent distribution by Age



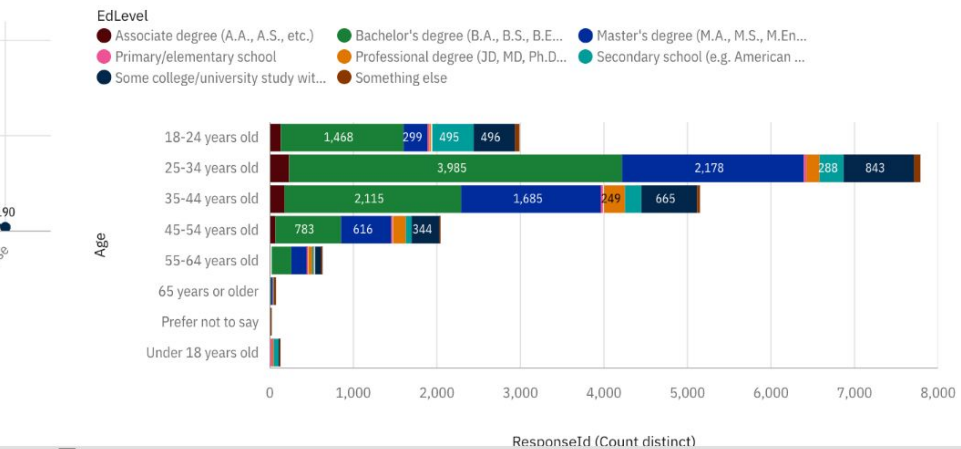
Respondent Count by Country



Respondent distribution by Formal Education Level



Respondent Count by Age, classified by Education Level



DISCUSSION



- Prominence of JavaScript, HTML for web development and use of SQL for database managing.
- Importance of the skills behind web development show how critical these languages are for the industry.
- Over 67% of all respondents are ages 50 or younger.
- AWS, Google, and Microsoft have technological monopolies over cloud architecture platforms



OVERALL FINDINGS & IMPLICATIONS

Findings

- JavaScript, TypeScript and HTML/CSS are significantly the most used languages by respondents
- Majority of developer respondents in the industry are younger than 35 years old
- Web Frames is the industry that is projected to change the most compared to platforms, databases and languages.
- Rise in use of SQL among developers

Implications

- Web Development is the most significant use of developers as shown by the use of JavaScript, HTML/CSS and Typescript
- Database management is a skill needed by many web developers in the future with the surge in data collection
- Web Frames are a very competitive industry with most popular ones changing significantly year over year.
- The increase in young developers indicate the growth and need for developers.

CONCLUSION



- The themes throughout the survey show how large the skill set that professional developers must have in a rapidly changing sector.
- Developers must need to learn quickly and adapt to new platforms, languages, databases and web frames to stay up to industry standards.
- Knowledge in being able to handle databases is extremely necessary in order to build web applications going forward.
- The industry is projected to grow with the influx of data collection and storage making data driven decision making important.

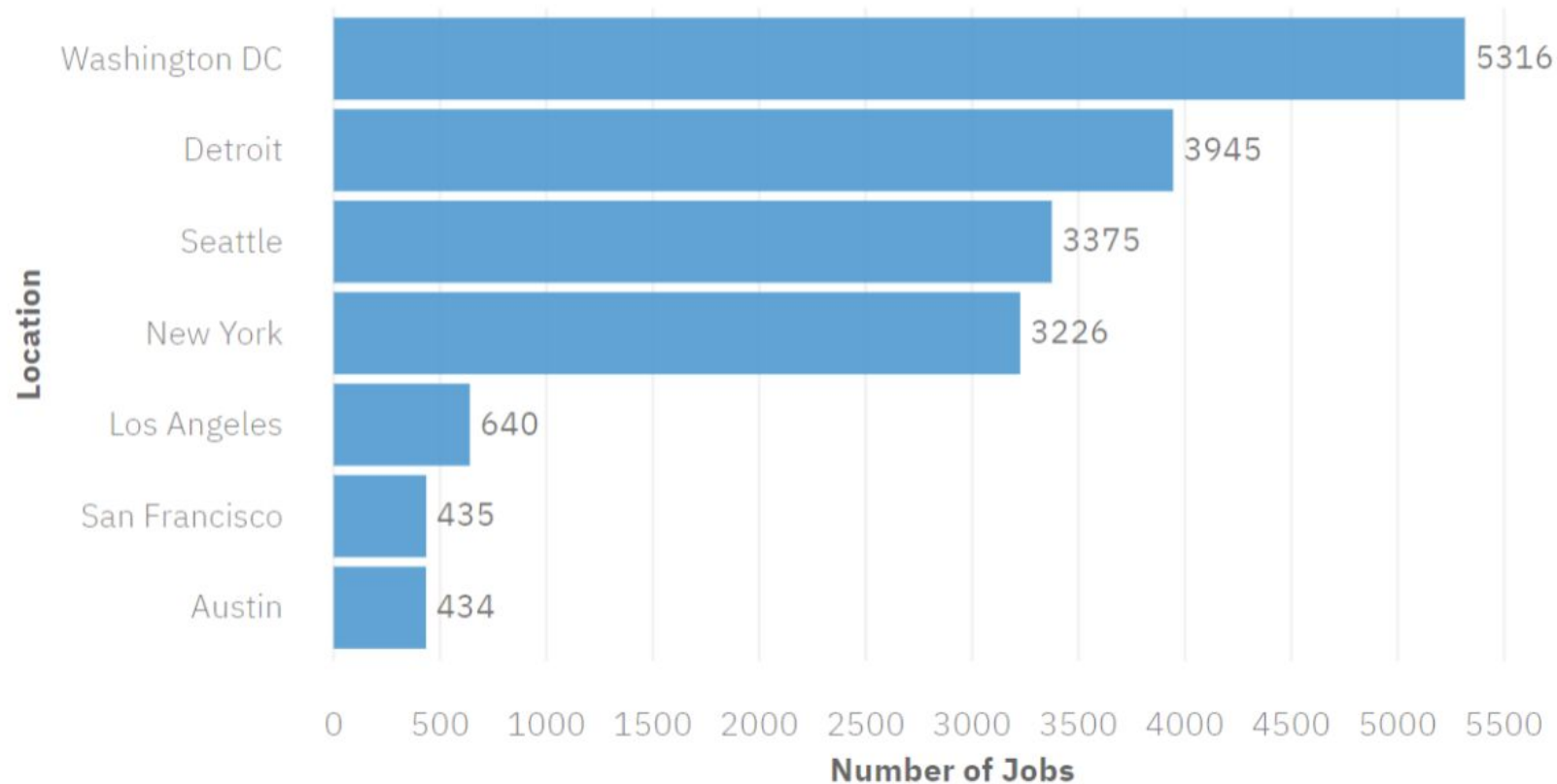
APPENDIX



- Include any relevant additional charts, or tables that you may have created during the analysis phase.



JOB POSTINGS



POPULAR LANGUAGES

