



Stack Overflow Developer Survey 2019: key Findings

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OUTLINE



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EXECUTIVE SUMMARY



The following Analyzing summarize key findings for data collected as part of the 2019 Stack Overflow Developer Survey.

Through this analyzing we dived in to the data and found out the following insights :

- what are the Most popular languages, databases, and other technologies (at the time of data collection)
- which technologies will become most popular in the future
- the gender gap among developers and how its reflecting the job demand in the future

Audience : developers, recruiters, educators, and policy makers.

INTRODUCTION



- Analyzing the trends in software development

Purpose:

- Finding out which skills will be requirement in the future
- What are the top Languages in demand
- Which database is more popular at the time of the survey and how this rank will change in the next year
- What is the most popular IDE .

METHODOLOGY



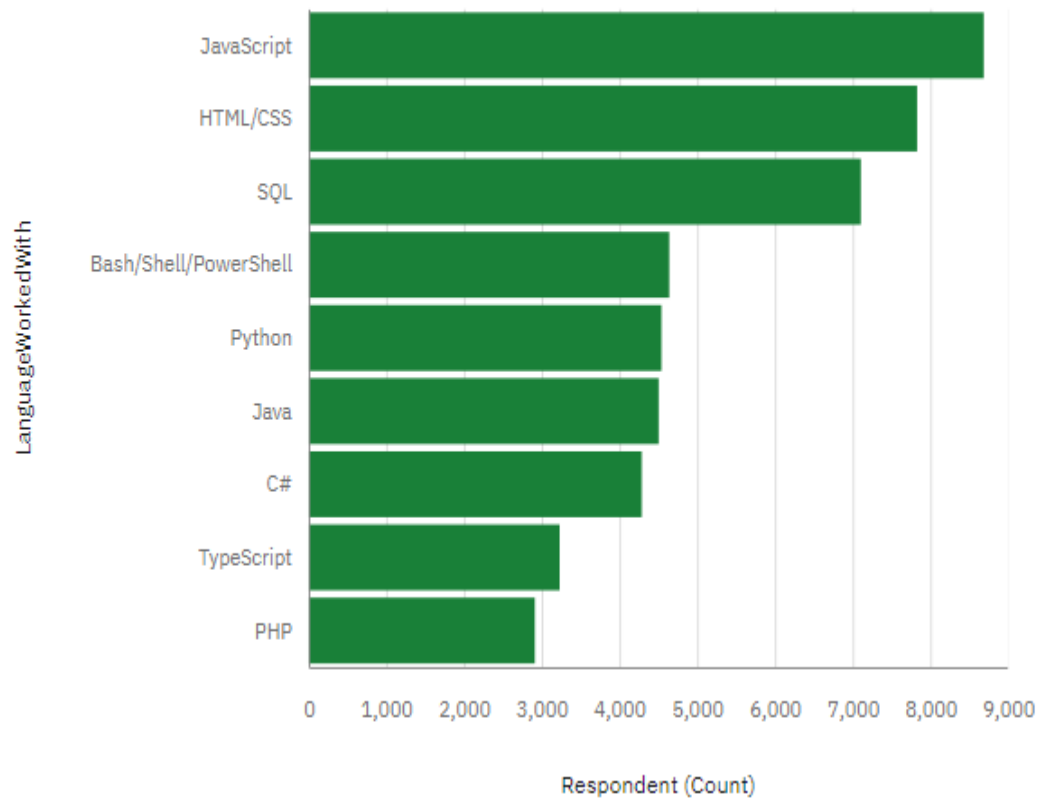
- **Data gathering :**
 - Collecting the data using API,
 - Web scraping and survey
- **Data Wrangling :**
 - this including cleaning the data by finding the missing values and removing duplicates ,normalizing the data
- **Analysis & Visualization :**
 - analyzing and visualizing the data using various Python libraries and *Congos*.

RESULTS

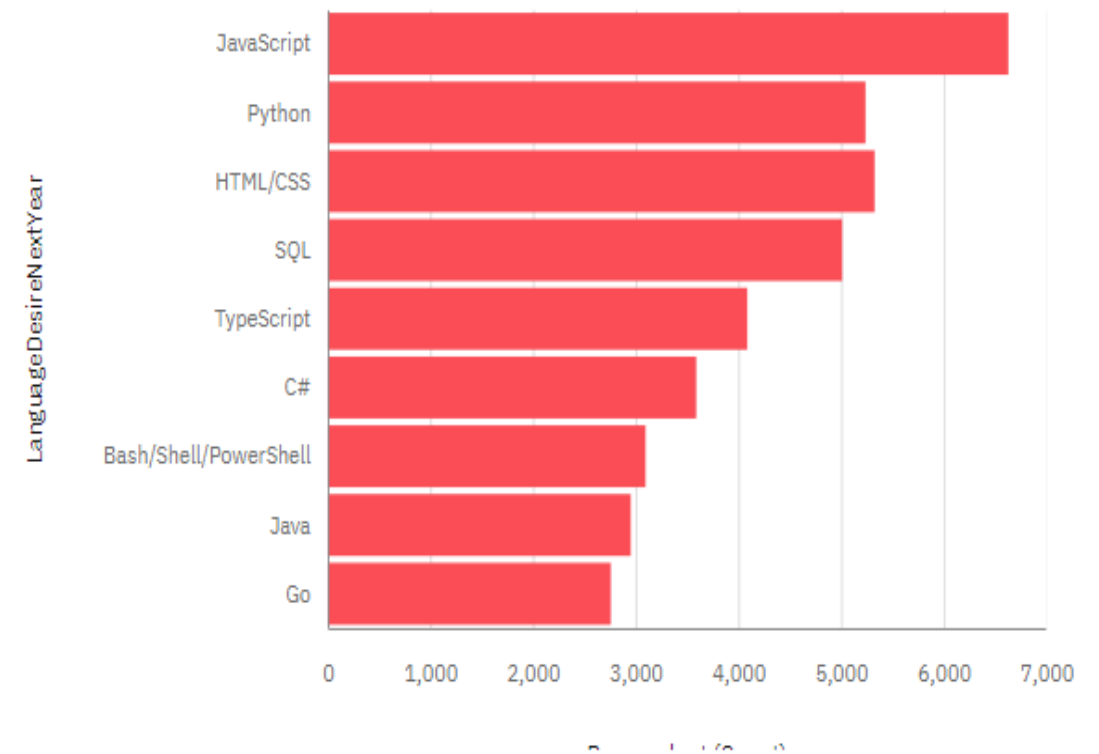


PROGRAMMING LANGUAGE TRENDS

TOP 10 Languages worked with



TOP 10 Languages Desire next year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

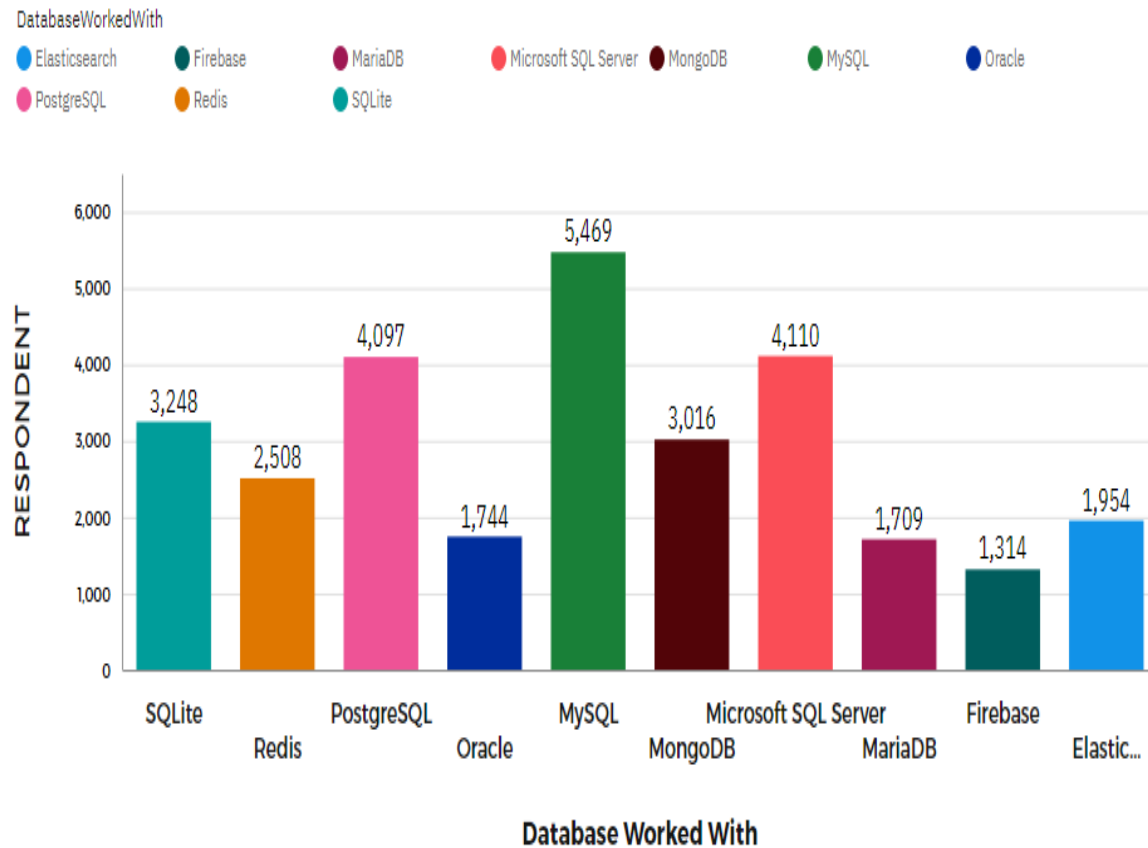
- *JavaScript* and *HTML/CSS* were the most popular in 2019 and will likely remain so the following year.
- *SQL* was popular in 2019 and will likely remain so.
- Increasing interests in *Python* and *Typescript*.
- Decreasing interest in *PowerShell/Bash*.

Implications

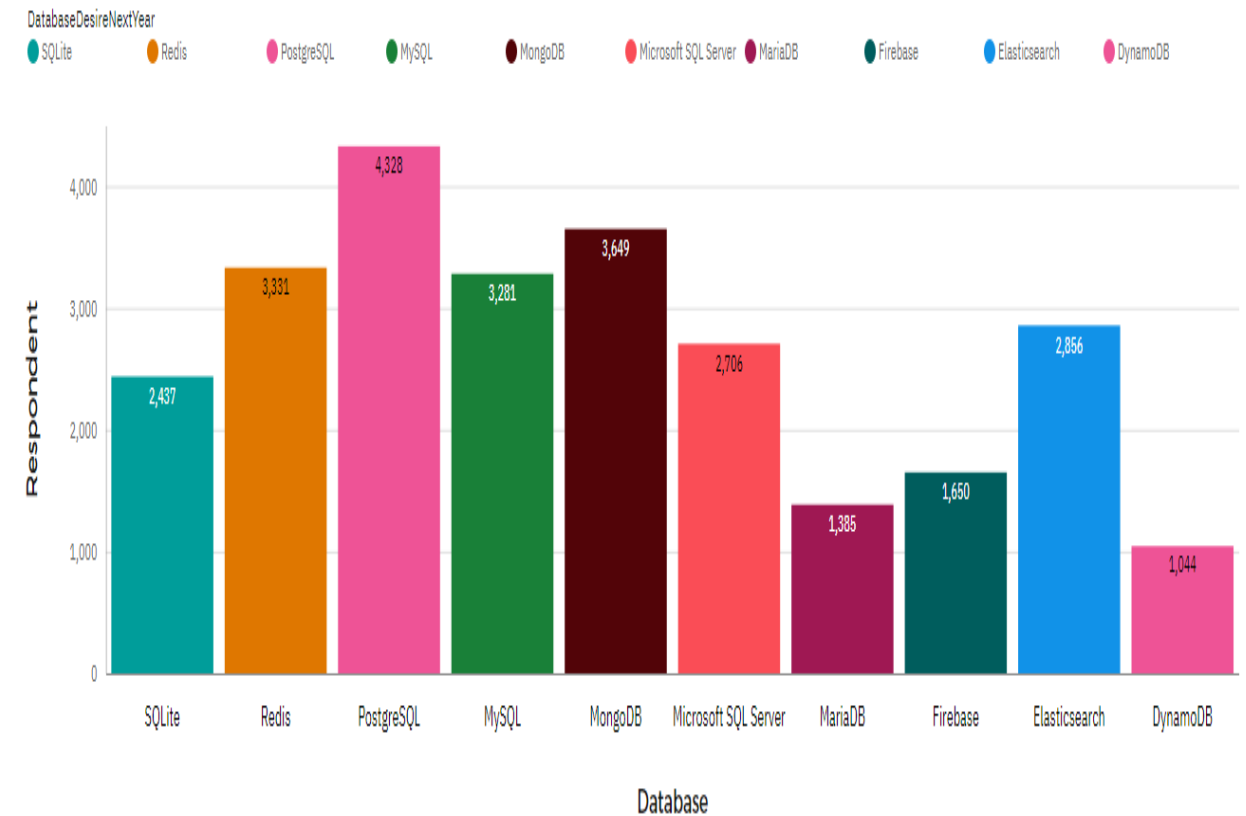
- Web development is still in high demand, and *JavaScript* and *HTML/CSS* remain the dominant languages, *Typescript* may catch up in the future.
- *SQL* remains the preferred language for big data storage and querying
- *Python*'s rising popularity likely reflects the growth of AI and ML work.

DATABASE TRENDS

Top 10 Database Worked With



Top 10 Database Desire next year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- SQL database programs were the most popular in 2019, with *MySQL* in the lead.
- *PostgreSQL* is gaining popularity over other SQL database programs, and it was the overall most desired database for the next year.
- *MongoDB* was popular in 2019 and gaining interest.

IBM Developer

Implications

- There appears to be increasing developer preference toward open-source database programs.
- NoSQL database programs are gaining popularity, which likely reflects a growing need to handle no relational and unstructured data.

DASHBOARD



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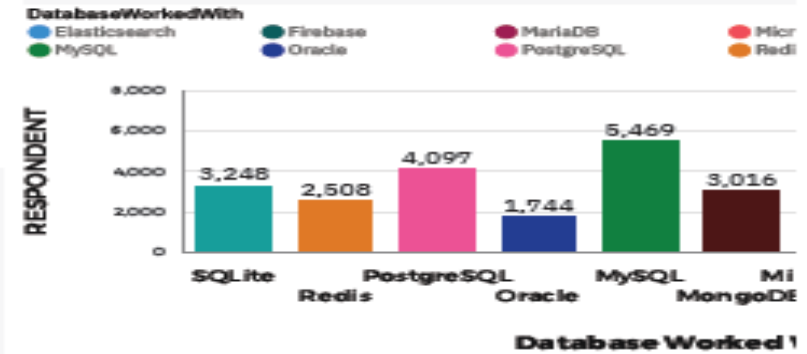
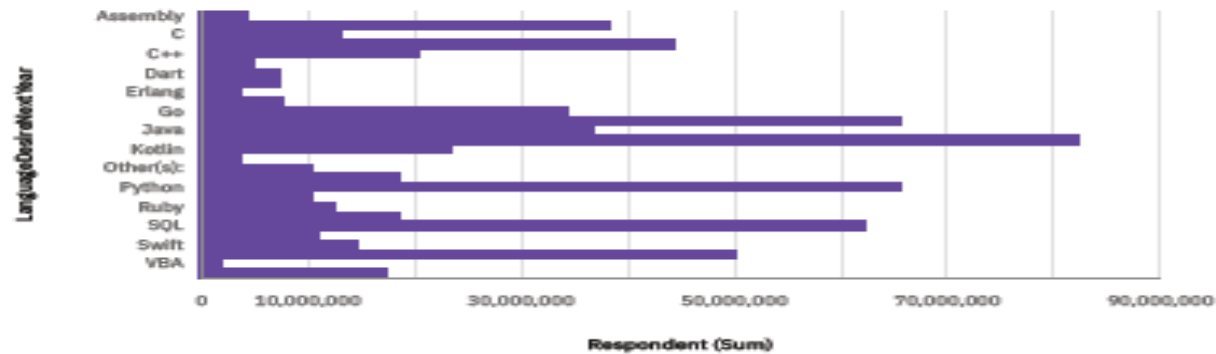
DASHBOARD TAB 1

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New dashboard

DASHBOARD A : CURRENT TECHNOLOGY USE

Respondent by Language Desired Next Year

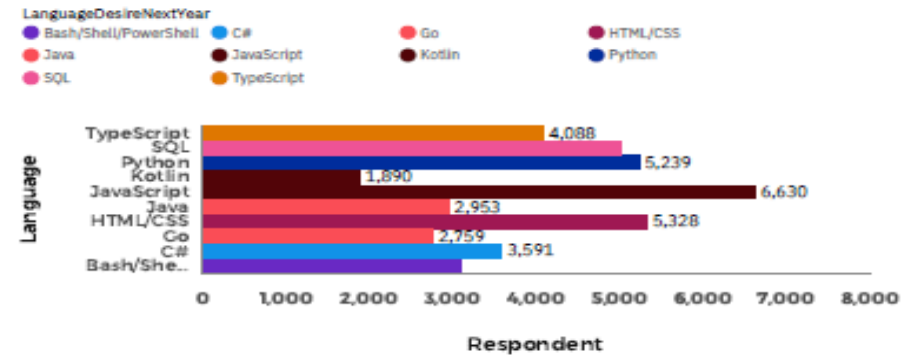


DASHBOARD TAB 2

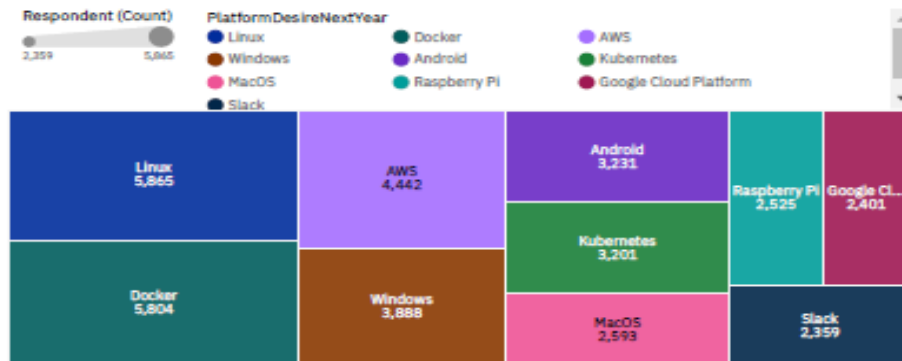
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DASHBOARD B : FUTURE TECHNOLOGY TREND

Top 10 Languages Desired for the next year

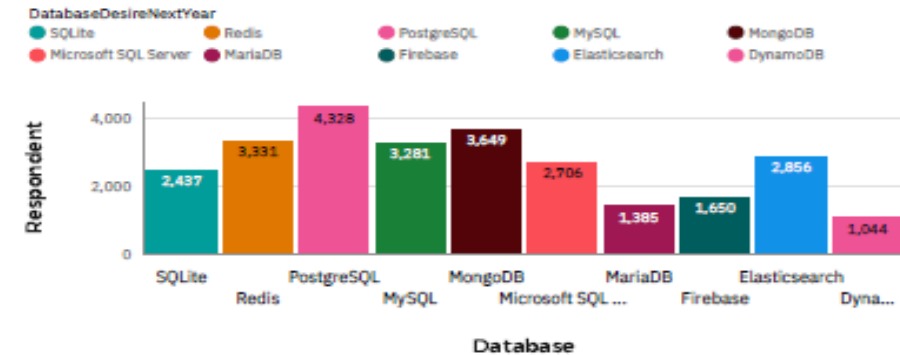


Platform Desired Next Year in 2019

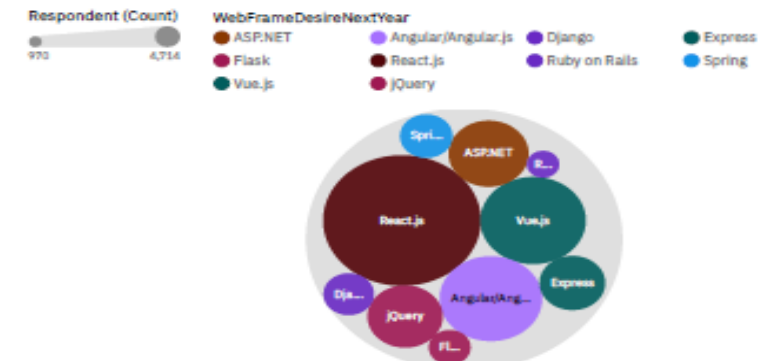


New dashboard

Top 10 Database Desire next year



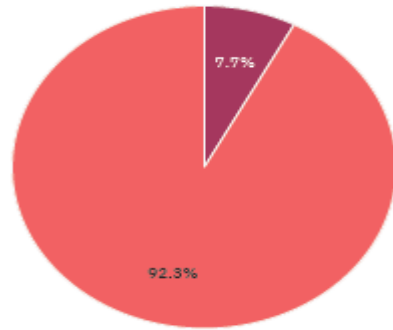
Top 10 Web Frame Desired Next Year



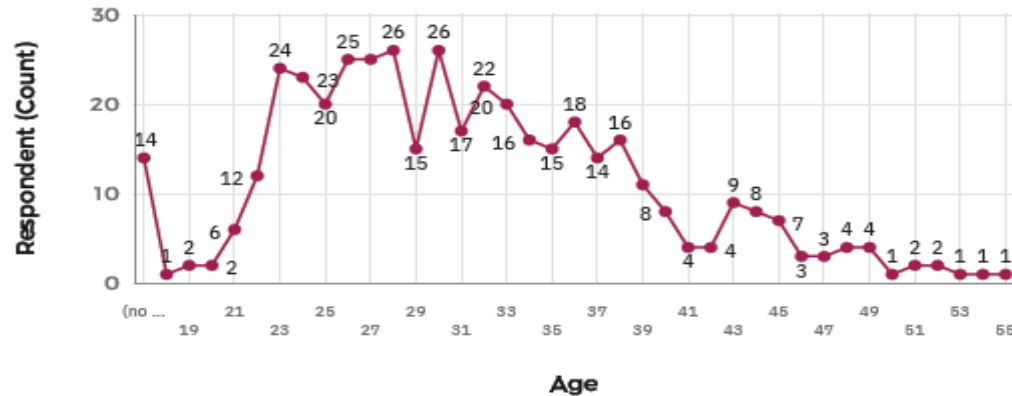
DASHBOARD TAB 3

Respondent classified by Gender

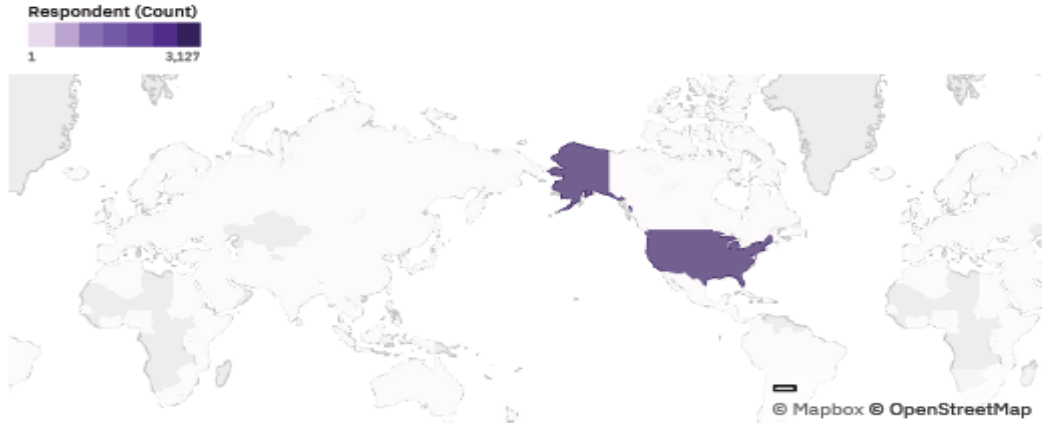
Gender
● Woman ● Man



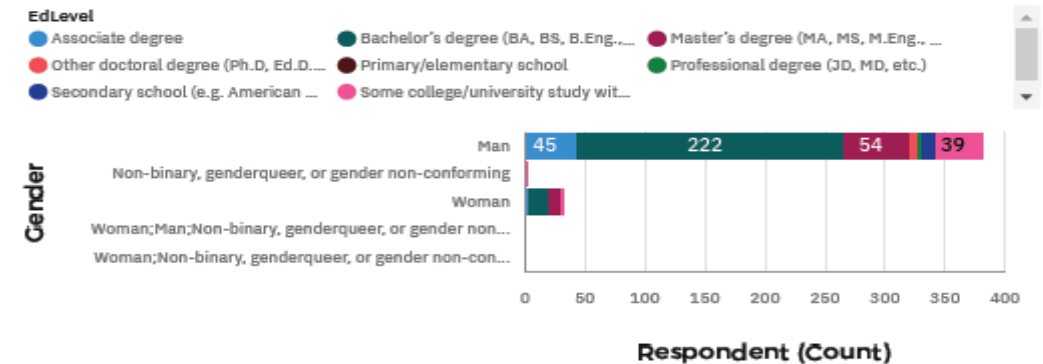
Respondent by Age



Respondent for Country regions



Respondent Count by Gender, classified by Formal Education Level



DISCUSSION



- What kinds of developer technologies are in top demand?
- Which technologies should prospective developers and data professionals be learning?
- Which technologies should educators place more emphasis on teaching in upcoming years?
- What does the distribution of annual compensation for developers look like?
- What is the developer demographic like? Is there a gender representation gap?

OVERALL FINDINGS & IMPLICATIONS

Findings

- High usage and interest in *JavaScript* and *HTML/CSS* remain high usage.
- Increasing interest in *Python*.
- High usage and interest in SQL. *MySQL* had the highest usage in 2019, but *PostgreSQL* is gaining interest and was the overall most desired database program for the next year
- NoSQL database programs gaining interest, of which *MongoDB* was the most used in 2019 and desired for the next year.
- A severe gender representation gap (in favor of men), despite median compensation being slightly higher for women.

Implications

- Web development is still in high demand
- data professionals should continue to enhance SQL competence but also enhance competence with NoSQL database programs and *Python*.

CONCLUSION

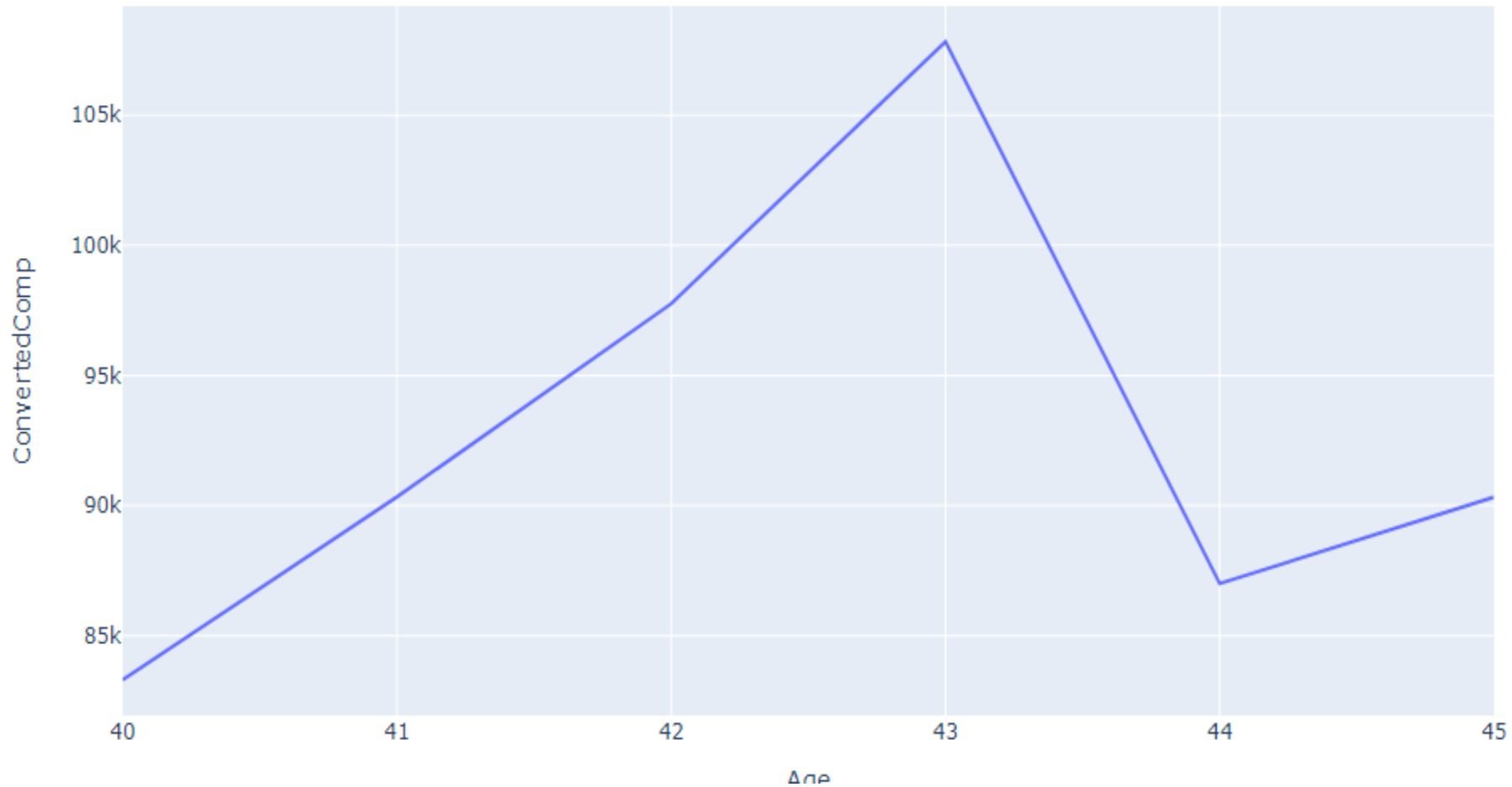


A subset of data collected as part of the *2019 Stack Overflow Developer Survey* was examined

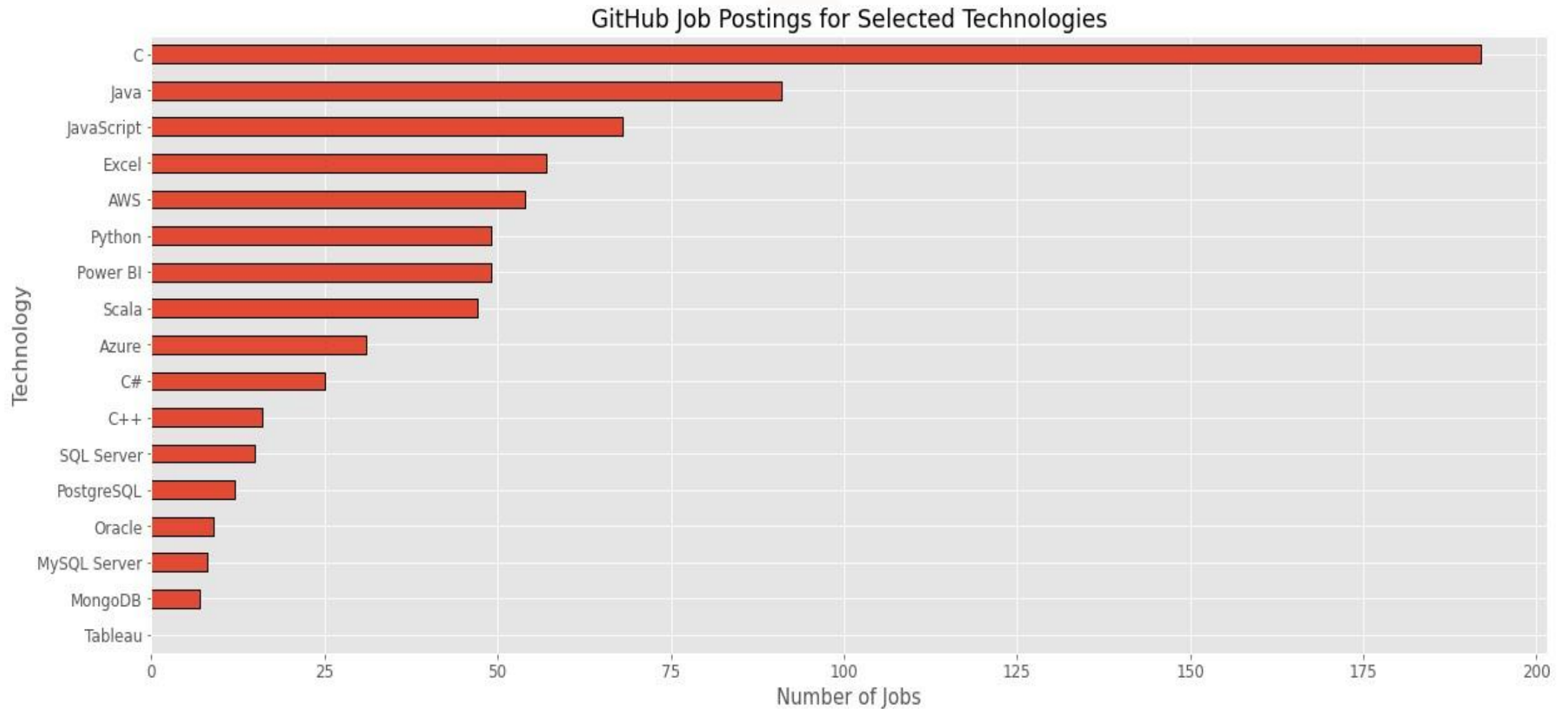
- The analyze show some interesting insights about the technologies that most used and desired by developers in addition to the developer demographic.
- These insights should be particularly relevant for current and prospective developers aiming to remain competitive, businesses aiming to upskill their talent

APPENDIX

relationship between age and annual salary



JOB POSTINGS



POPULAR LANGUAGES

