



2019 Stack Overflow Developer Survey

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18/08/2022

OUTLINE



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EXECUTIVE SUMMARY



- Programming Languages & Databases trends
- Demographics survey result
- Gender gap in Tech sector
- Gap between countries based on access to technology

INTRODUCTION



- **Trends Analysis in Web development**
 - Identifying the Gaps in workforce
 - Identifying the future skills needs
 - To identify the popular languages and technologies
- **Audience: HR department and Tech department**

METHODOLOGY



- Data Collection sources
 - Stack Overflow Developer Survey
 - GitHub job posting
- Data exploration
- Data cleaning
- Data visualization
- Presentation

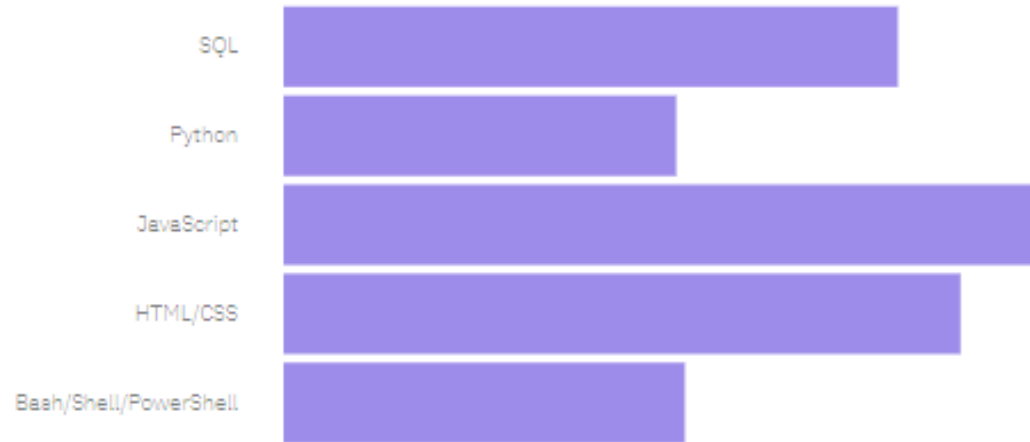
Data

WebFrameWorkedWith	PlatformWorkedWith	LanguageWorkedWith	DatabaseWorkedWith
ASP.NET	AWS	Assembly	Cassandra
			Couchbase
			DynamoDB
			Microsoft SQL Server
			MySQL
		Bash/Shell/PowerShell	Cassandra
			Couchbase
			DynamoDB
			Elasticsearch
			Firebase
			MariaDB
			Microsoft SQL Server

PROGRAMMING LANGUAGE TRENDS

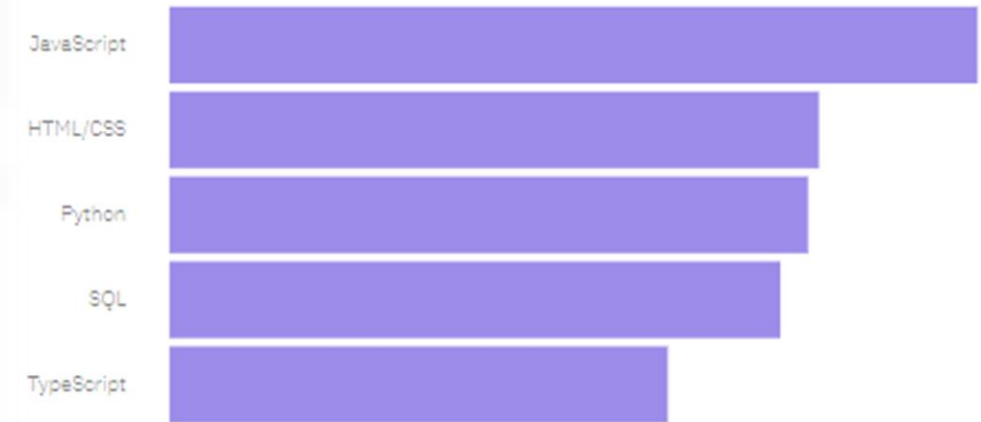
Current Year

Popular Languages



Next Year

Language Desire Next Year



PROGRAMMING LANGUAGE TRENDS

Findings

- JavaScript, HTML/CSS, SQL are top 3 this year
- Python and Typescript becoming popular next year
- PowerShell edged out in next year

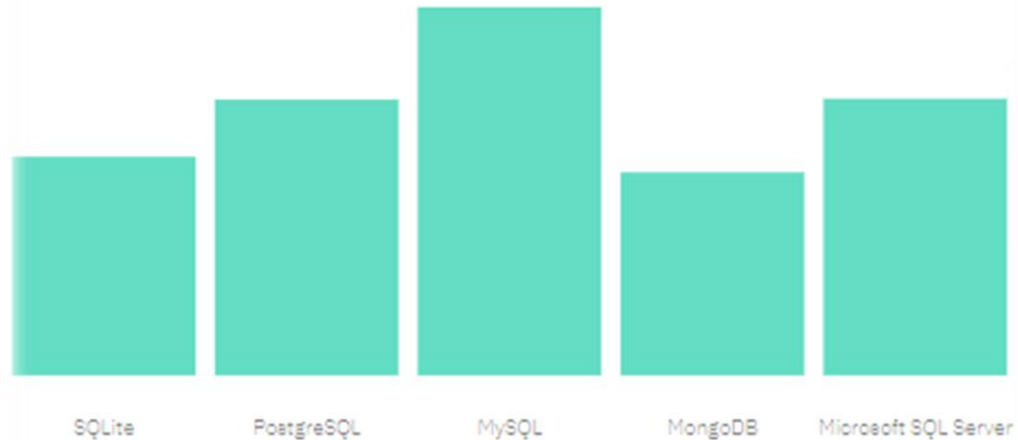
Implications

- Web development are still in high demand
- Big Data technology in companies still requires SQL
- With AI and ML in rising demand, Python is best choice

DATABASE TRENDS

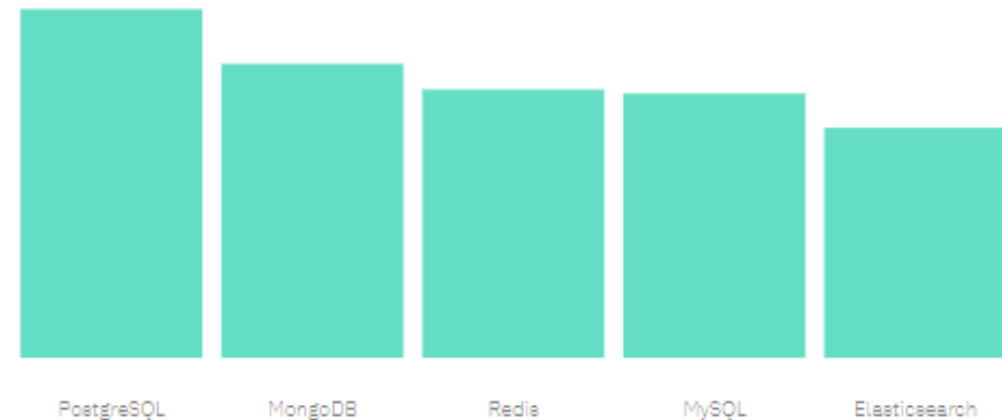
Current Year

Popular Databases



Next Year

Database Desire Next Year



DATABASE TRENDS

Findings

- MySQL most popular
- Behind is Microsoft SQL
- MongoDB and Redis are upcoming favorites
- New kid on the block: Elasticsearch

Implications

- Open source databases are still preferable in companies
- NoSQL databases will make an impact for storing non relational data
- Redis supports abstract data types
- Pre tuned search to website, app, or ecommerce store

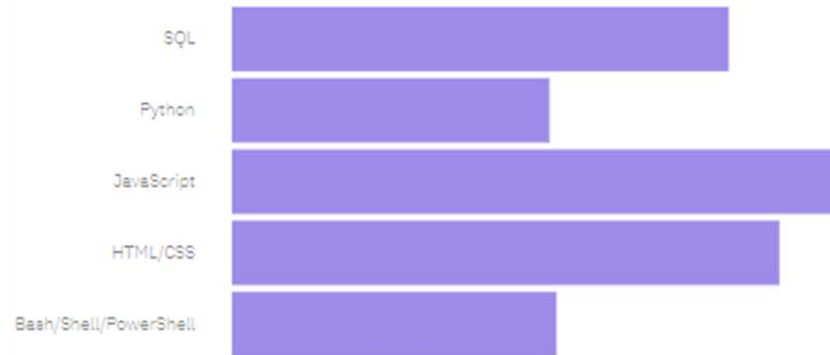
DASHBOARD



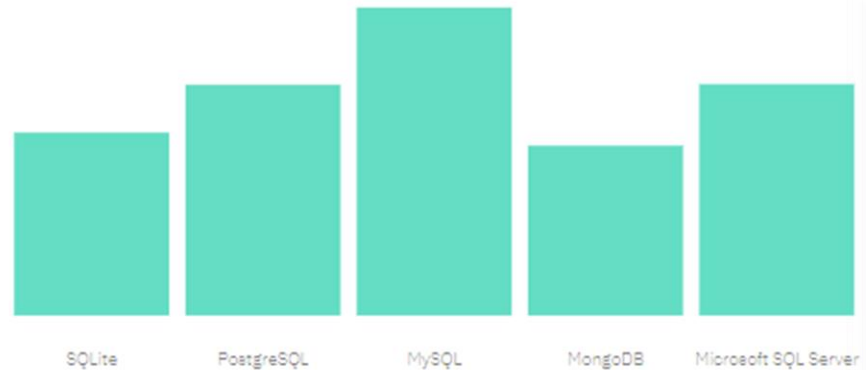
<<https://eu-de.dataplatform.cloud.ibm.com/dashboards/f0b03774-ace0-4ac5-9dc1-453a001aaaaea/view/6728d73c27b908c26ce9f6e4079828012e37205cbabb8b0a808d7b4907352497f36b1298c82c4c08da45076af3ef4350c8>

DASHBOARD TAB 1

Popular Languages



Popular Databases



Popular Platforms



Popular WebFrames

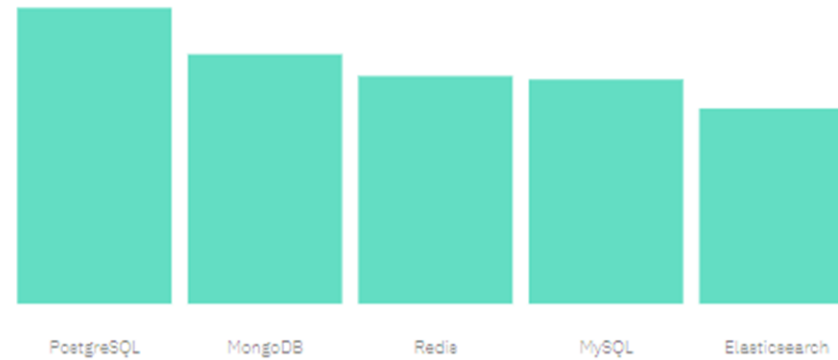


DASHBOARD TAB 2

Language Desire Next Year



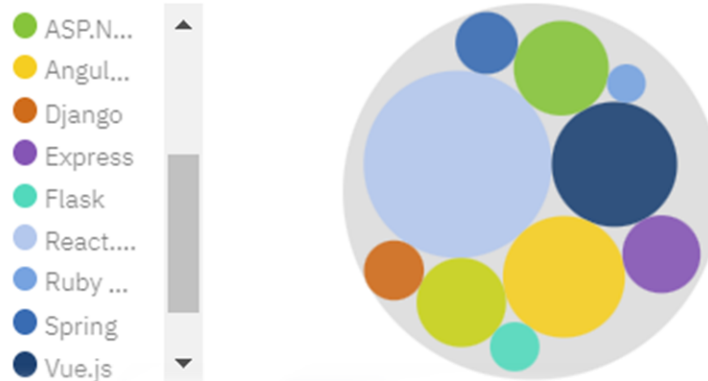
Database Desire Next Year



Platform Desire Next Year



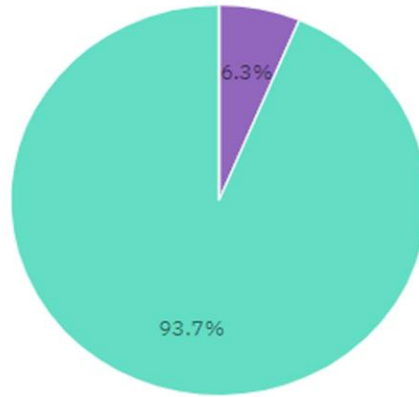
Web Frame Desire Next Year



DASHBOARD TAB 3

Respondent classified by Gender

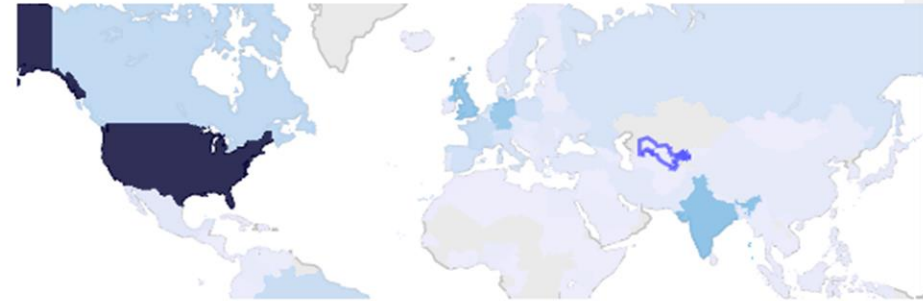
Gender
Woman
Man



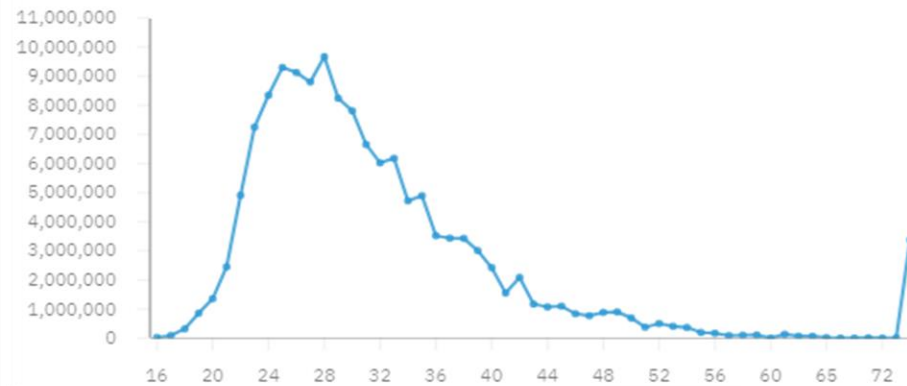
Respondent Count for Countries

Respondent (Sum)

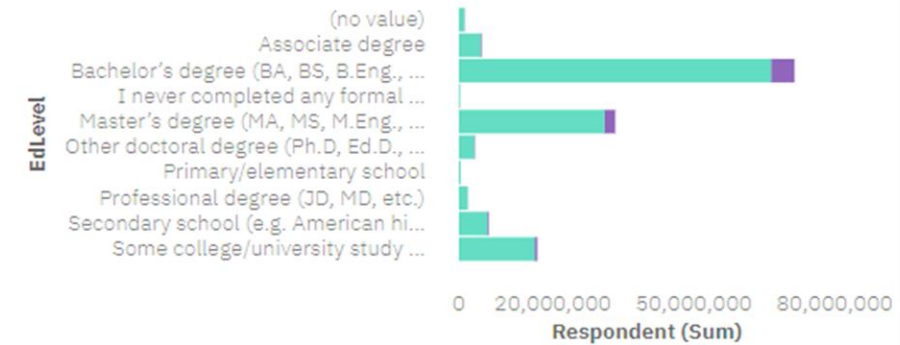
865 38,170,293



Respondent Count by Age



Respondent by Gender & Education



DISCUSSION



- Technology Trends now and future
- Training and Reskilling workers
- Females participation in Technology field
- Bridge divide of technology gaps in developing countries
- Eliminate age and education discrimination in employment

OVERALL FINDINGS & IMPLICATIONS

Findings

- Fast changing technology every year
- Concentration on several countries like USA and India
- Gender gap in technology jobs
- Platforms like Docker and AWS are growing

Implications

- Companies need to be flexible and adjust to rapid changes
- Need to spread technology out to lagging countries
- Impact of job hiring's
- Shift to faster app deployments and cloud services in future

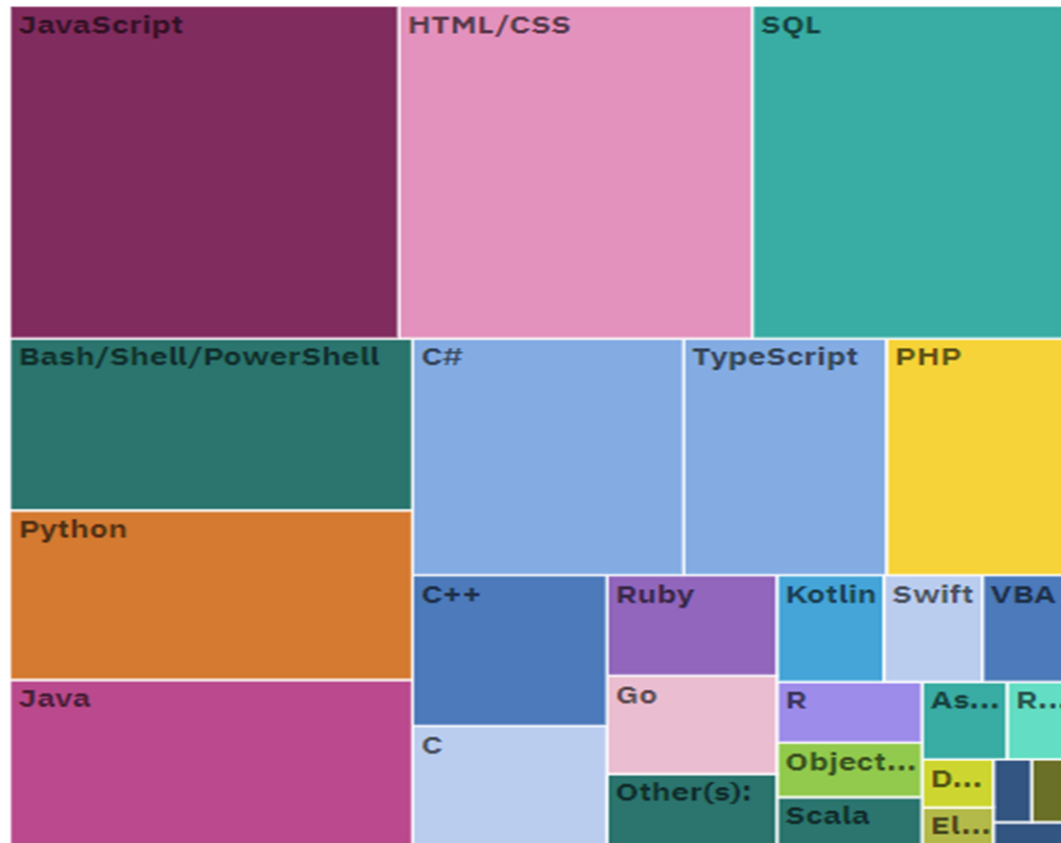
CONCLUSION



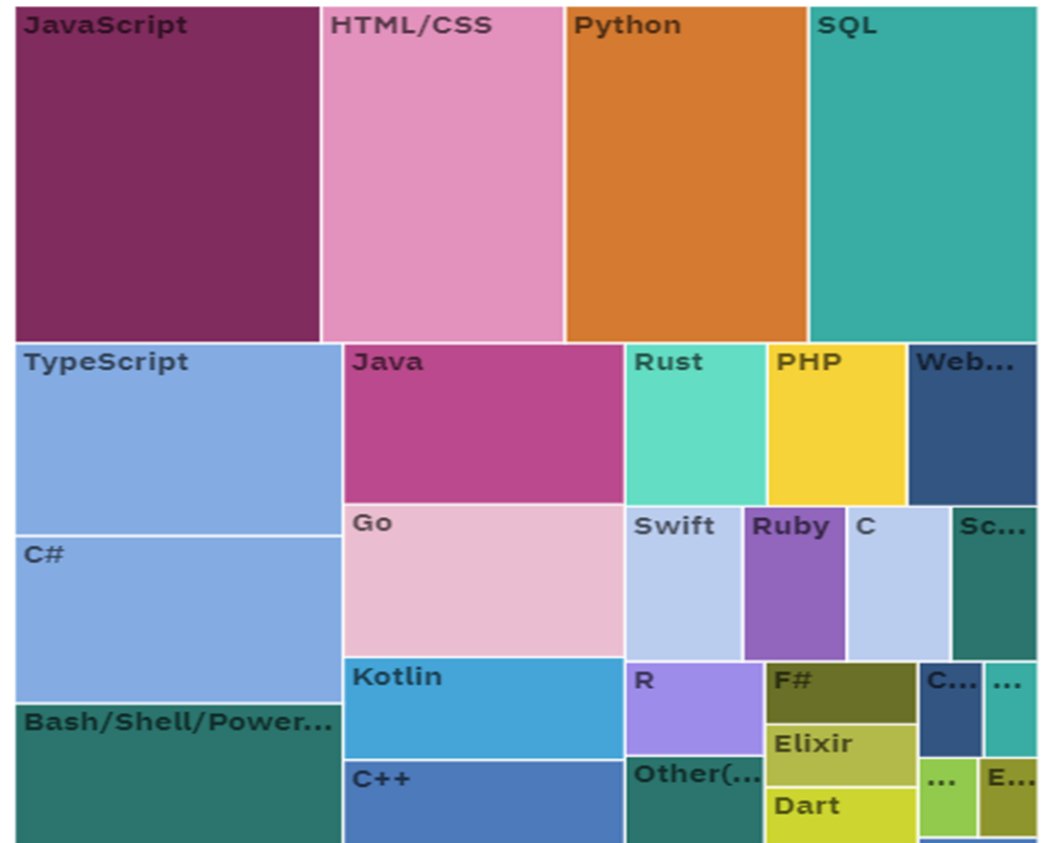
- Technology Trends for current and next year
- Programming Languages, Database and Platform overview
- Demographics overview
- Actions to be taken
- In future, incorporate Machine Learning to predict trends and salaries

APPENDIX

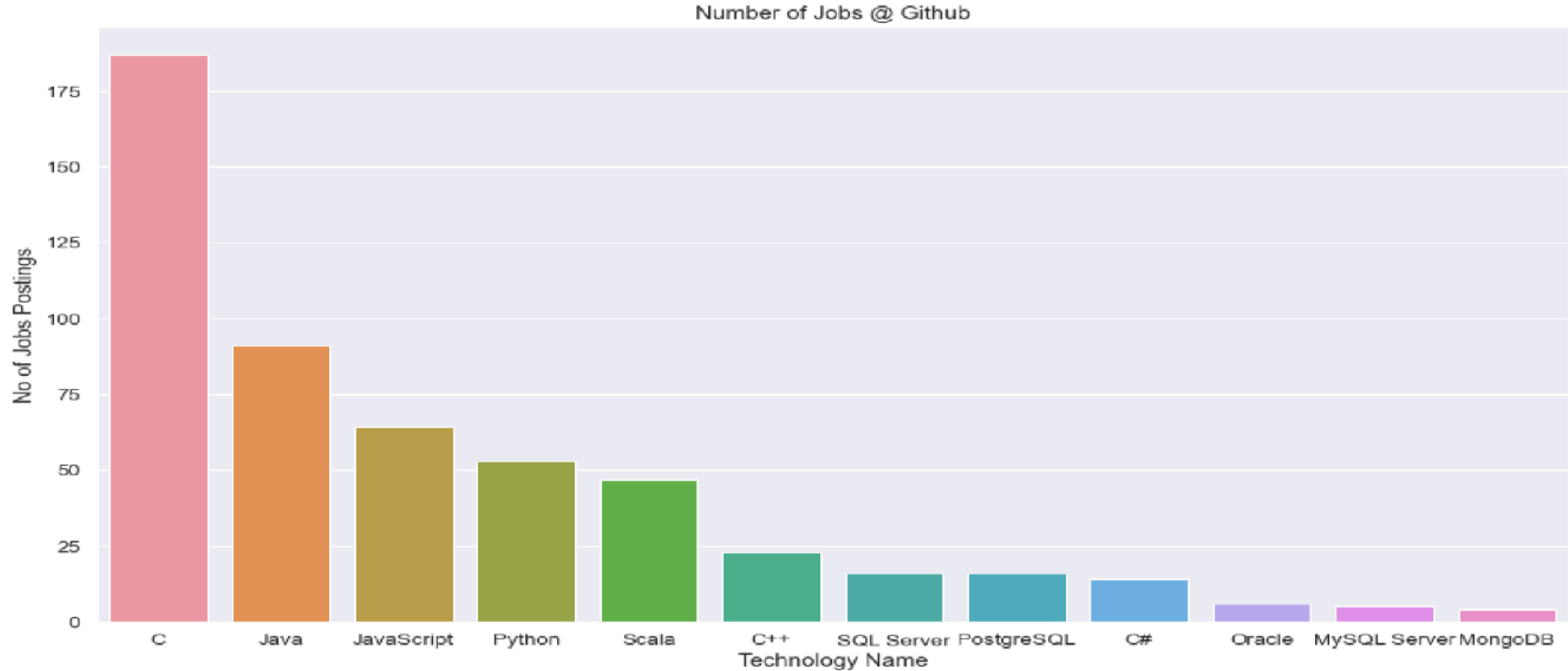
Top Languages this year



Top Languages next year



JOB POSTINGS



POPULAR LANGUAGES

