



Technology in Demand for Developers: Current vs. Future

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OUTLINE



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



- Dataset introduction and analysis goal
- Methodology
 - Data collection
 - Data wrangling
 - Exploratory Data Analysis
 - Data Visualization
- Analysis Results with graphs
- Discussion of findings from analysis results
- Final conclusions

INTRODUCTION



- Data Source:
 - Job postings (by GitHub Jobs APIs)
 - An online survey of software professionals across the world from Stack Overflow, a popular website for developers
- Purpose:
 - Identify skill requirement now and in the future
 - Top programming languages and database in demand
 - Popular platforms used by developers

METHODOLOGY



- Data collection and exploring
 - APIs.
 - Web Scraping
 - Data content exploring
- Data Wrangling
- Data Analysis
 - Data distribution analysis
 - Outliers handling
 - Data correlation
- Data Visualization
 - Highlight relationships and composition of data by graphs
- Dashboards

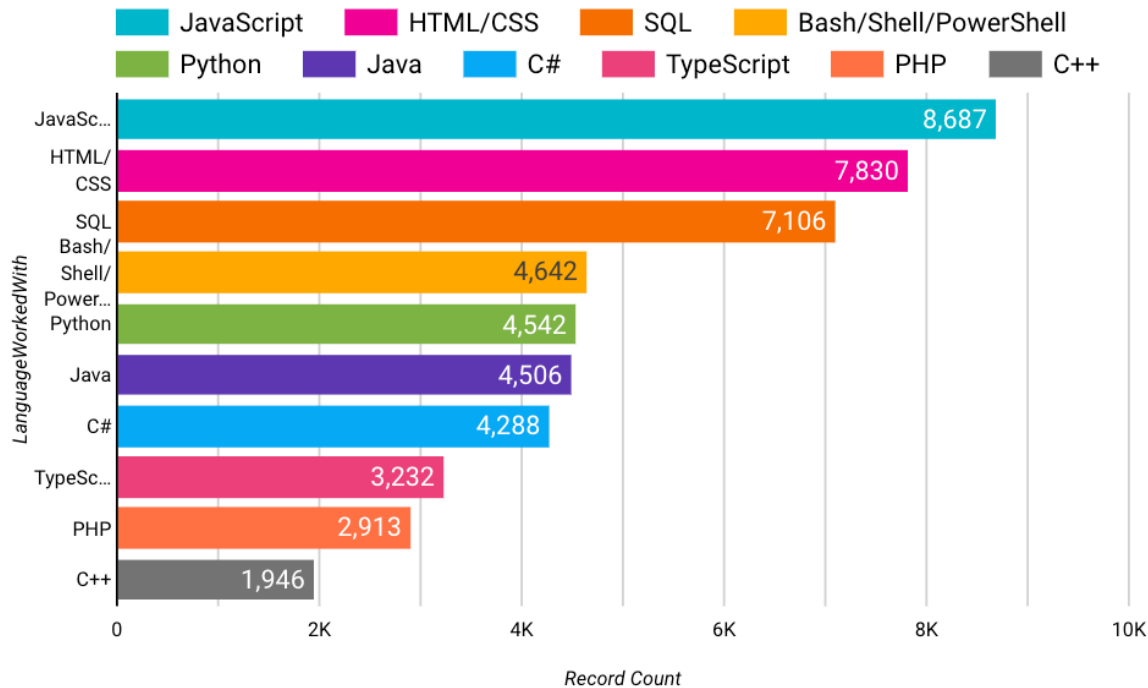
RESULTS



PROGRAMMING LANGUAGE TRENDS

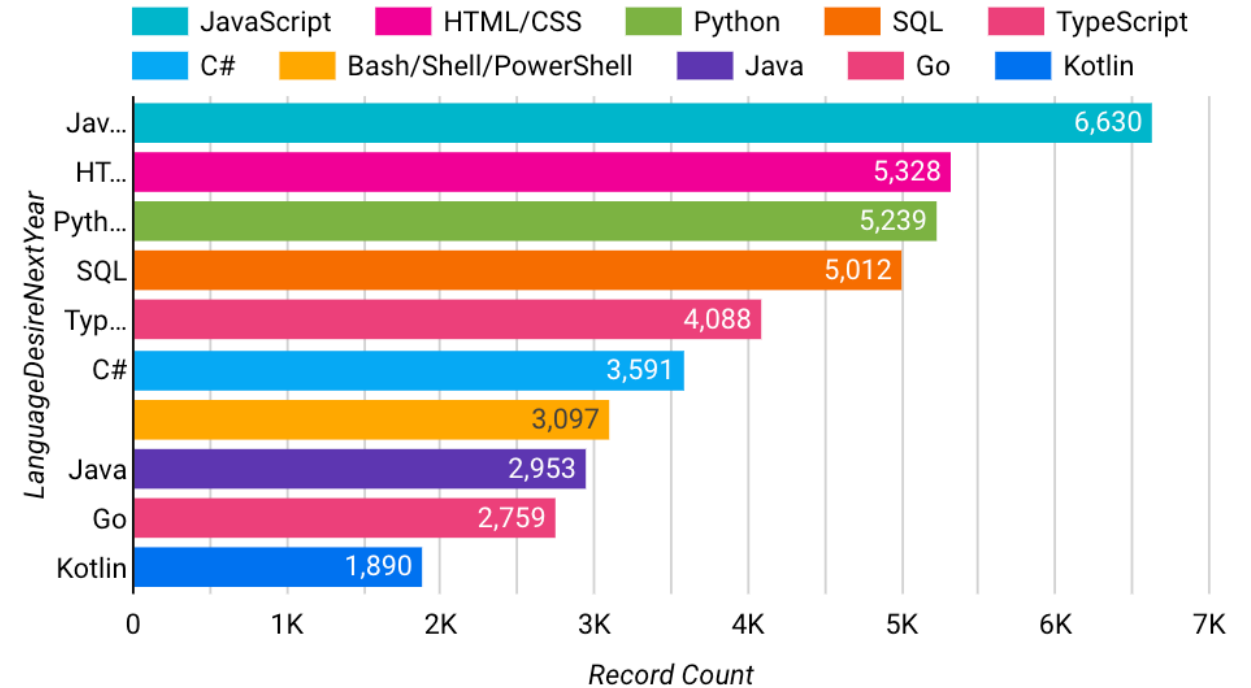
Current Year

Top 10 LanguageWorkedWith



Next Year

Top 10 LanguageDesireNextYear



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

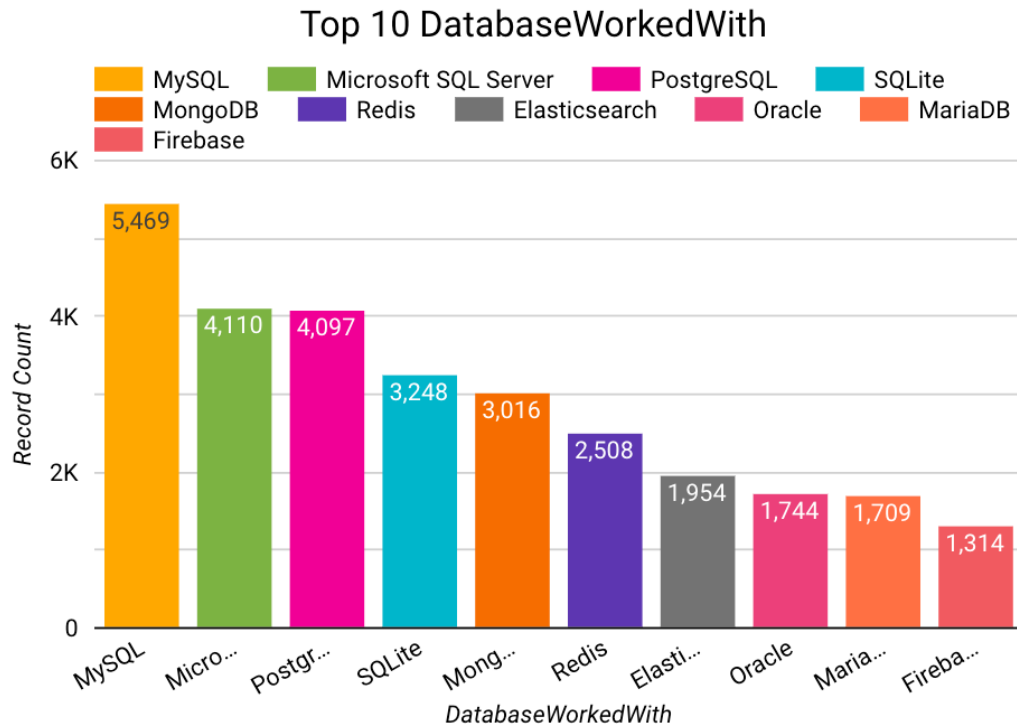
- JavaScript still keeps its leading place in programming language
- Interests in Python and TypeScript are fast-growing

Implications

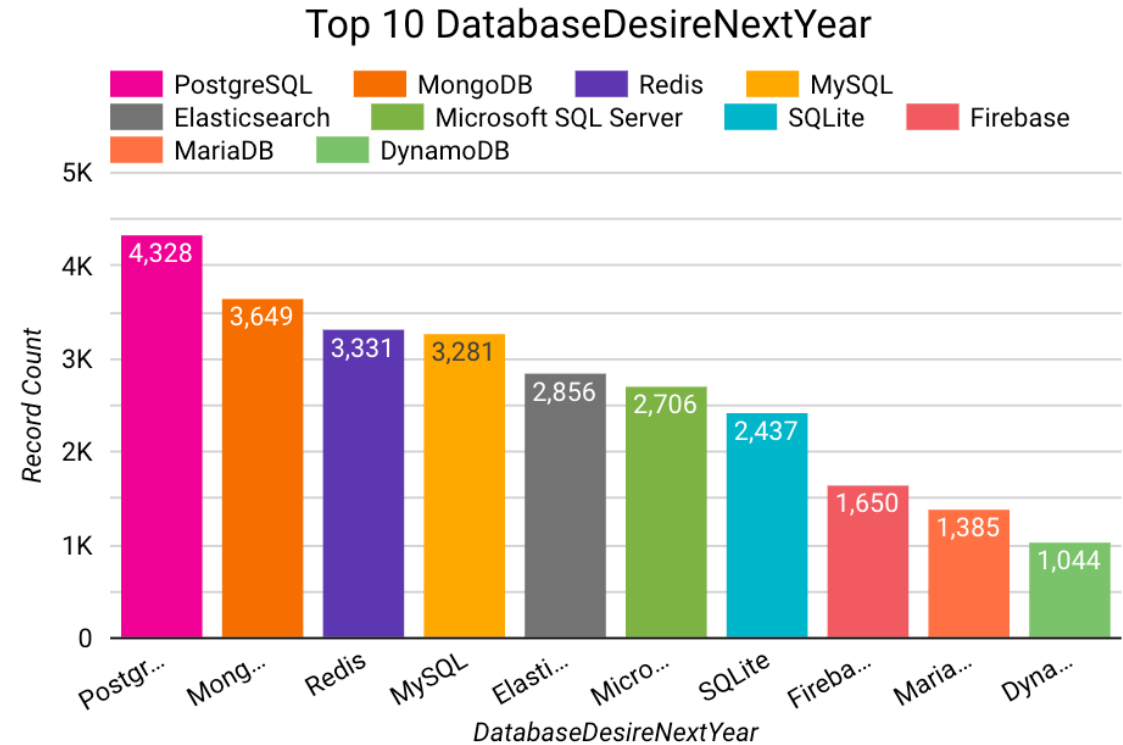
- Python may become one of most popular programming languages due to the surge of Artificial Intelligence
- There might be a migration trend from JavaScript to TypeScript for developers

DATABASE TRENDS

Current Year



Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL is the most used database.
- Interests in PostgreSQL and MongoDB have increasing trends
- Interests in Microsoft SQL Server and SQLite have decreasing trends

Implications

- PostgreSQL and MongoDB have become more important in the market
- Microsoft SQL Server and SQLite become less popular in the market comparing to previous years

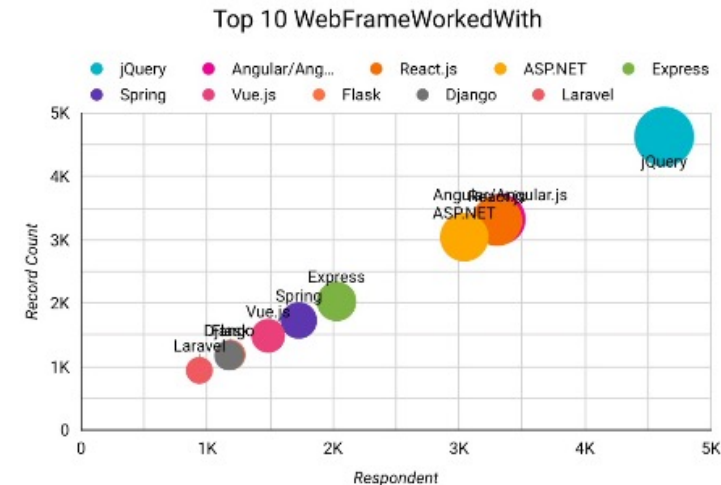
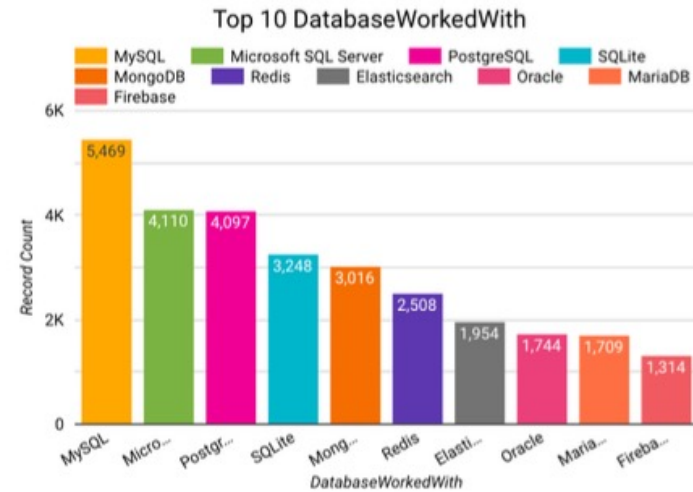
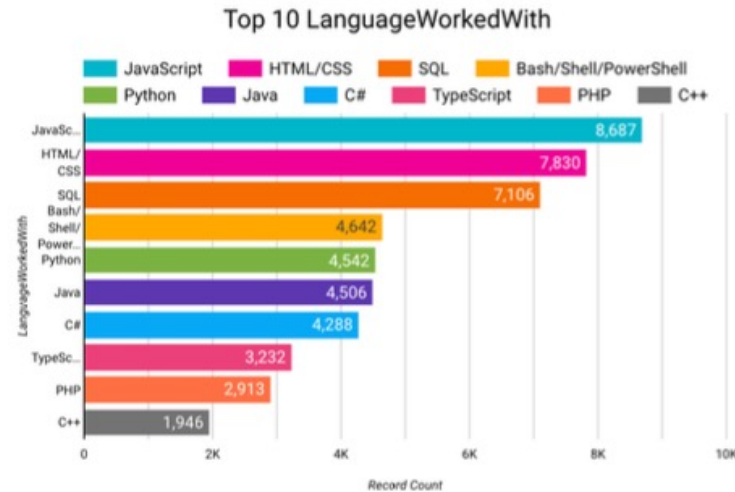
DASHBOARD



<https://github.com/milachanhyc/Data-Analyst-Capstone-Project/blob/main/7.%20Dashboard.pdf>

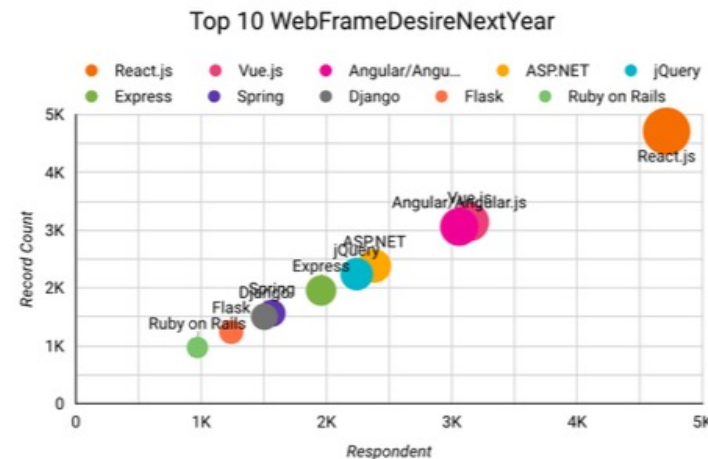
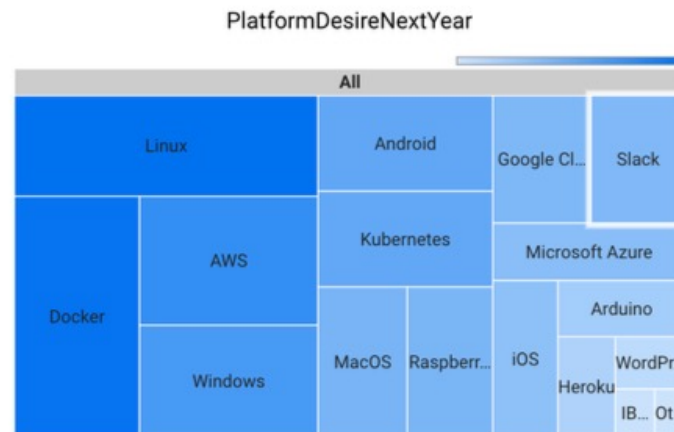
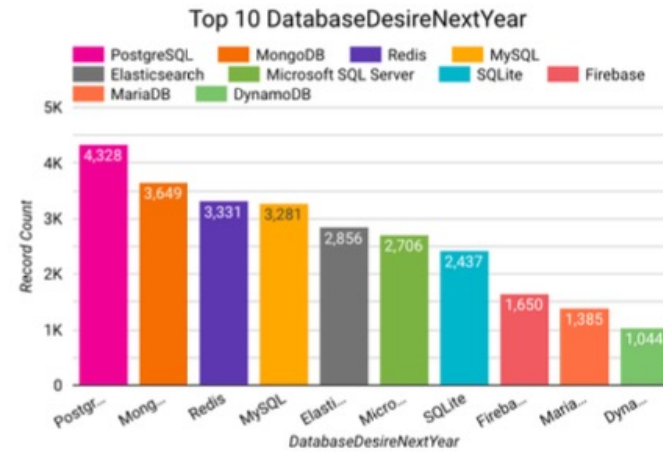
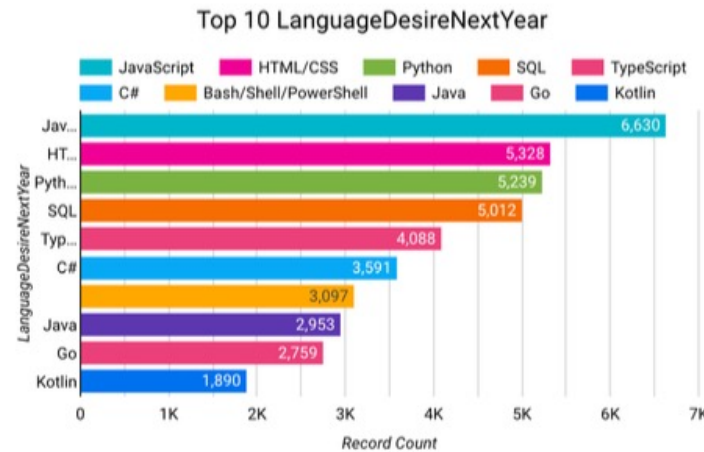
Current Technology Usage

Current Technology Usage



Future Technology Trend

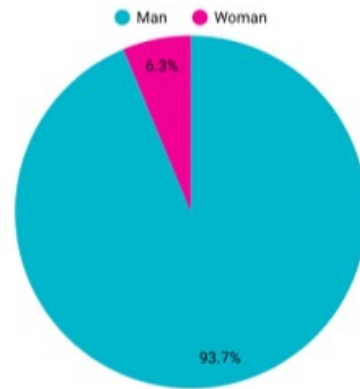
Future Technology Trend



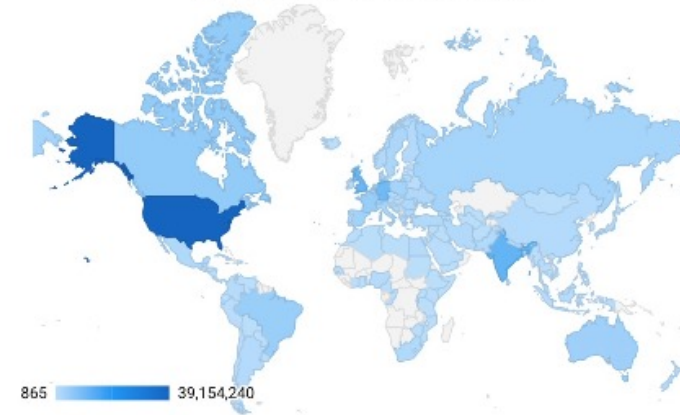
Demographics

Demographics

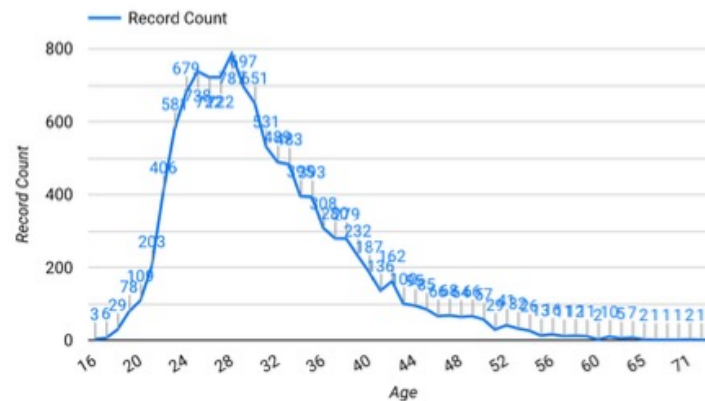
Respondent classified by Gender



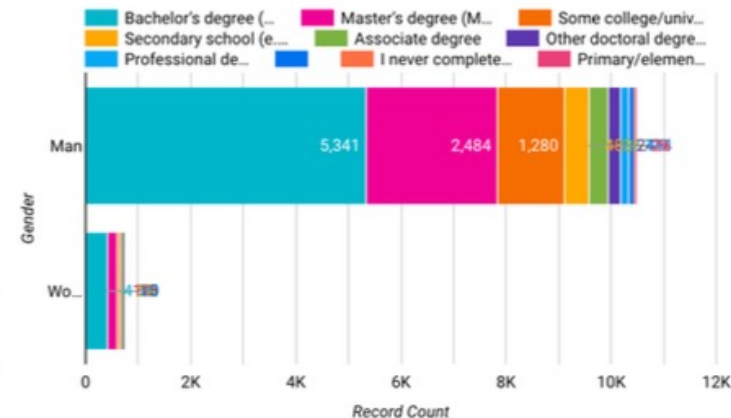
Respondent Count for Countries



Respondent Count by Age



Respondent Count by Gender and Formal Education Level



DISCUSSION



OVERALL FINDINGS & IMPLICATIONS

Findings

- JavaScript is still the leading programming language; Python and TypeScript become popular
- Over 90% male developers and most of developers' ages are at range 22 ~ 45 years-old
- Developers are mostly in the USA and India

Implications

- Due to the surge of AI, Data Science and Big data, the popularity of languages and databases has changed
- Companies not located in USA and India may have to cooperate with local education for excellent developers' training or outsource to find international developers to meet their needs.

CONCLUSION

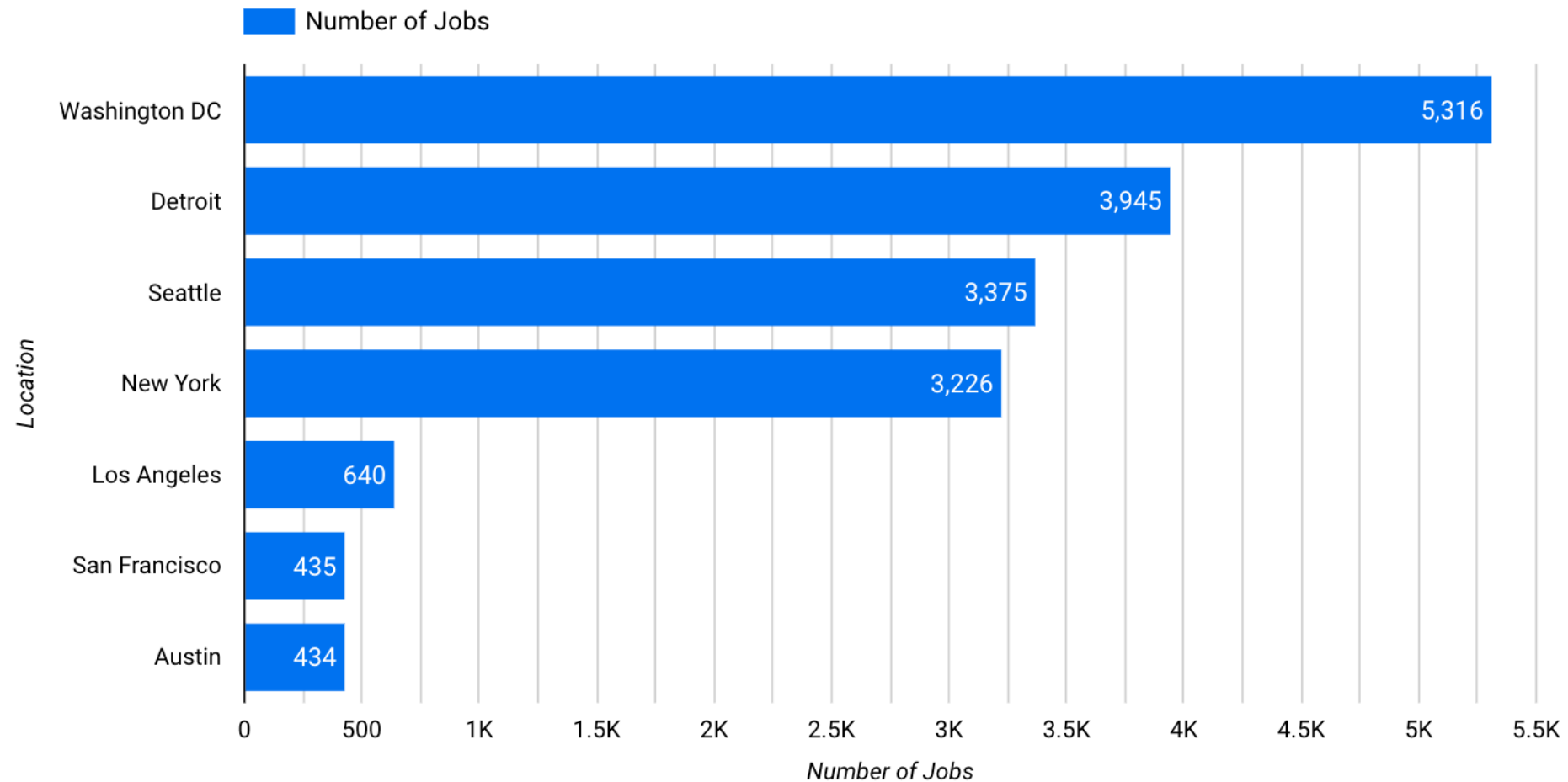


- JavaScript, Python are top programming languages in demand currently and in the future
- The rank of popularity of databases has changed due to Big data, AI, and Data Science
- Platforms like Linux and Docker still have them leading position in the development market
- Best candidates as a developer should equip with some of those top skills mentioned in this report

APPENDIX



JOB POSTINGS



POPULAR LANGUAGES

