Technology Trends & Analysis Pattern

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OUTLINE

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

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EXECUTIVE SUMMARY

- Trends in programming languages and databases.

- Demographics survey.

- Technological gap in countries.

- Gender gap in job.

INTRODUCTION

About :

Analyzing the trends in software development

Purpose :

- Identify skill requirements for future.

- What are the top programming languages in demand?

- What are the top database skills in demand?

- What are the popular IDEs

Audience : HR and IT Head

METHODOLOGY

- Data Collection Sources
  - Stack Overflow Developer 2019 Survey.
  - GitHub job postings.
  - Programming Languages Annual Salary

- Data Exploration

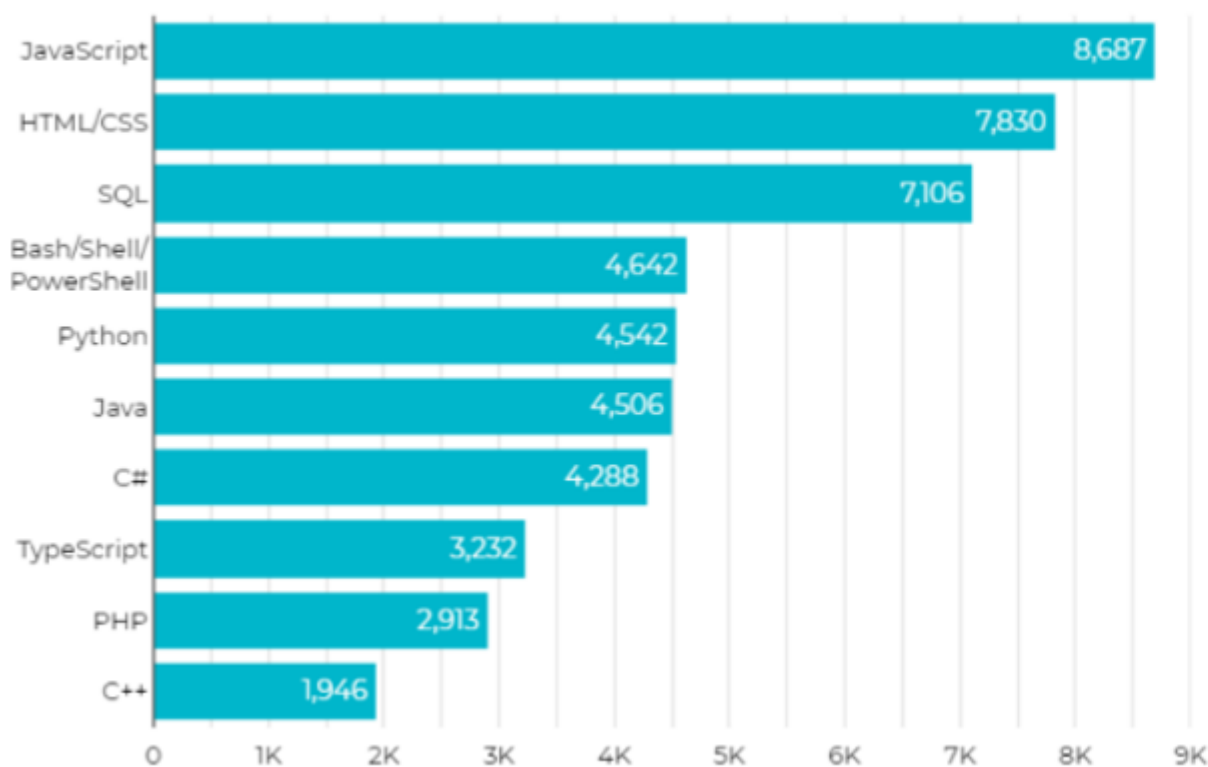- Data Cleaning

- Data Visualization

- Presentation

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RESULTS

	Respondent...	LanguageWorkedWith	LanguageDesireNextYear	DatabaseWorkedWith	DatabaseDesireNextYear
1.	25142	R			
2.	25142	Python			
3.	25142	C	C		
4.	25142	Go	Python		
5.	25142	C++	C++		
6.	25142	HTML/CSS	R		
7.	25142	PHP			
8.	25142	Bash/Shell/PowerShell	Bash/Shell/PowerShell	PostgreSQL	PostgreSQL
9.	25141	C#	F#		Microsoft SQL Server
10.	25141	JavaScript			
11.	25141	TypeScript			
12.	25141	HTML/CSS			Redis
13.	25141	Java			
14.	25141	Python			
15.	25141	SQL			

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PROGRAMMING LANGUAGE TRENDS

Top 10 LanguageWorkedWith

Language	Value
JavaScript	8,687
HTML/CSS	7,830
SQL	7,106
Bash/Shell/PowerShell	4,642
Python	4,542
Java	4,506
C#	4,288
TypeScript	3,232
PHP	2,913
C++	1,946

Top 10 LanguageDesireNextYear

Language	Value
JavaScript	6,630
HTML/CSS	5,328
Python	5,239
SQL	5,012
TypeScript	4,088
C#	3,591
Bash/Shell/PowerSh...	3,097
Java	2,953
Go	2,759
Kotlin	1,890

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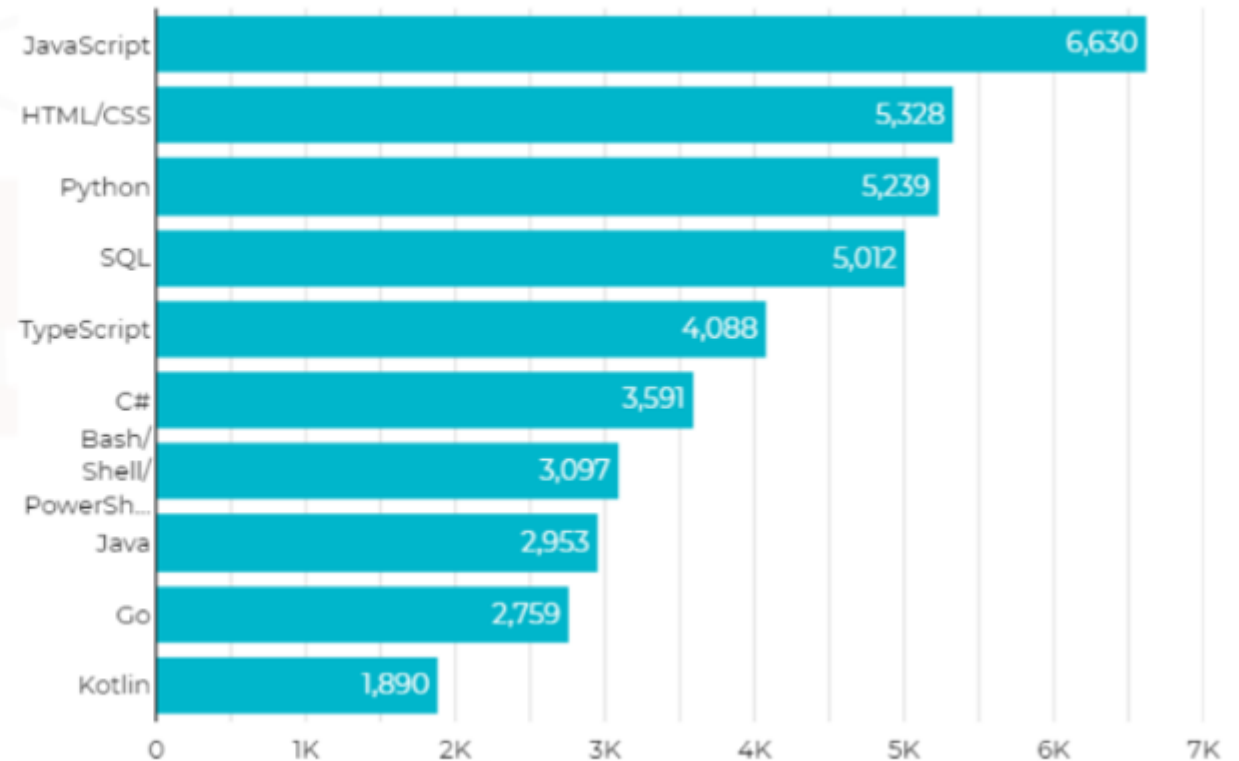
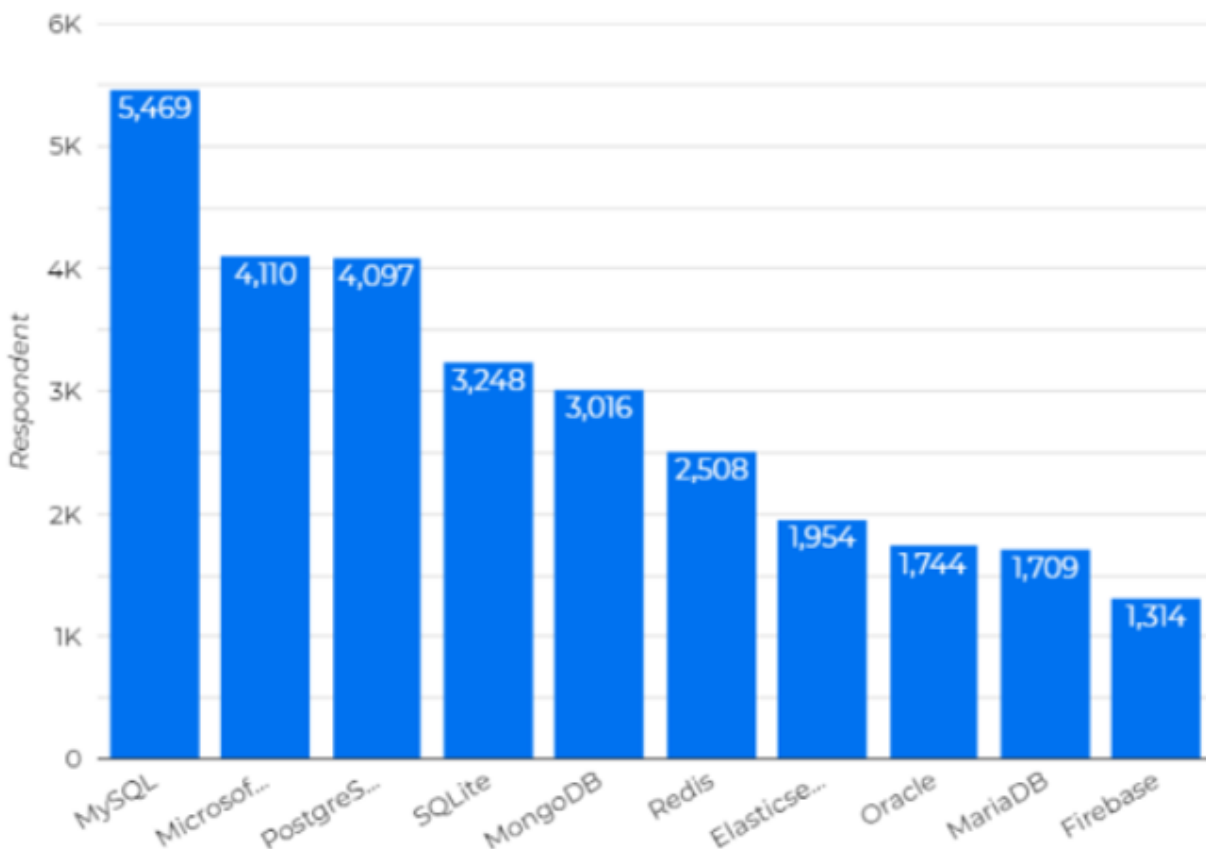# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

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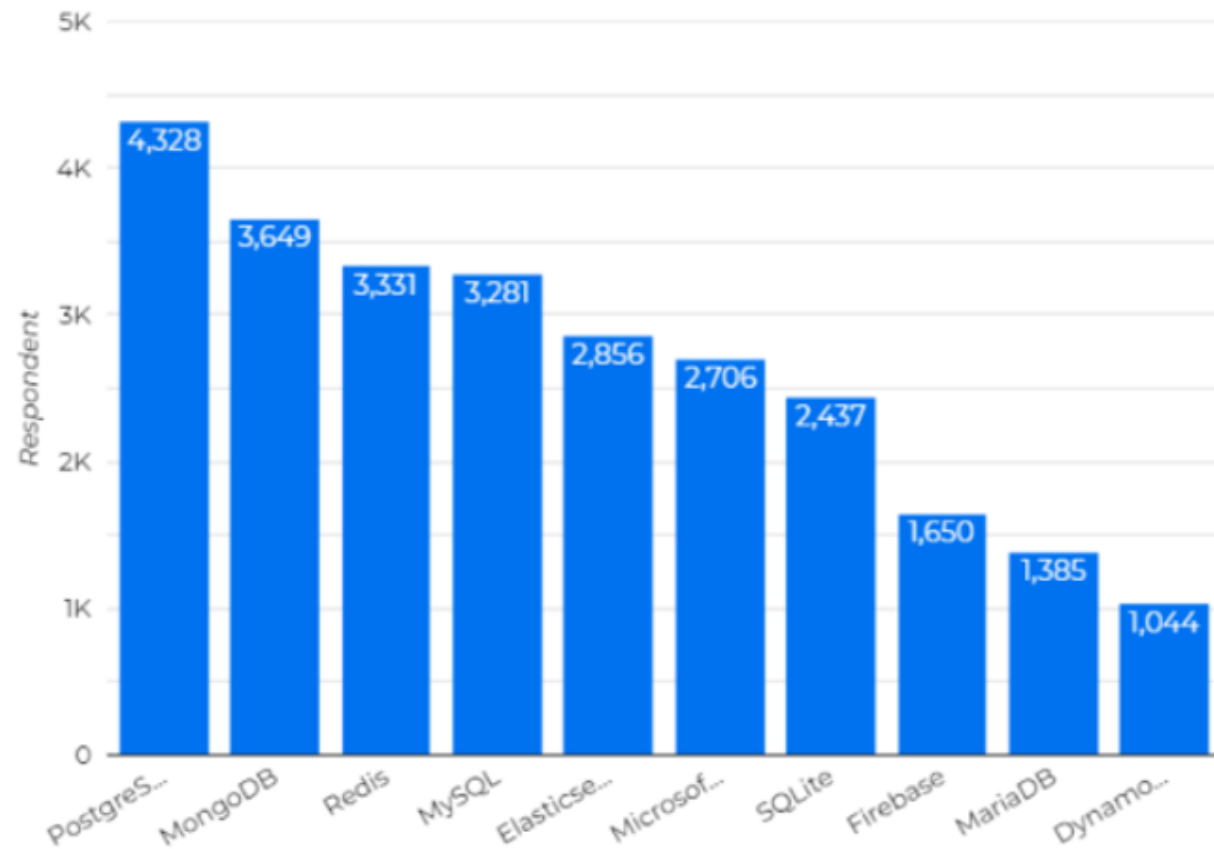- PowerShell edge out in next year.

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 the best choice.

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DATABASE TRENDS

Top 10 DatabaseWorkedWith

- MySQL: 5,469
- Microsof...: 4,110
- PostgreS...: 4,097
- SQLite: 3,248
- MongoDB: 3,016
- Redis: 2,508
- Elasticse...: 1,954
- Oracle: 1,744
- MariaDB: 1,709
- Firebase: 1,314

Top 10 DatabaseDesireNextYear

- PostgreS...: 4,328
- MongoDB: 3,649
- Redis: 3,331
- MySQL: 3,281
- Elasticse...: 2,856
- Microsof...: 2,706
- SQLite: 2,437
- Firebase: 1,650
- MariaDB: 1,385
- Dynamo...: 1,044

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DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL is the most popular.

- Behind is MS SQL Server.

- 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

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DASHBOARD

https://github.com/manjit8387/Dashboards/blob/main/Final-capstone-story-template.pptx

Or

https://github.com/manjit8387/Final-Project/blob/main/Final-capstone-story-template.pptx

github.com > manjit8387 > Dashboards > Final-capstone-story-template.pptx

Or

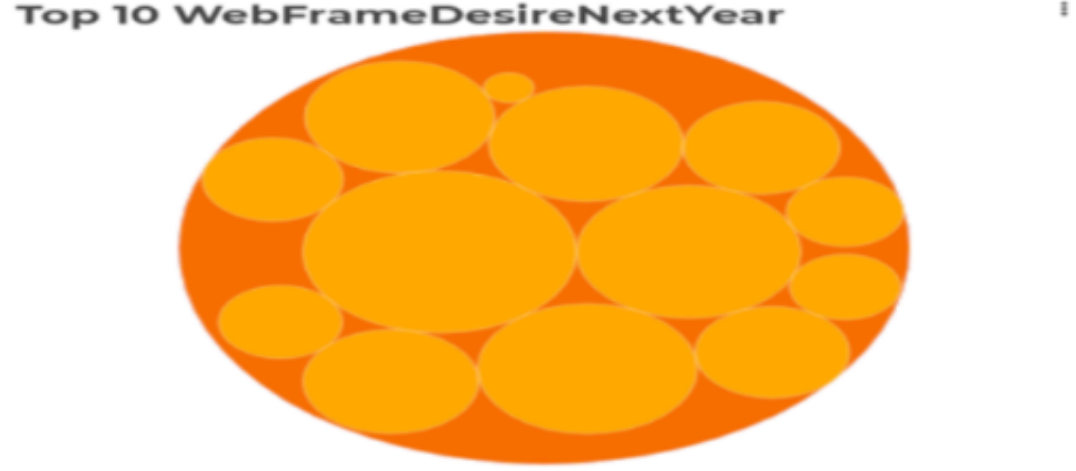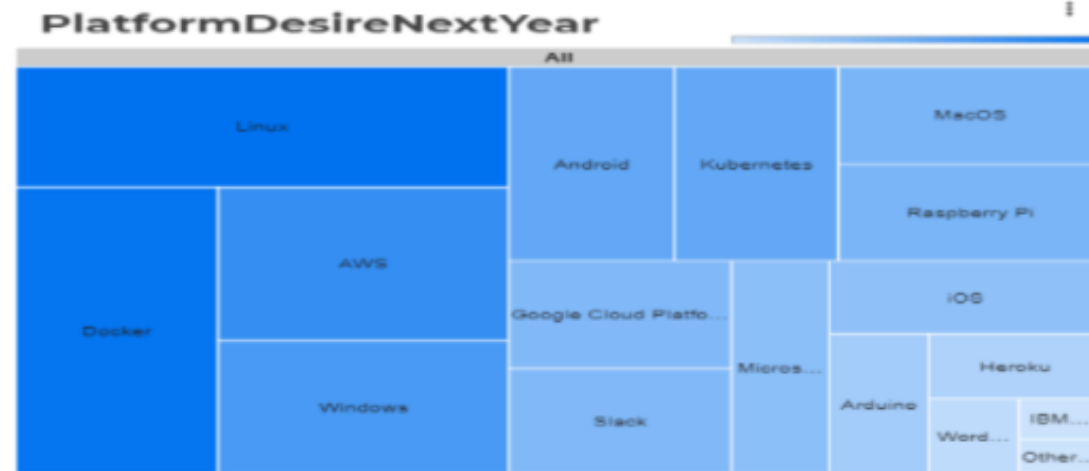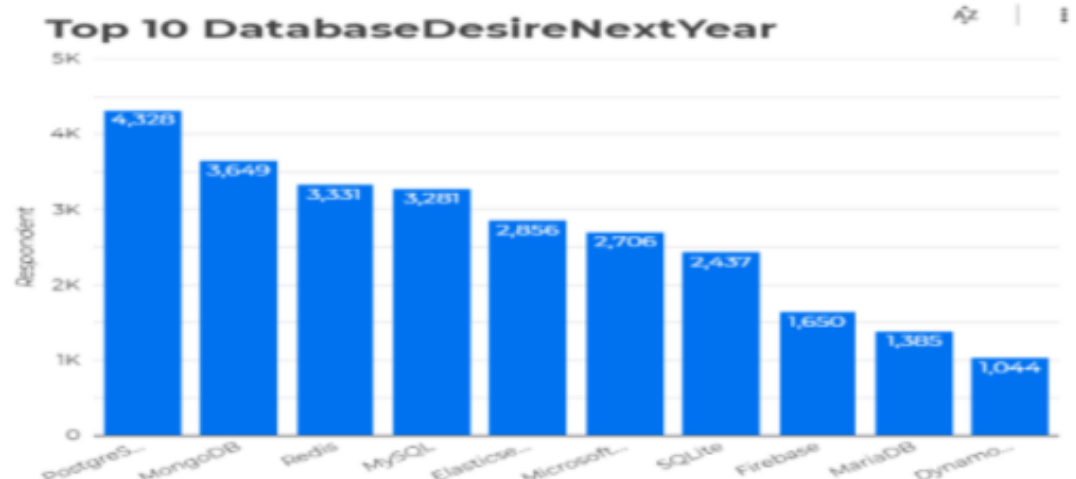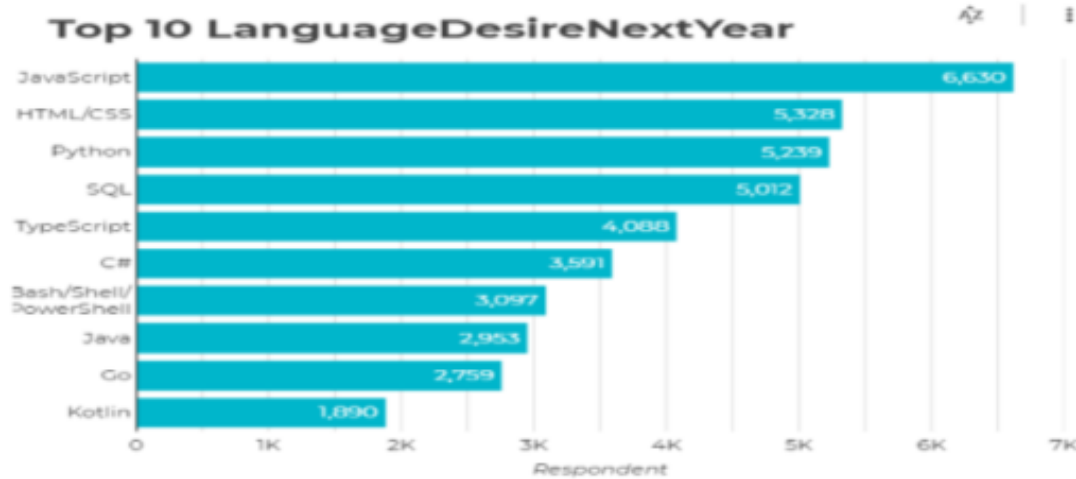github.com > manjit8387 > Final-Project > Final-capstone-story-template.pptx

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DASHBOARD TAB 1

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Top 10 DatabaseWorkedWith

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PlatformWorkedWith.

Android, Windows, MacOS, Linux, iOS, Kubernetes, WordPress, Docker, Raspberry Pi, Slack, Others, Google Cloud Platform, Microsoft Azure, AWS

Top 10 WebFrameWorkedWith
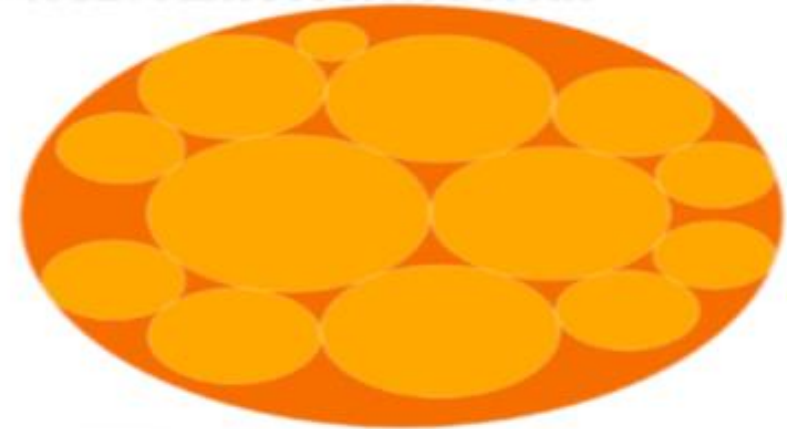
DASHBOARD TAB 2

DASHBOARD TAB 3
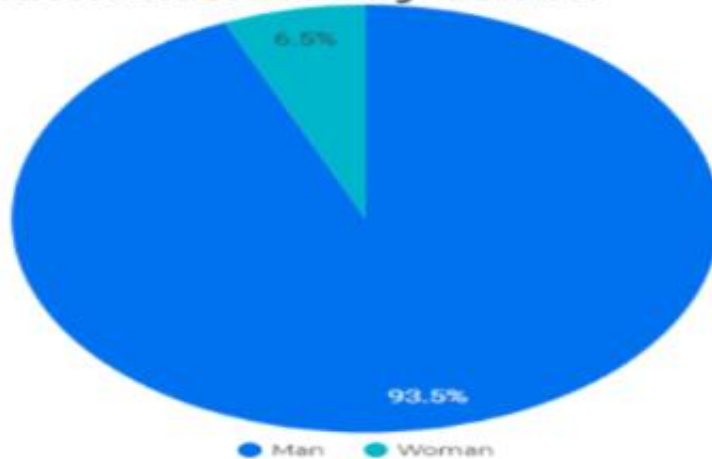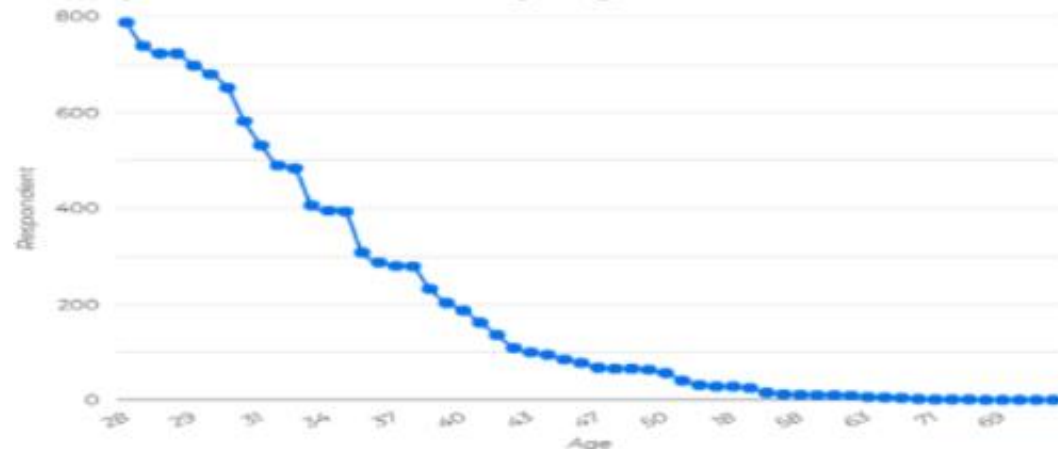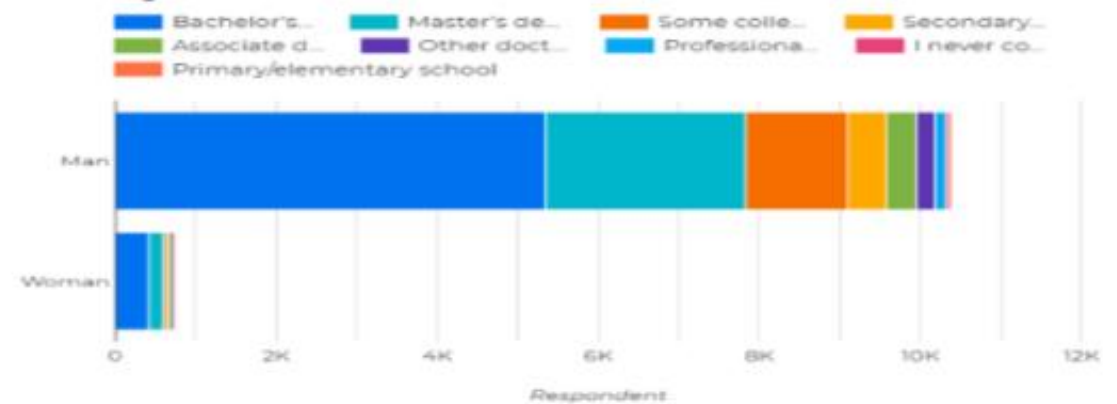
DISCUSSION

- Technology trends now and future.

- Training and Reskilling workers.

- Females partition in technology field.

- Bridge divide of Technology gaps among developing countries.

- Eliminate age and education discrimination in employment.

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OVERALL FINDINGS & IMPLICATIONS

Findings

- Fast changing technology every year.

- Concentration on several countries like USA and India.

- Gender gaps in technical jobs.

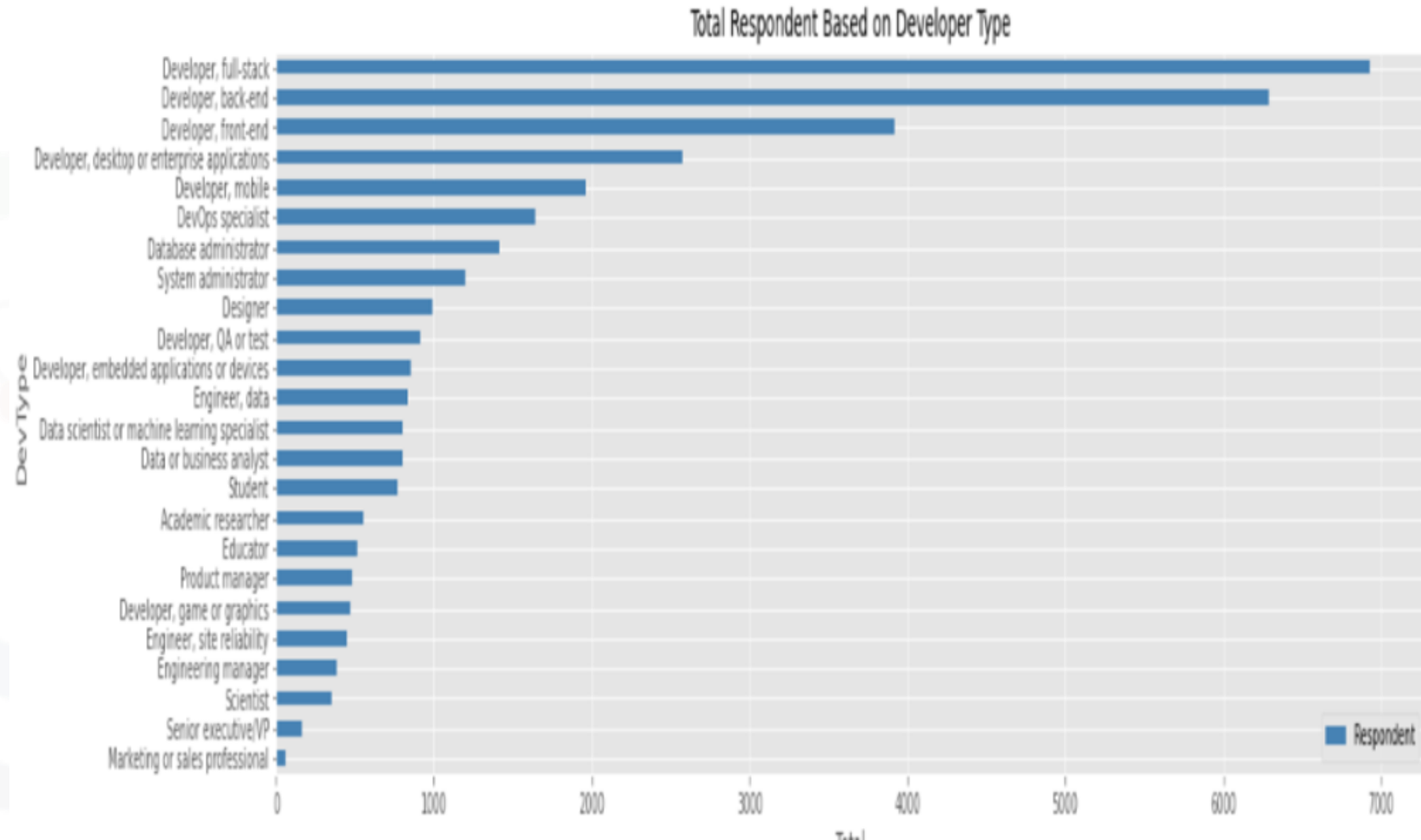- Platforms like Docker and AWS are growing.

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.
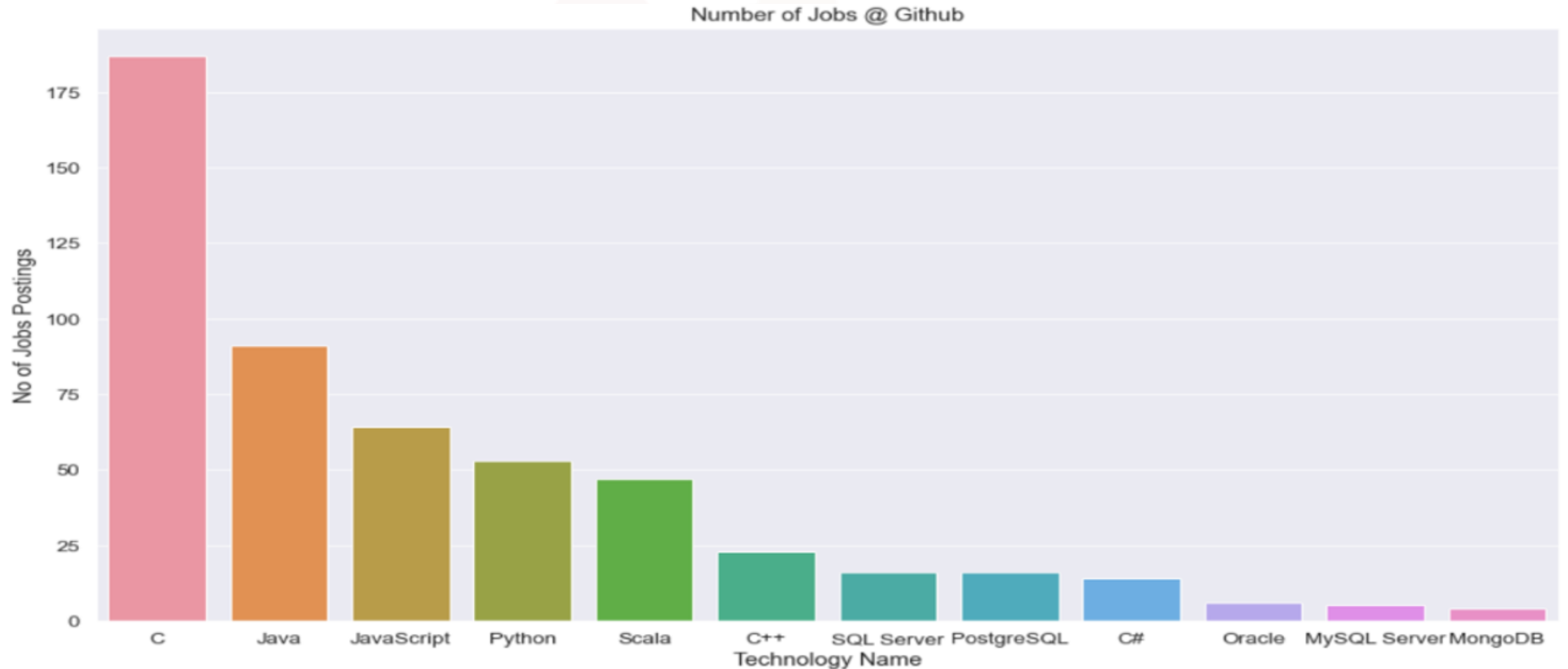
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CONCLUSION

- Technology trends for current and next year.
- Programming languages, databases and platform overview.
- Demographics overview.
- Actions to be taken.
- In future, incorporate Machine Learning to predict trends and salaries.

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APPENDIX

Total Respondent Based on Developer Type

JOB POSTINGS

Number of Jobs @ Github

POPULAR LANGUAGES