



# Developers Survey

**Aarti Srinivasan**

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IBM Developer

SKILLS NETWORK 

# OUTLINE

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

# EXECUTIVE SUMMARY

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- This report analyses a sample survey conducted by stack overflow.
- The findings of this report will help anyone starting a new career and experienced professional alike.
- The report analyses the following
  - Current trends in languages and databases
  - Likely future trends of learning
  - Technology trends in various countries
  - Gender gap in the field of technology

# INTRODUCTION

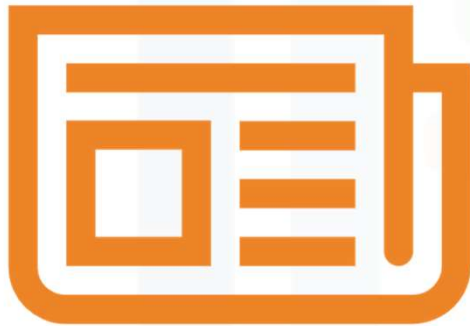
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- Current and Future trends in technology
- Purpose:
  - To find of the programming language in demand
  - To find out the databases in demand
  - Likely future trends of Programming languages and Databases
  - The top skills required for experienced professionals and anyone seeking a career in technology.

# METHODOLOGY

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- **Data Collection**
  - Stack overflow Survey
  - Git hub
- **Data Wrangling**
  - Removing Duplicates
  - Imputing missing data
  - Normalizing Data using statistical methods
- **Data Visualization**
  - Using Python libraries like Matplotlib and seaborn
  - Cognos BI
- **Dashboard**
  - IBM Watson
- **Presentation**

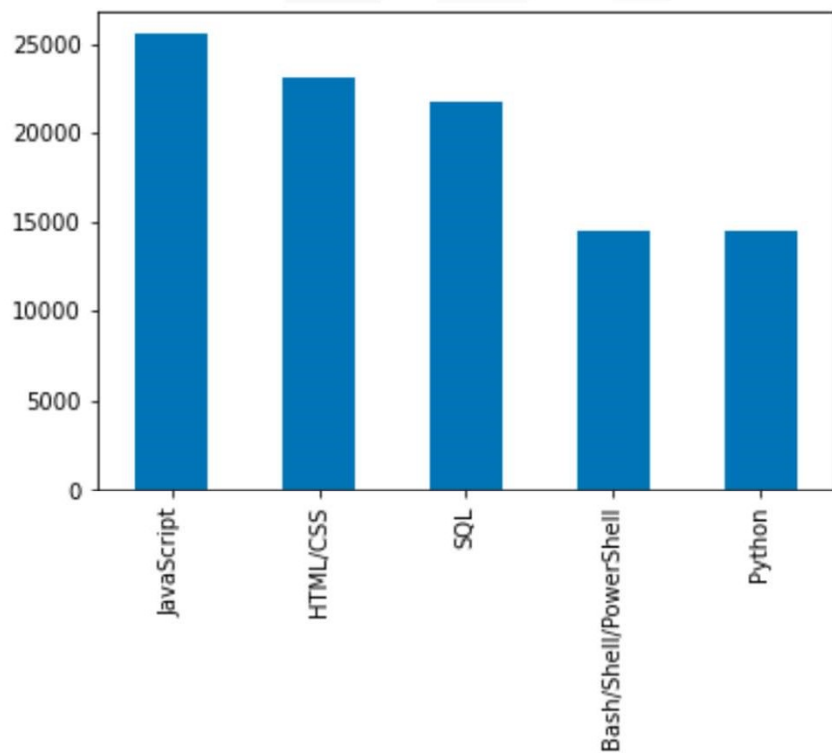
# RESULTS

Results are based on the DataFrame below:

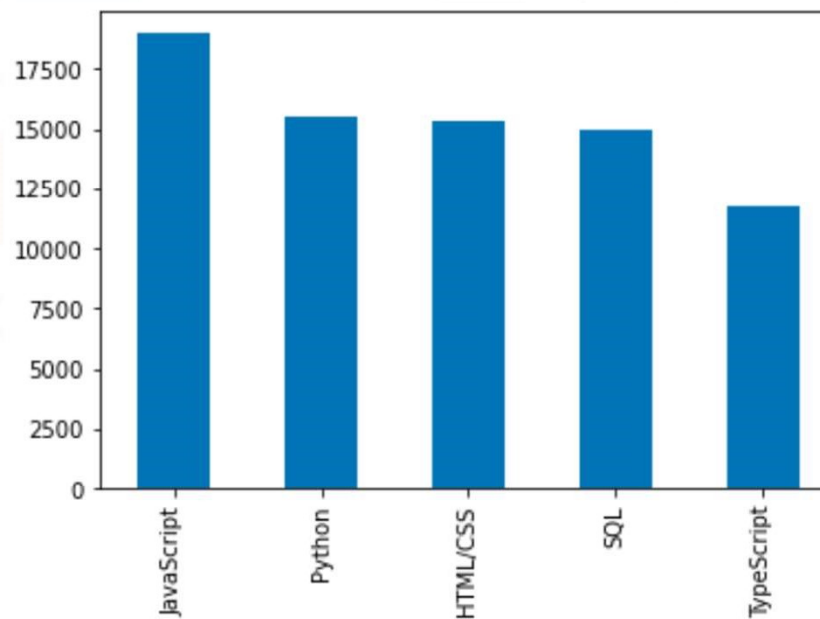
	Respondent	LanguageWorkedWith	LanguageDesireNextYear	DatabaseWorkedWith	DatabaseDesireNextYear	PlatformWorkedWith
0	4	C	C	MySQL	MySQL	Linux
1	4	C++	C#	SQLite	SQLite	Windows
2	4	C#	JavaScript	NaN	NaN	NaN
3	4	Python	SQL	NaN	NaN	NaN
4	4	SQL	NaN	NaN	NaN	NaN
...	...	...	...	...	...	...
74584	25142	Go	Python	NaN	NaN	NaN
74585	25142	HTML/CSS	R	NaN	NaN	NaN
74586	25142	PHP	NaN	NaN	NaN	NaN
74587	25142	Python	NaN	NaN	NaN	NaN
74588	25142	R	NaN	NaN	NaN	NaN

# PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



## PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

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### Findings

- JavaScript and HTML/CSS are the popular languages this year
- Python and SQL are equally popular

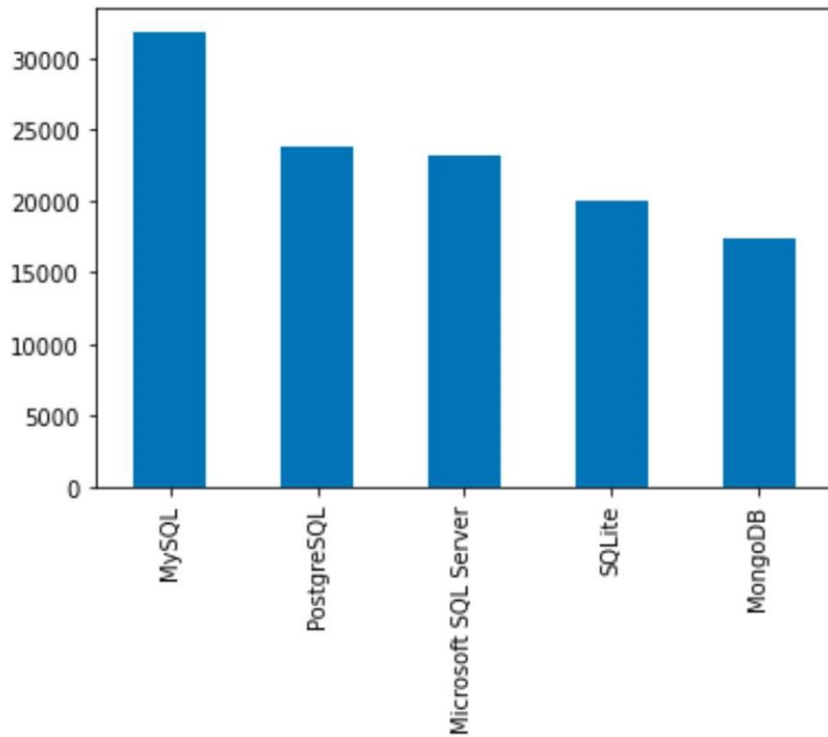
### Implications

- JavaScript is the language for Web development
- Developers have increasing interest in Python and SQL .The trend seems to continue onto the future

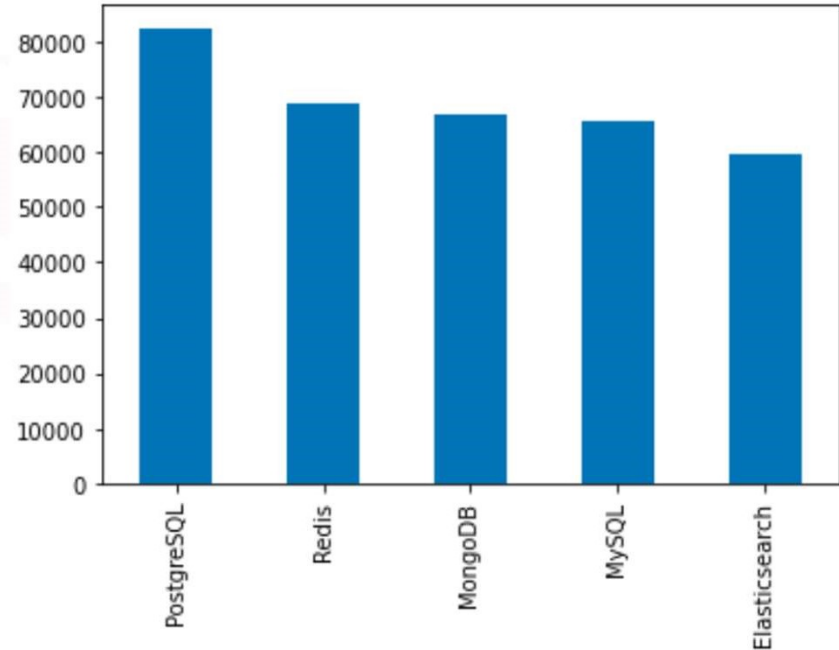


# DATABASE TRENDS

Current Year



Next Year



# DATABASE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- MySQL , PostgreSQL are popular among developers
- MongoDB has an increasing interest with developers

## Implications

- Open source databases are more popular
- NoSQL will have a growing demand in the Job market

# DASHBOARD

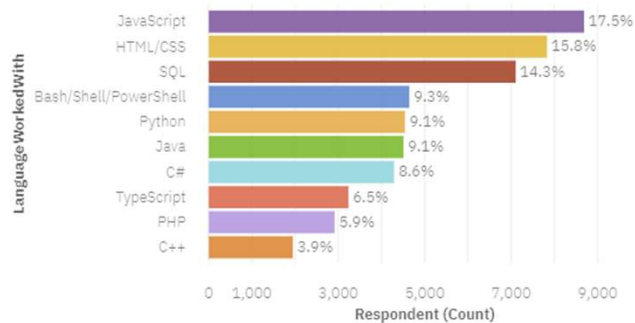
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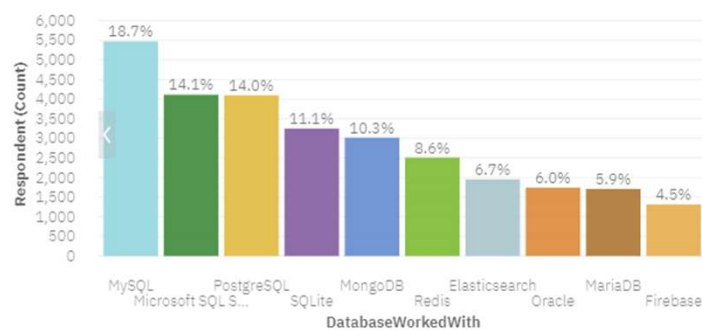
<https://dataplatform.cloud.ibm.com/dashboards/8092293a-bbf1-4cf3-af42-954c936fc7b0/view/622ad60e63b91d8d41bdcce4079d250479622509e7bbd70580877b490e692497a93f1097c82a1f0f8915506bf3eb120f9b>

# CURRENT TECHNOLOGY USAGE

Top 10 Languages Worked With



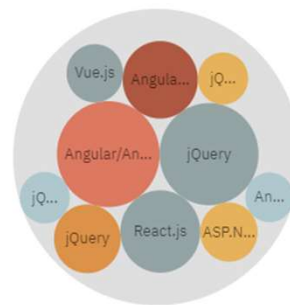
Top 10 Databases Worked With



Platform Worked With

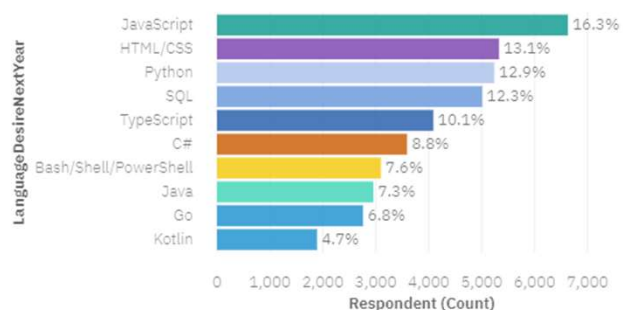


Top 10 Platforms Worked With

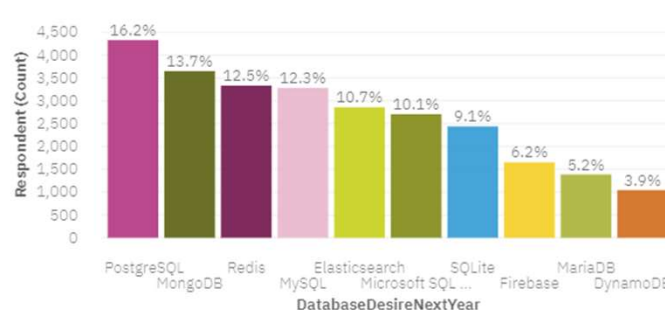


# FUTURE TECHNOLOGY TREND

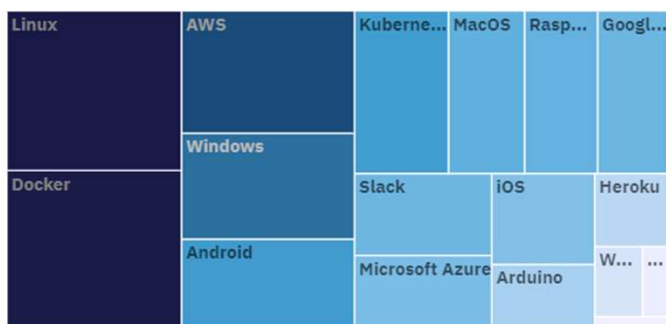
## Top 10 Languages Desire to Learn



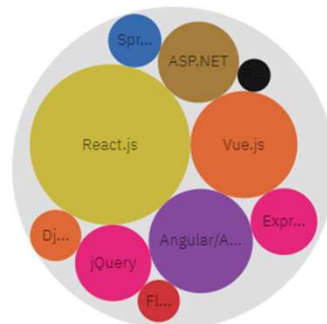
## Top 10 Databases Desire To Learn



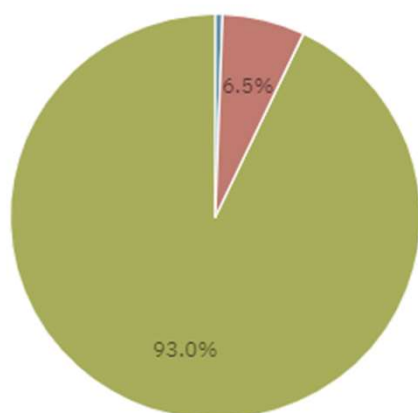
## Platform Desire To Learn



## Top 10 Webframes Desire To Learn

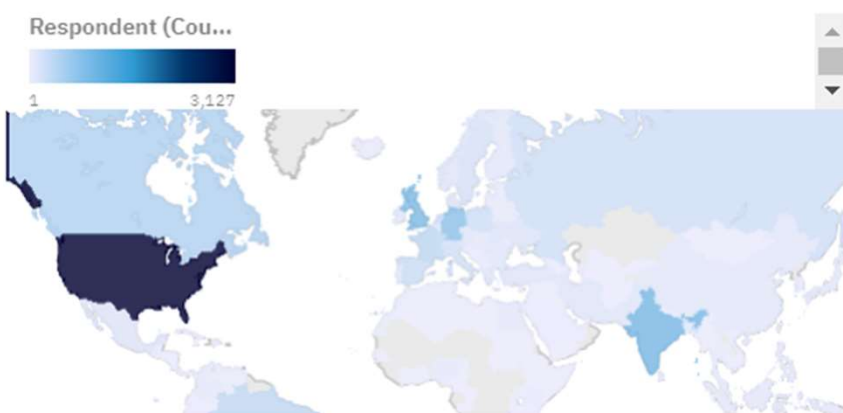


### Respondent Classified by Gender

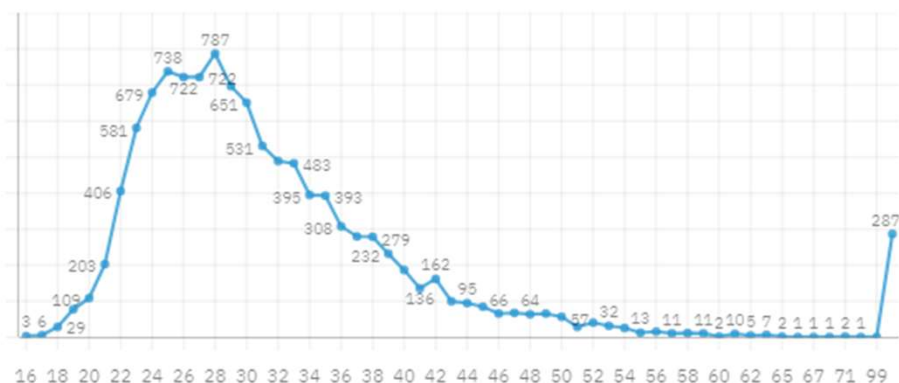


Gen...  
 ● No...  
 ● W...  
 ● M...

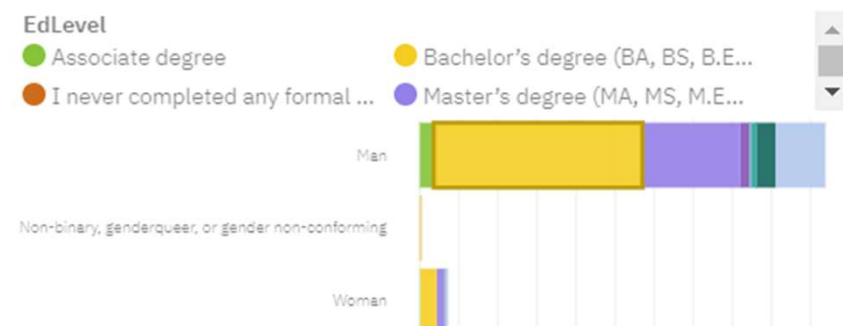
### Respondent Count for Countries



### Respondent Count by Age



### Respondent Count by Gender, classified by Formal Education Level.



# DISCUSSION

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- How do we bring more women into technology jobs?
- What are the current and future trends ?
- What are the factors that affects the technology development in various countries?

# OVERALL FINDINGS & IMPLICATIONS

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## Findings

- Majority of developers are men
- Most of the technology development is in the USA

## Implications

- Companies and Universities need to bring in incentives for women to bridge the gender gap
- Companies need to work on spreading technology to various countries by establishing their presence.



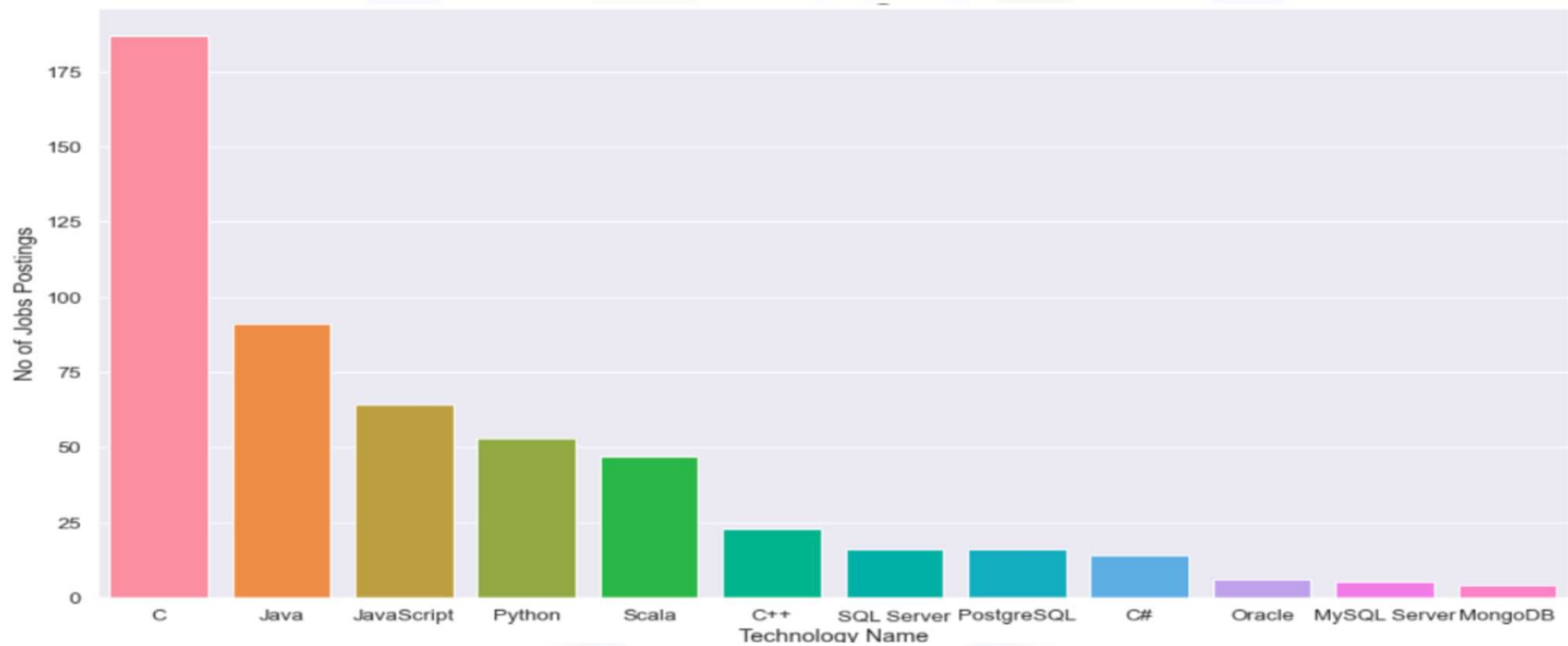
# CONCLUSION

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- Understanding current and future trends in the tech market will enable new entrants and the experienced professionals to step up their career.
- More programs and incentives should be made by companies to bring in women to bridge the vast gender gaps
- Sharing knowledge across countries is important for a global tech empowerment.

# GITHUB JOB POSTINGS



# POPULAR LANGUAGES

