



IBM Data Analyst Capstone Project

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January 31, 2023

OUTLINE



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EXECUTIVE SUMMARY



- Current Technology Usage
- Future Technology Trends
 - Most Desired Languages for next year
 - Most Desired Databases for next year
 - Most Desired Web frames for next year
 - Most Desired Platforms for next year
- Demographic Data

INTRODUCTION



- What are the most used programming languages?
- Which database is most commonly used?
- What are the best Web Frames to work with?
- Which platform is most commonly used?
- What are the trends for programming in the future?
- Who is the average programmer?

METHODOLOGY



- Data Sources
 - 2019 Stack Overflow Developer Survey
- Data Exploration
- Data wrangling
- Data Visualization
- Sharing Results

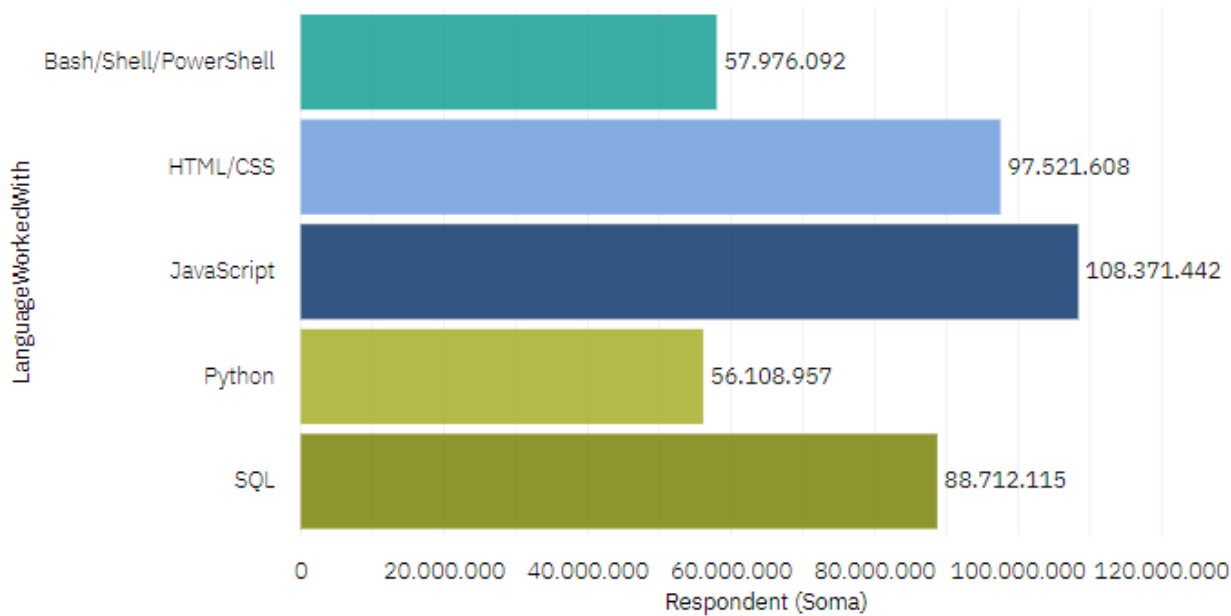
RESULTS

Using the data that we have collected we are able to derive many important insights about the developers across the world such as salary in comparison with educational level, most commonly used tools, trends for the future and a plethora of important information about the developers themselves.

PROGRAMMING LANGUAGE TRENDS

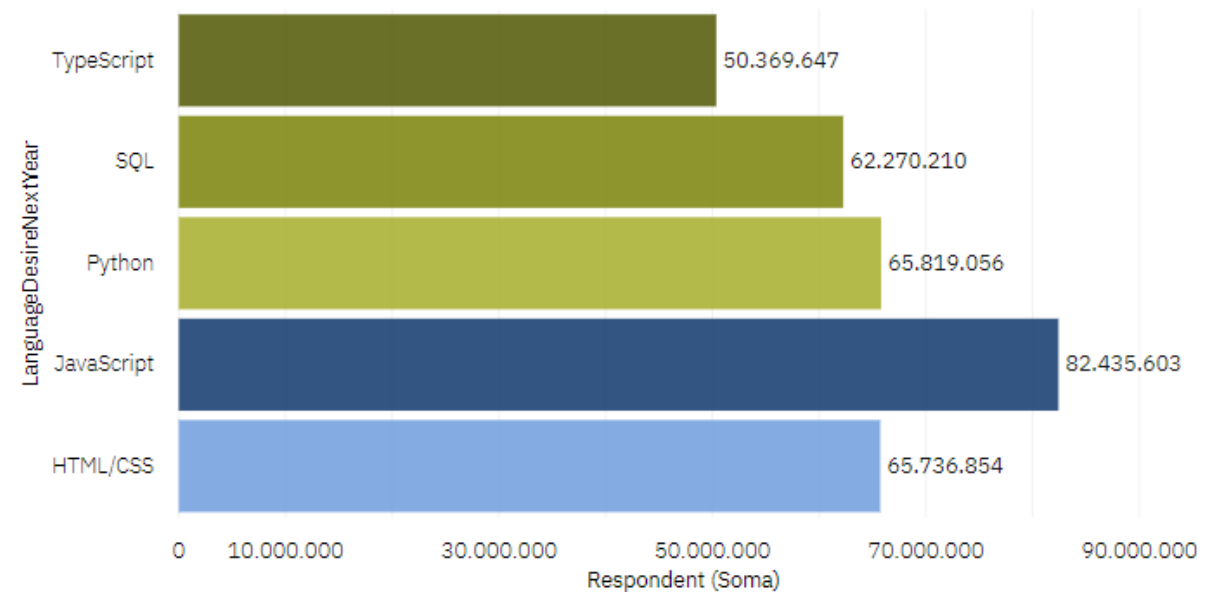
Current Year

Most Used Programming Languages



Next Year

Languages Most Desired for the NextYear



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript is the most popular Programming language and is expected to continue next year.
- Python is expected to increase in usage.
- Shell/PowerShell is expected to be replaced in the top 5 by TypeScript.

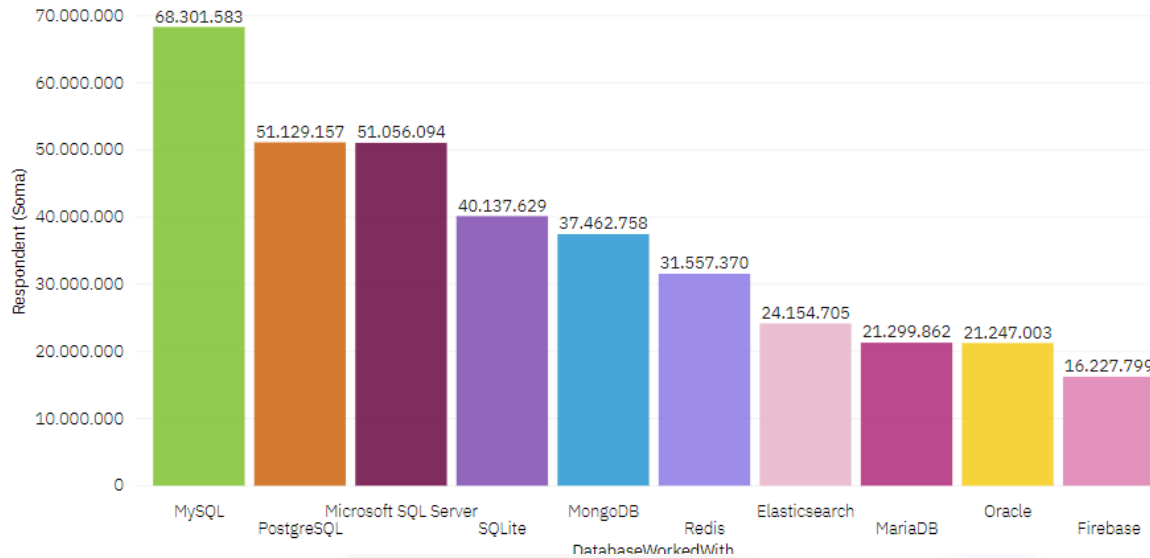
Implications

- Web development is and will still be in high demand.
- Due to the rise of Ai and Machine Learning python is becoming more popular.
- More and more developers are opting to learn TypeScript to complement their JavaScript.

DATABASE TRENDS

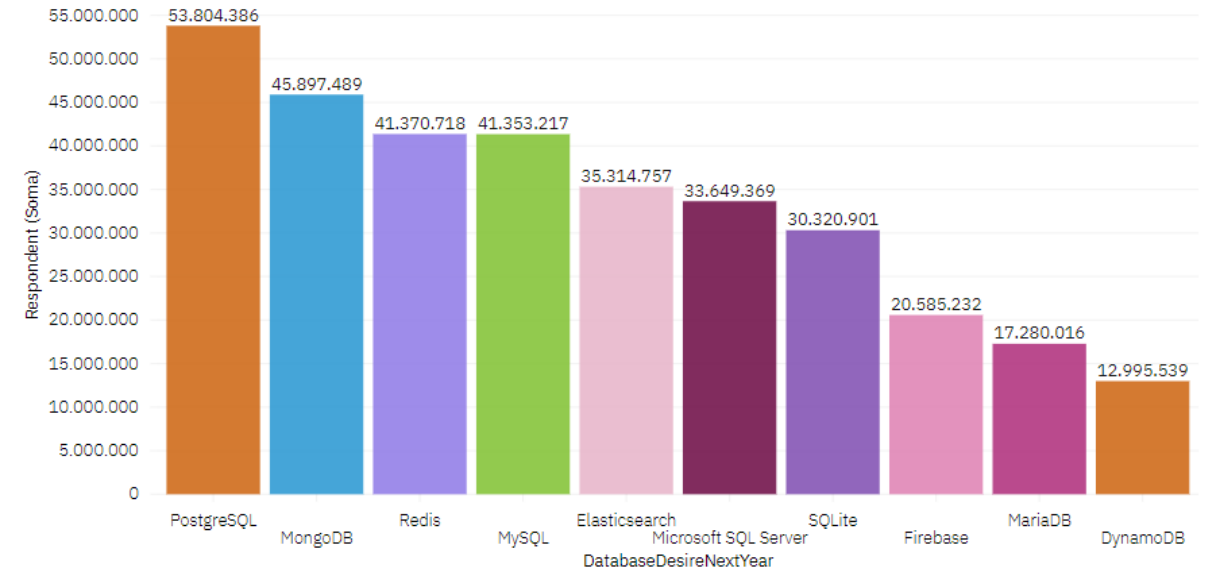
Current Year

Top 10 Databases Worked With



Next Year

Databases Most Desired for the Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL is expected to no longer be the most popular Database.
- Even though Microsoft SQL Server is the third most used Database it is expected to lose popularity.
- Redis and Elasticsearch grow in popularity

Implications

- Open source Databases are widely used and are expected to continue to.
- Redis' growth in popularity is due to their support of abstract data types.
- MongoDB's usage increase is due to its speed and scalability, making it one of the most used in the future.

DASHBOARD

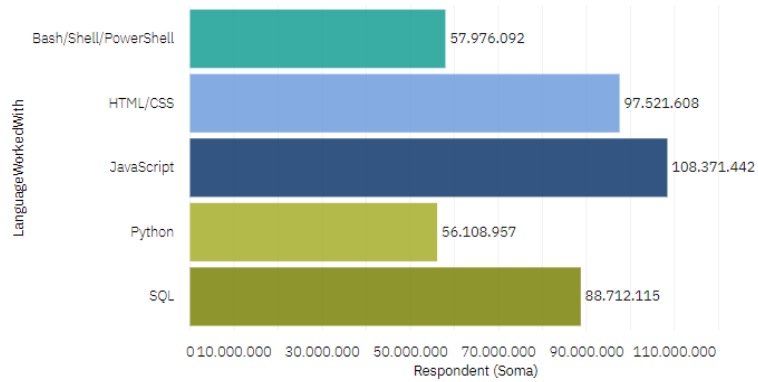


Link to Cognos Dashboard:

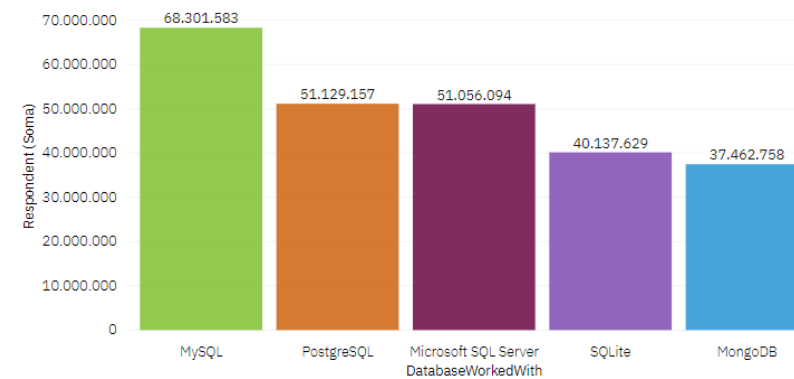
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Current Technology Usage

Most Used Programming Languages



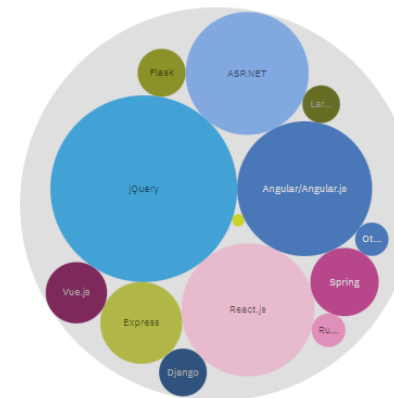
Top 5 Databases Worked With



Platforms Worked With

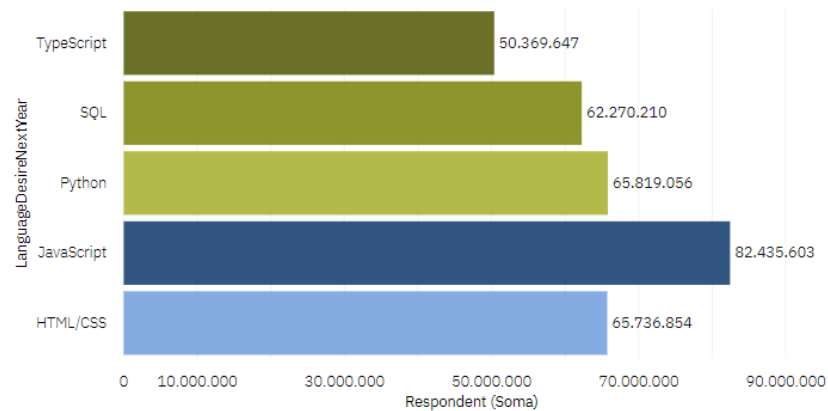


Top 10 WebFrames Worked With

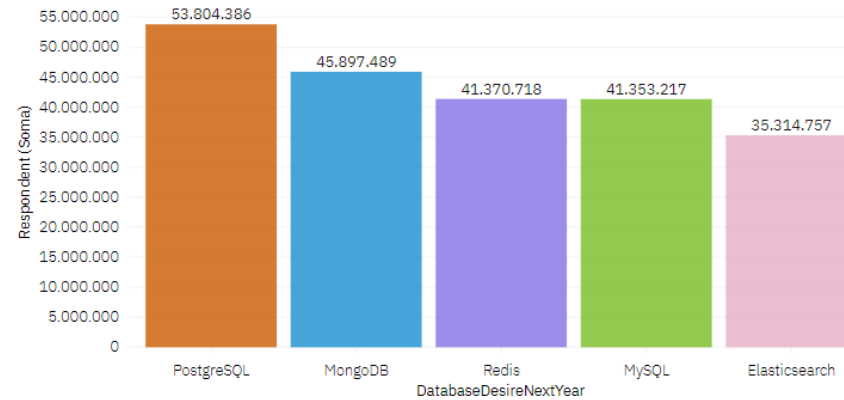


Future Technology Trend

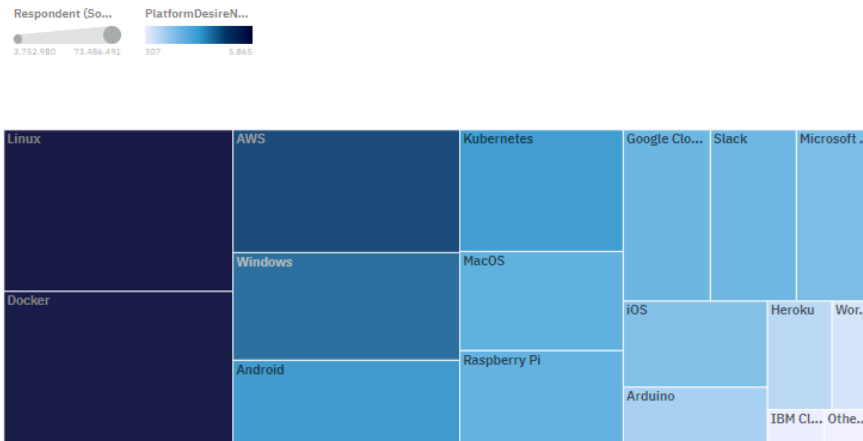
Languages Most Desired for the NextYear



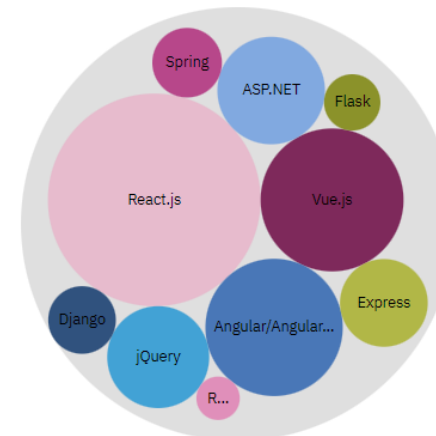
Databases Most Desired for the NextYear



Platforms Most Desired for the NextYear



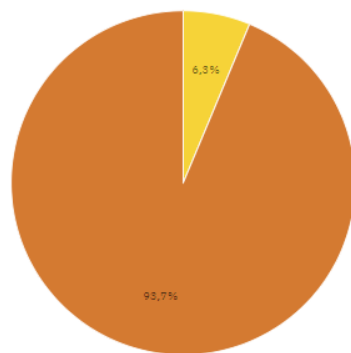
WebFrames Most Desired for the NextYear



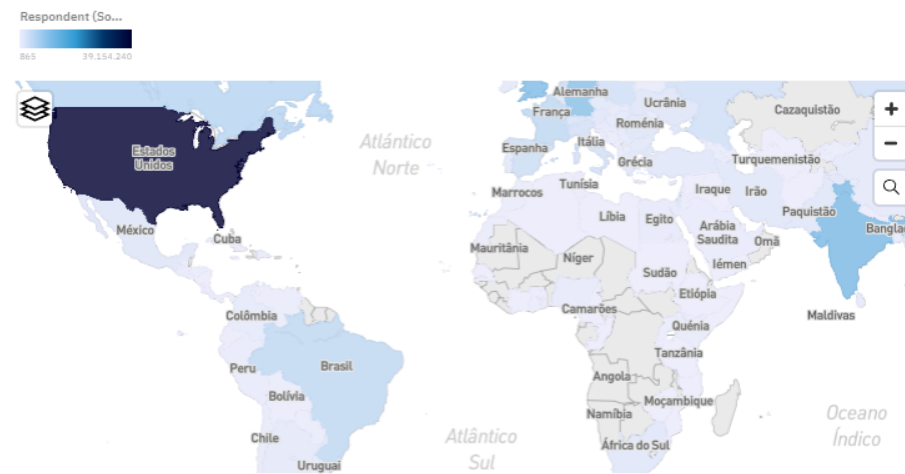
Demographics

Respondent classified by Gender

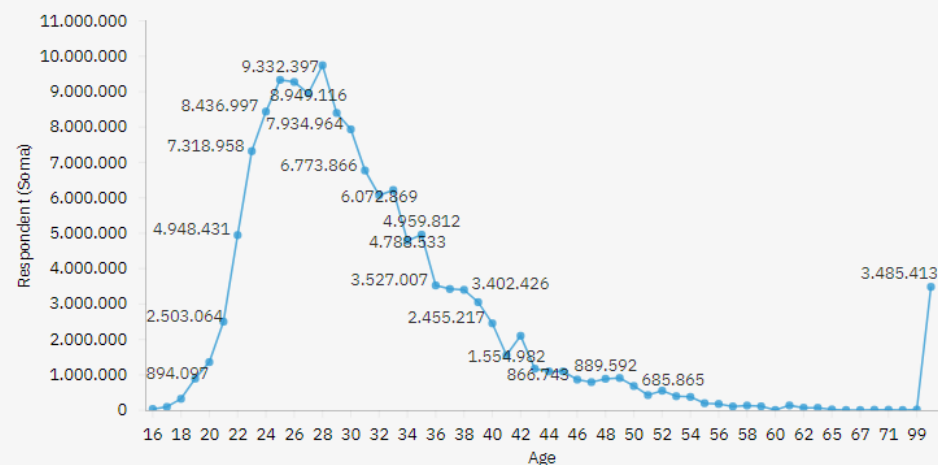
Gender
● Woman ● Man



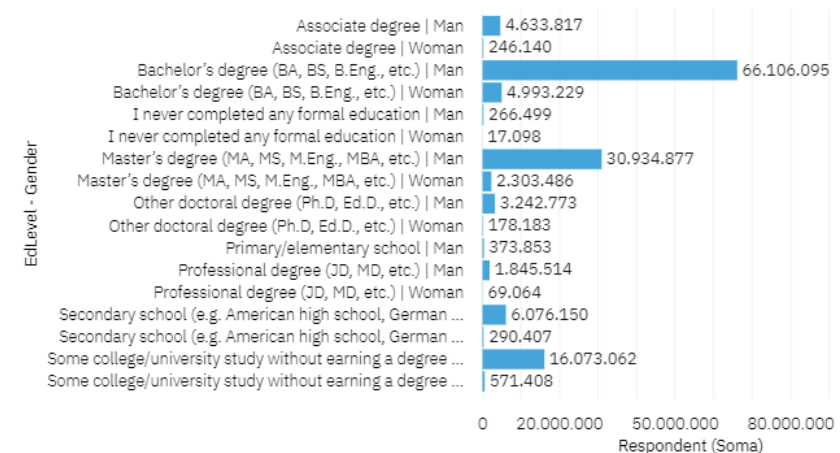
Respondent Count for Countries



Respondent Count by Age



Respondent Count by Gender, classified by Formal Education Level



DISCUSSION



- Trends in technology
- The profession's globalization
- Gender representation in the community
- The rise in popularity of python
- Age and education discrimination

OVERALL FINDINGS & IMPLICATIONS

Findings

- JavaScript is the most popular Programming language and is expected to continue next year.
- Even though Microsoft SQL Server is the third most used Database it is expected to lose popularity.
- Python is expected to increase in usage.

Implications

- Web development is and will still be in high demand.
- Open source Databases are widely used and are expected to continue to.
- Due to the rise of Ai and Machine Learning python is becoming more popular.

CONCLUSION

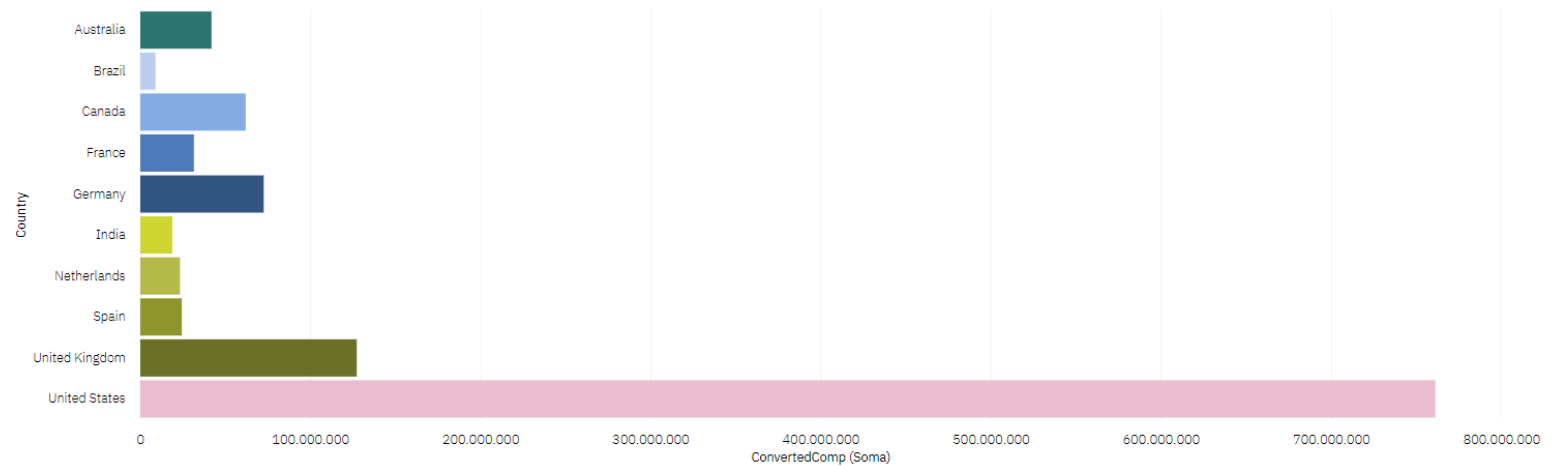


- The developer trend show that web development is and will be the area with the highest demand
- SQL is still going to be an essential skill to have.
- Developers are migrating towards opensource Databases.
- TypeScript saw an significant increase in popularity which implies demand.

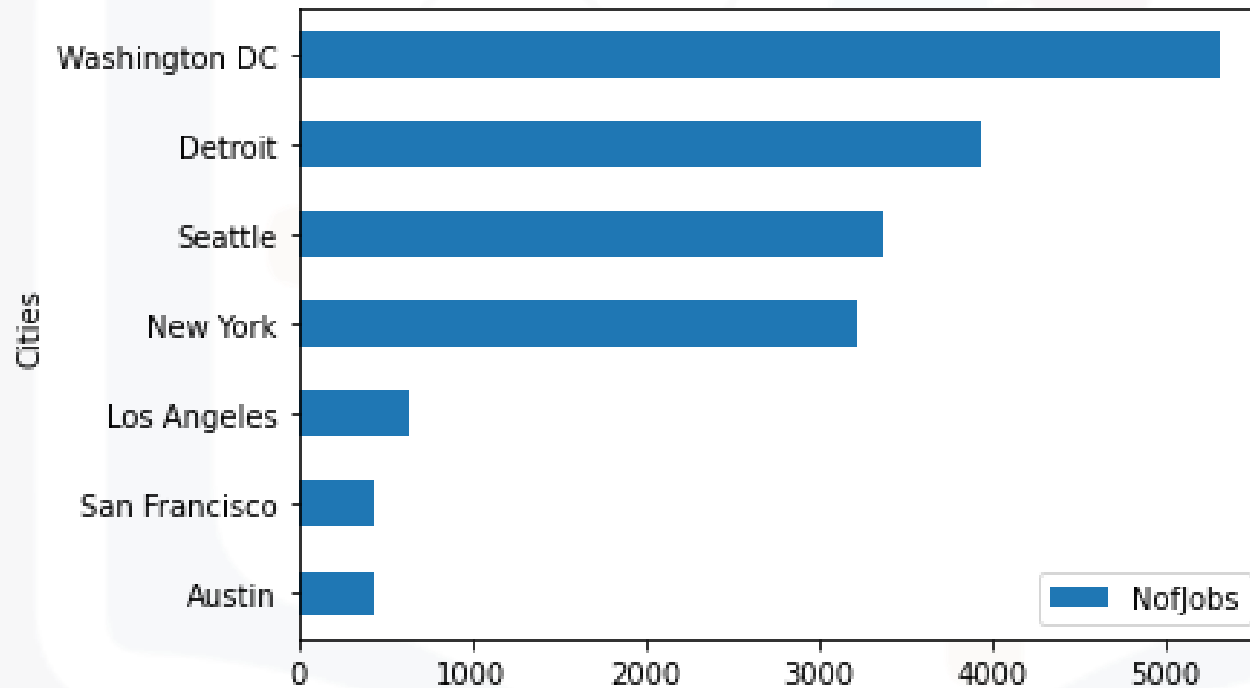
APPENDIX



Countries with the highest salaries



JOB POSTINGS



POPULAR LANGUAGES

