



IBM Data Analyst Capstone Project

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OUTLINE



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EXECUTIVE SUMMARY



- JavaScript, HTML/ CSS, Python, Go, Kotlin, Bash/Shell/ PowerShell, C#, Java, TypeScript are the most desired top 10 programming Languages.
- PostgreSQL, MongoDB, MariaDB, Microsoft SQL, MySQL, SQLite, Redis, Elasticsearch, Firebase are the most desired Database applications.
- Gender Gap in IT industry:
 - Male – 91.9%
 - Female - 8.1%
 - Other – 0.1 %

INTRODUCTION



- IBM Cloud and Watson, Google Cloud are the most popular Platforms among Programmers.
 - Programming Languages
 - Databases
 - Demographics
- Target Audience
 - IT professionals, Programmers.

METHODOLOGY



- Data Sources:
 - The 2019 Stack Overflow Developer Survey Results Are In
 - Julia Silge, Data Scientist.
- Data Exploration and Cleaning
 - Python
- Data Visualization
 - IBM Cognos Analytics
- Presentation



RESULTS

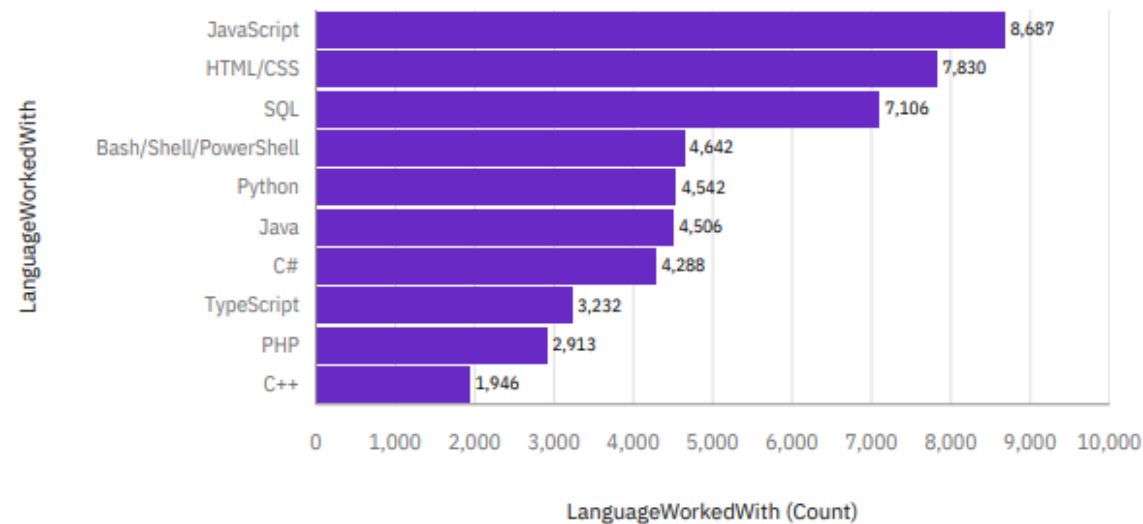
PROGRAMMING LANGUAGE TRENDS

Current Year

Next Year

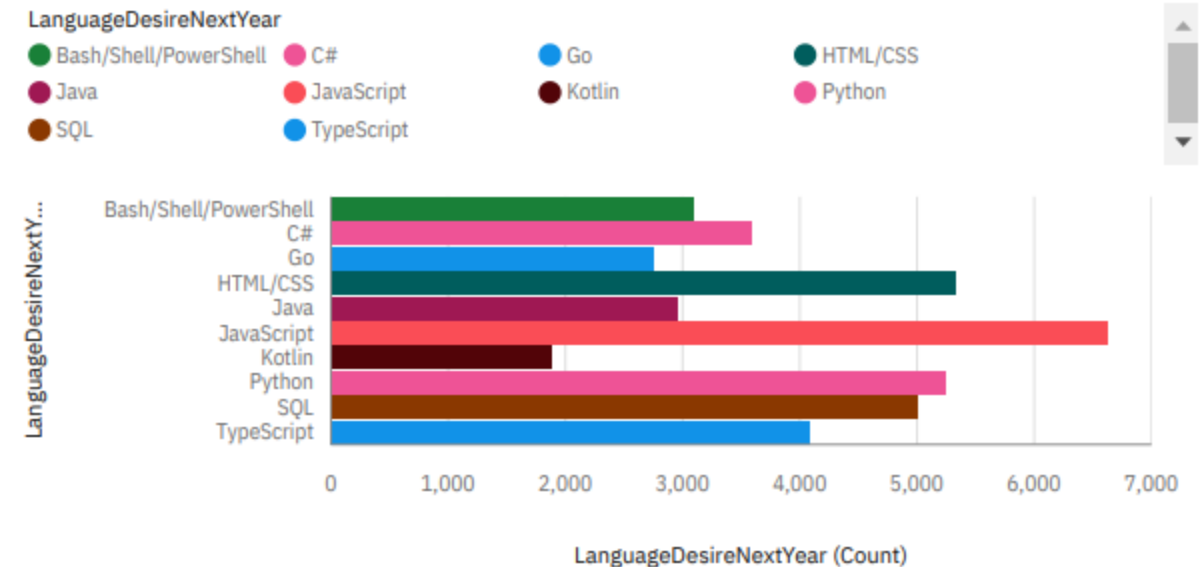
Current Technology Usage

Top 10 LanguageWorkedWith



Future Technology Trend

Top 10 LanguageDesireNextYear



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript is the most in demand programming language.
- Python, HTML/CSS, and SQL are other in demand programming languages.
- Skills in TypeScript, Python is more desirable than Java, Kotlin for next year.

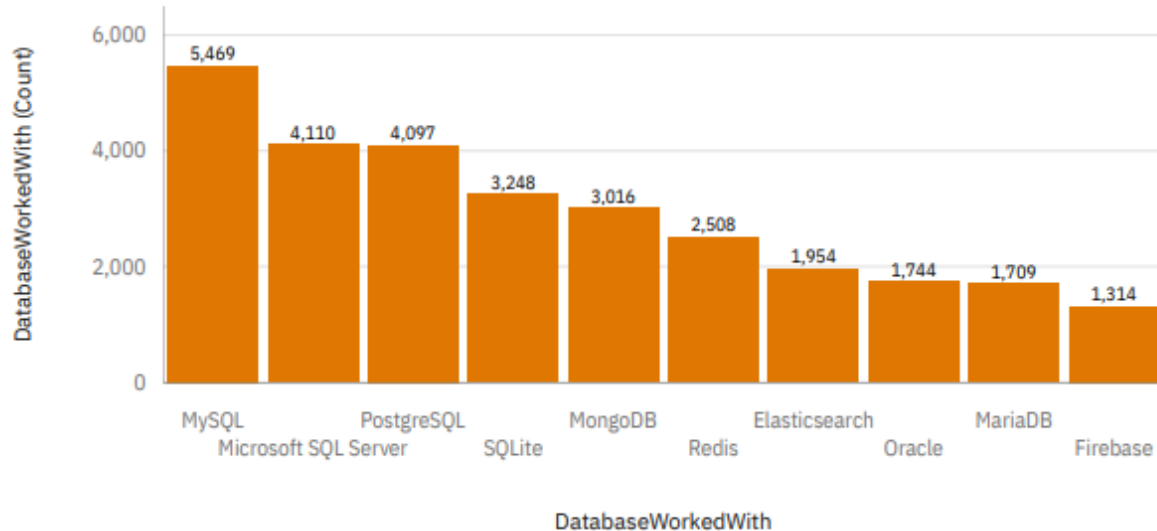
Implications

- Python's increase in demand may overtake JavaScript in the future.
- JavaScript, Python, HTML/CSS, and SQL are consistently in demand.
- Web development remains in high demand.

DATABASE TRENDS

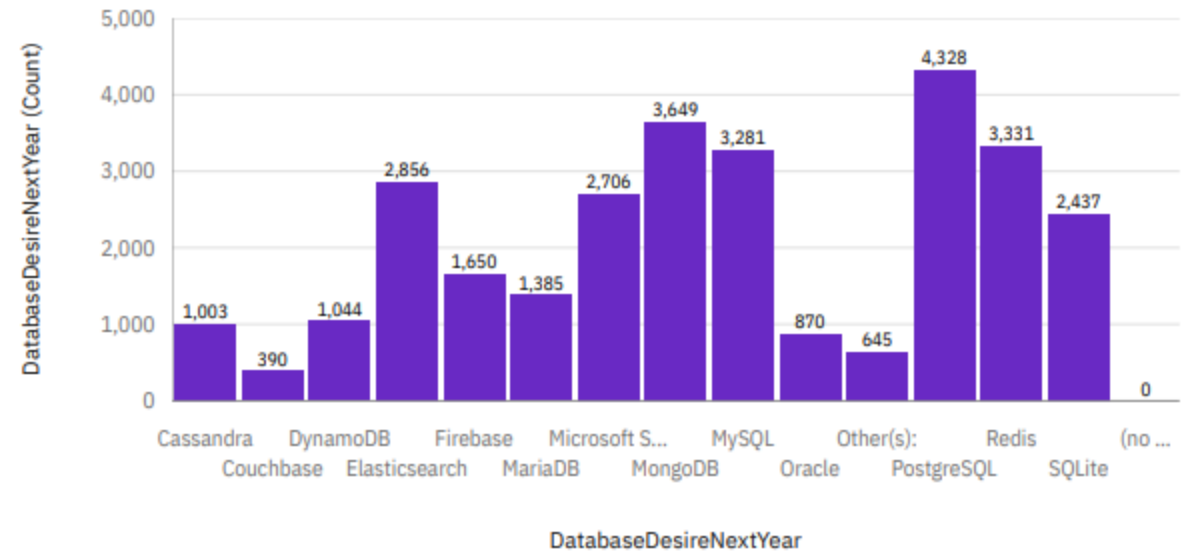
Current Year

Top 10 DatabaseWorkedWith



Next Year

Top 10 DatabaseDesireNextYear



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- PostgreSQL and MongoDB have an increase in demand.
- MySQL has a decrease in demand for next year.
- Skills in Redis and Elasticsearch are more desirable than Microsoft SQL Server and SQLite for next year.

Implications

- PostgreSQL and MongoDB are the most consistent in demand databases.
- Open source databases are preferred.
- Demand is volatile.

DASHBOARD

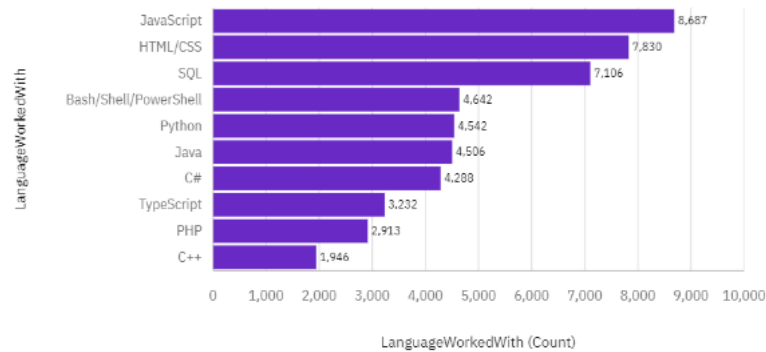


https://github.com/ashishfreaksout1/Final_assignment/blob/44ac3b9691284aca8af50c5e627ee8d989efd63f/_%20New%20dashboard.pdf

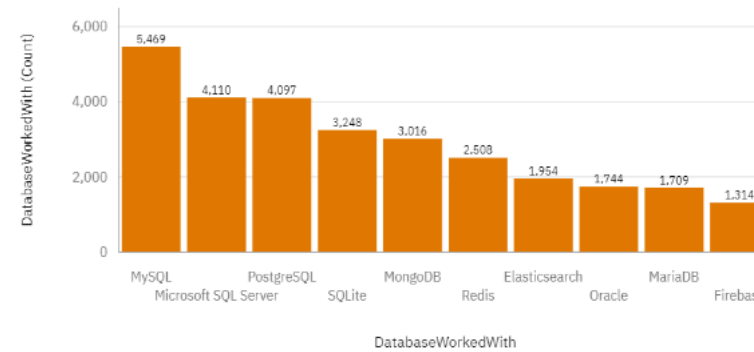
DASHBOARD TAB 1

Current Technology Usage

Top 10 LanguageWorkedWith



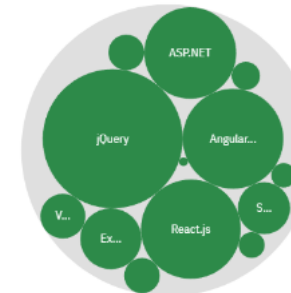
Top 10 DatabaseWorkedWith



PlatformWorkedWith



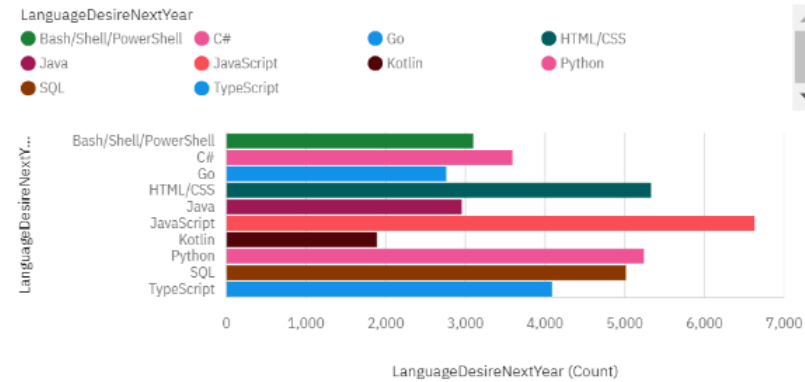
Top 10 WebFrameWorkedWith



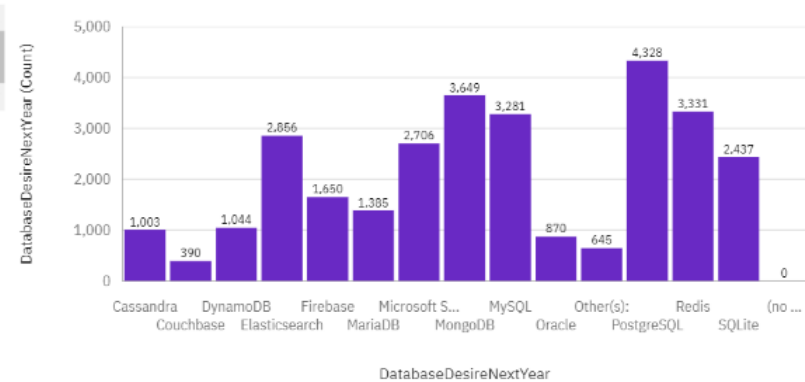
DASHBOARD TAB 2

Future Technology Trend

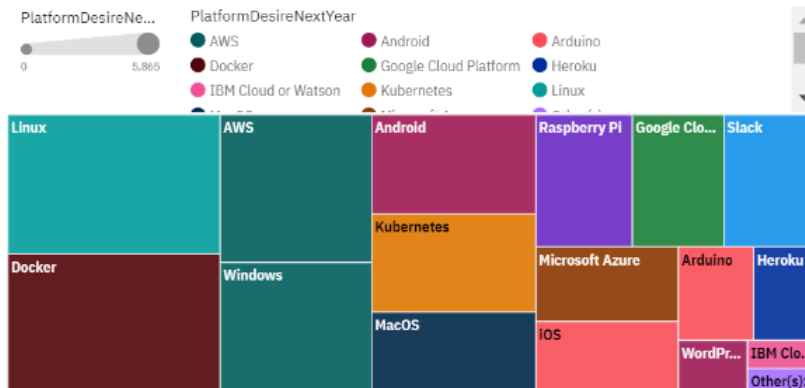
Top 10 LanguageDesireNextYear



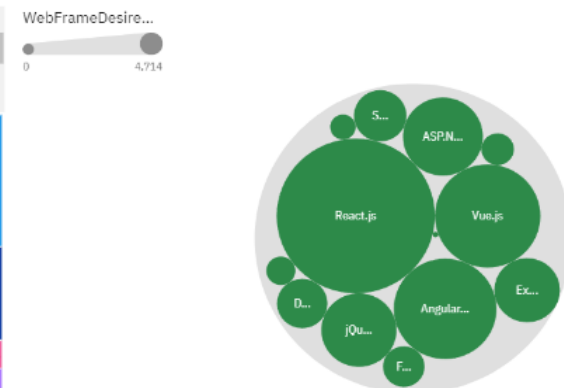
Top 10 DatabaseDesireNextYear



PlatformDesireNextYear



Top 10 WebFrameDesireNextYear



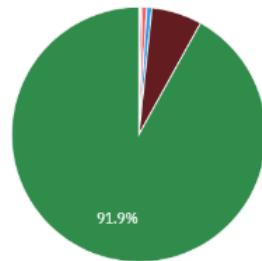
DASHBOARD TAB 3

Demographics

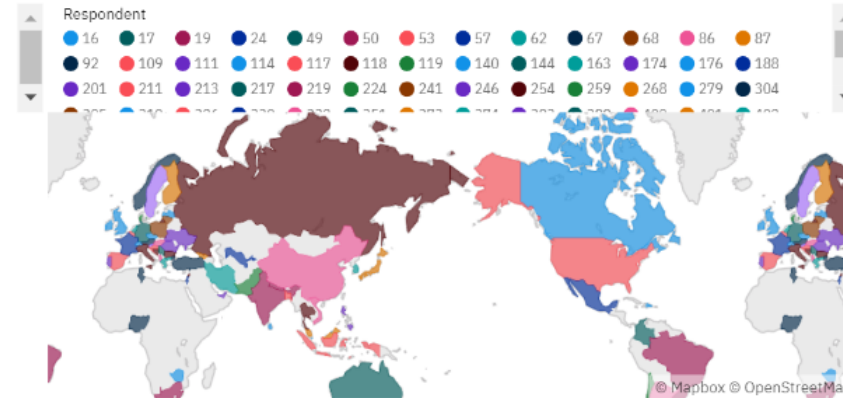
Respondent classified by Gender

Gender

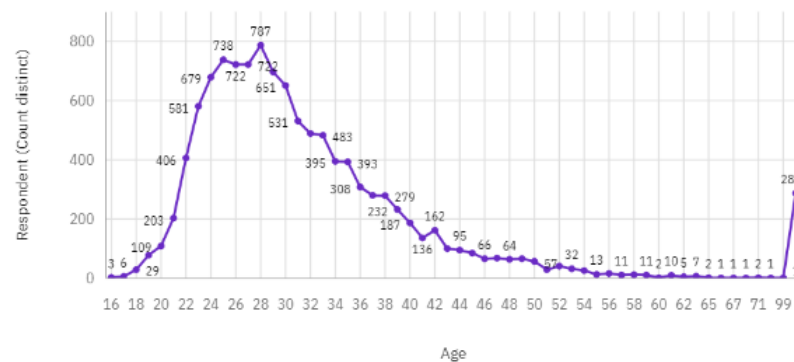
- Woman;Man;Non-binary, genderqueer, or genderfluid
- Woman;Man
- Woman;Non-binary, genderqueer, or genderfluid
- Man;Non-binary, genderqueer, or genderfluid
- Non-binary, genderqueer, or genderfluid
- (no value)
- Woman
- Man



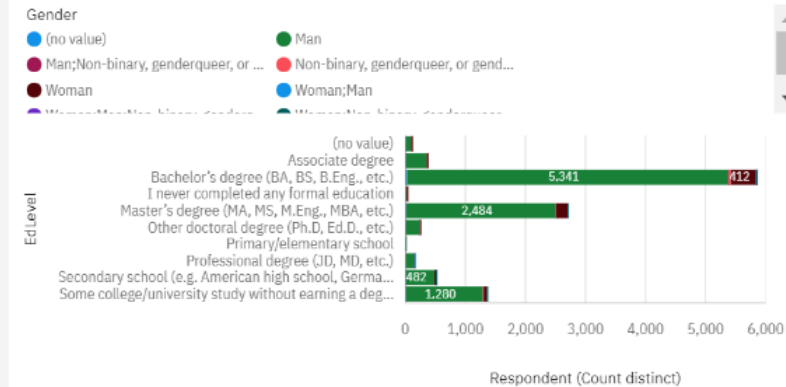
Respondent Count for Countries



Respondent Count by Age



Respondent Count by Gender, classified by Formal Education Level



DISCUSSION



- New technology constantly emerges leading to changes in demand.
- The IT industry needs to diversify in order to eliminate gender gap.

OVERALL FINDINGS & IMPLICATIONS

Findings

- Trends and demands fluctuate based on new technologies.
- JavaScript and HTML/CSS are the most popular programming languages.
- PostgreSQL is the most popular database.
- Gender gap in the IT field.

Implications

- IT professionals and companies have to learn and adapt to new demands.
- Having skills that are high in demand leads to more job opportunities.
- Gender gap will affect job hiring trend.

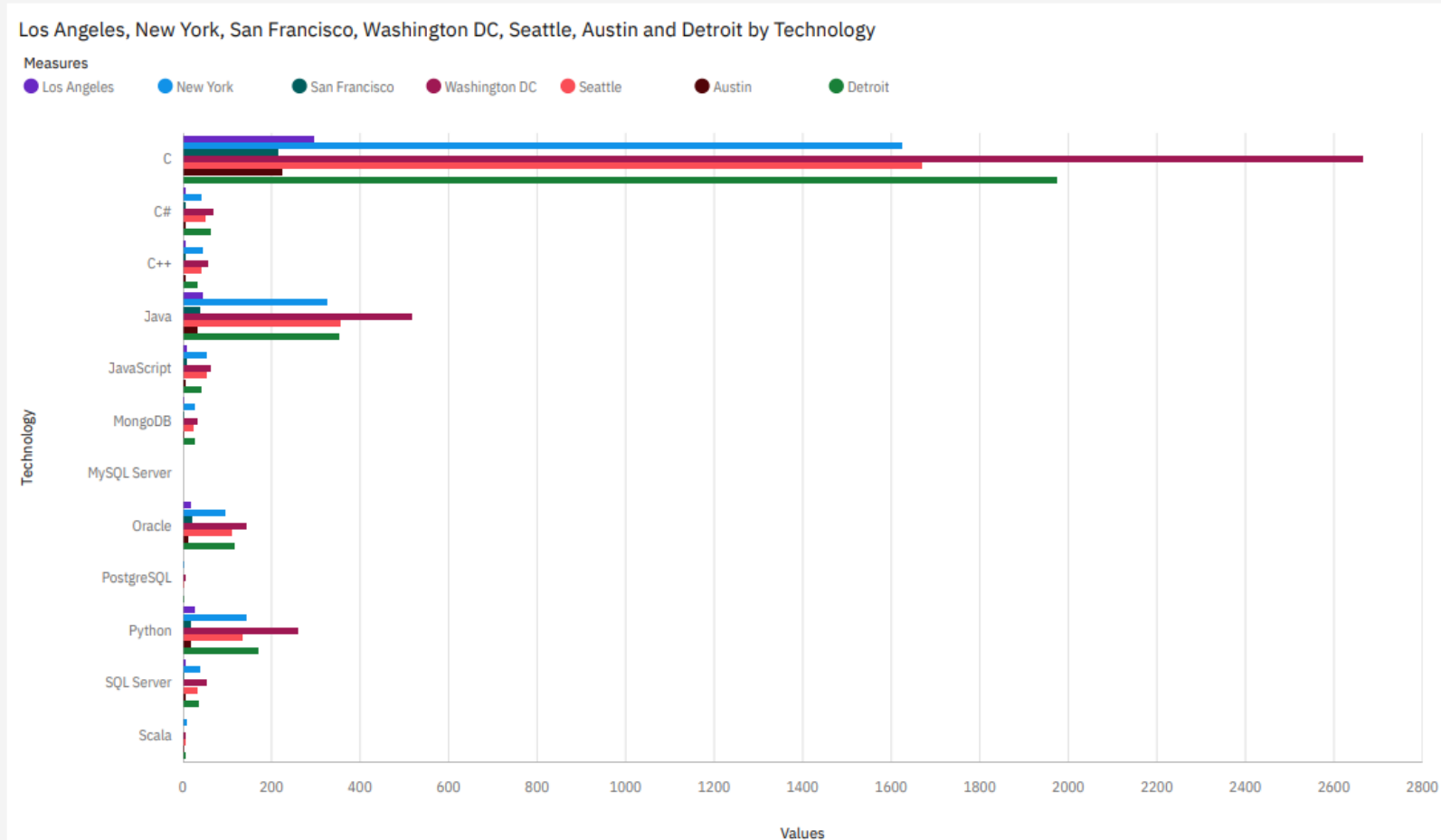
CONCLUSION



- New technology leads to different trends and demands.
- JavaScript and HTML/CSS are the most popular programming languages.
- PostgreSQL is the most popular database.
- The IT industry needs to diversify.

JOB POSTINGS

Tab 1



POPULAR LANGUAGES

Tab 2

