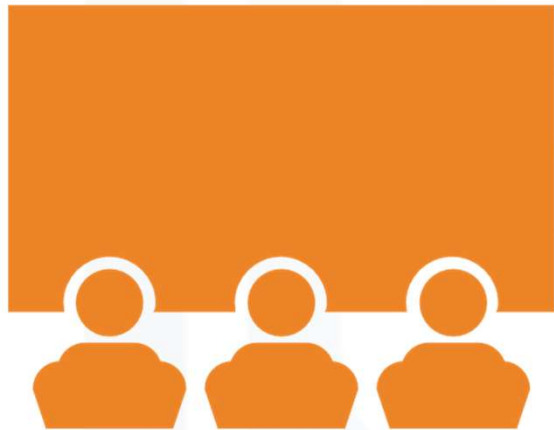




Presentation on technology trends and pattern

Ehikwe Ozioma Henry
June 2023

OUTLINE



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

EXECUTIVE SUMMARY



- Trends in programming languages and databases
- Demographics survey
- Technological gap in countries
- Gender gap in jobs

INTRODUCTION



- About: Analyzing the trends in software development
- Purpose:
 - Identify skill requirements for future
 - What are the programming language in high demand?
 - What are the skills for database that are in high demand?
 - What are the popular IDEs?
- Audience: Human Resource and IT Head

METHODOLOGY



- Data Collection Sources
 - Stack Overflow Developer 2019 Survey:
 - <https://stackoverflow.blog/2019/04/09/the-2019-stack-overflow-developer-survey-results-are-in/>
 - GitHub Job Postings
 - Programming Languages Annual Salary
- Data Exploration
- Data Cleaning
- Data Visualization
- Presentation

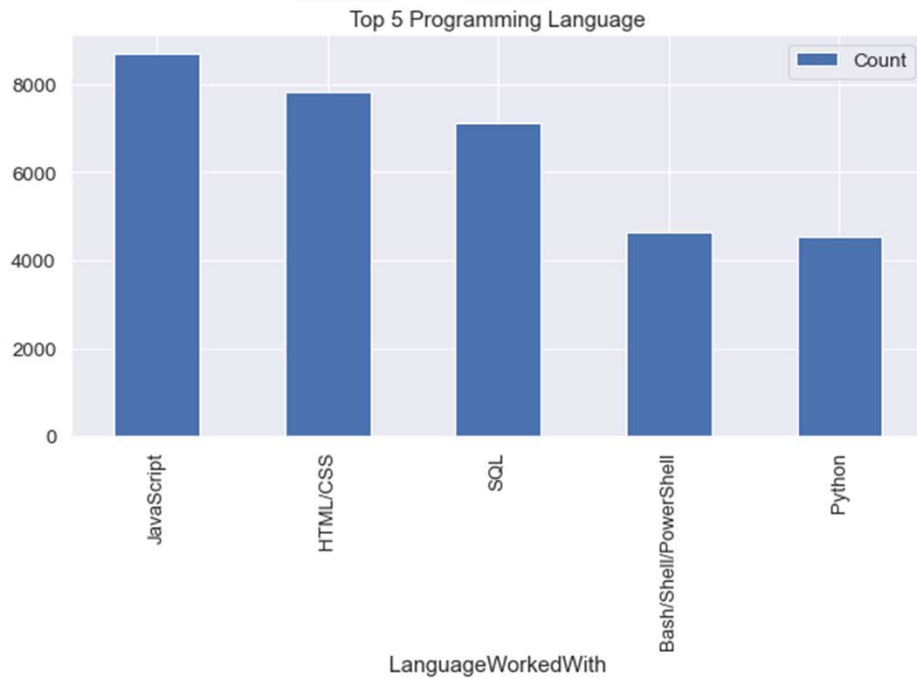
RESULTS

Results are based on this table:

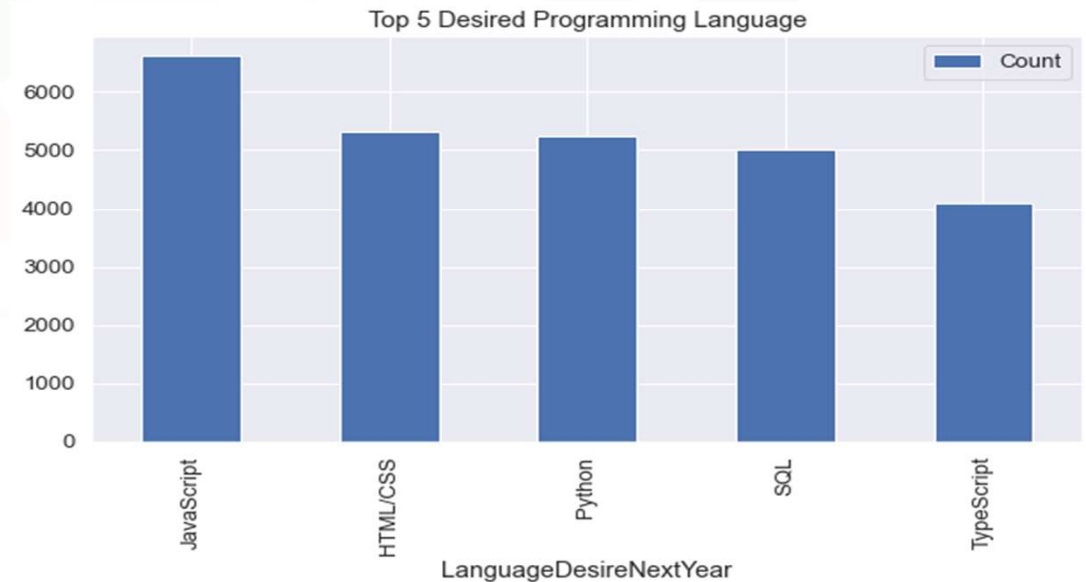
	Respondent	LanguageWorkedWith	LanguageDesireNextYear	DatabaseWorkedWith	DatabaseDesireNextYear	PlatformWorkedWith
0	4	C	C	MySQL	MySQL	Linux
1	4	C++	C#	SQLite	SQLite	Windows
2	4	C#	JavaScript	NaN	NaN	NaN
3	4	Python	SQL	NaN	NaN	NaN
4	4	SQL	NaN	NaN	NaN	NaN
...
74584	25142	Go	Python	NaN	NaN	NaN
74585	25142	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

Findings

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

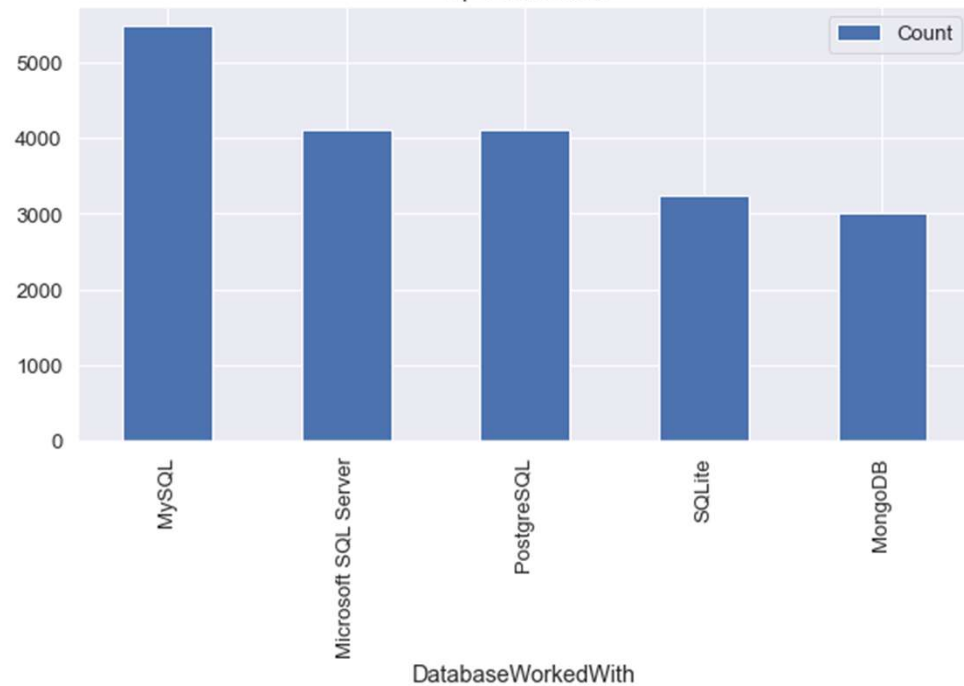
Implications

- 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

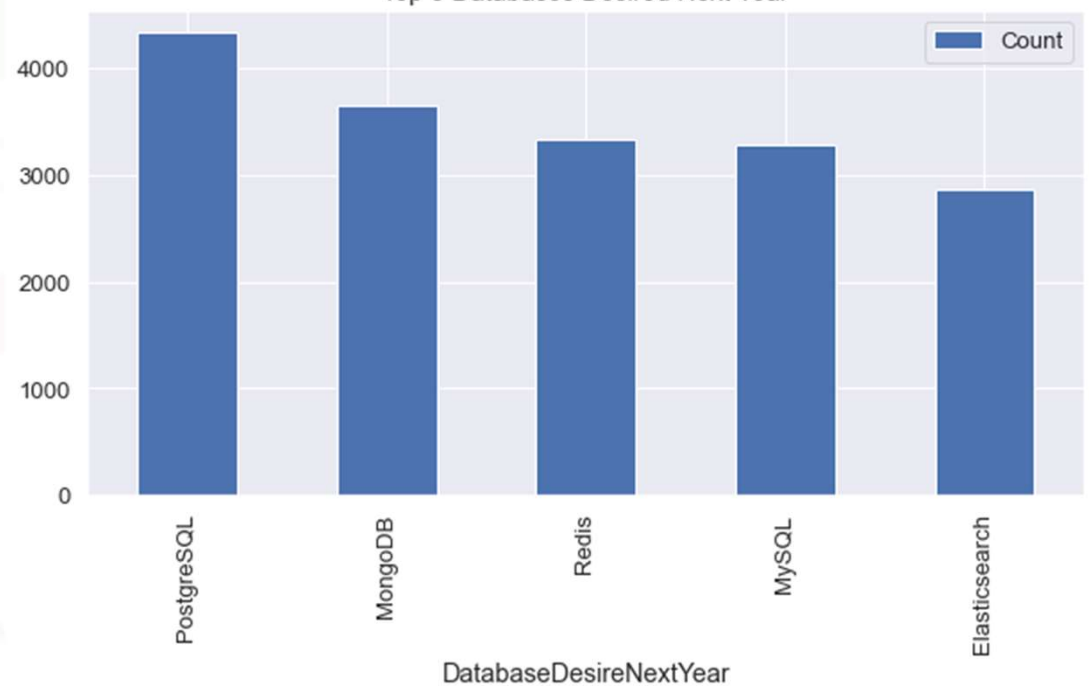
Current Year

Top 5 Databases



Next Year

Top 5 Databases Desired Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

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

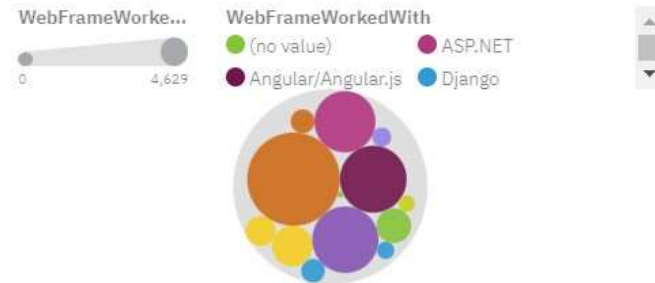
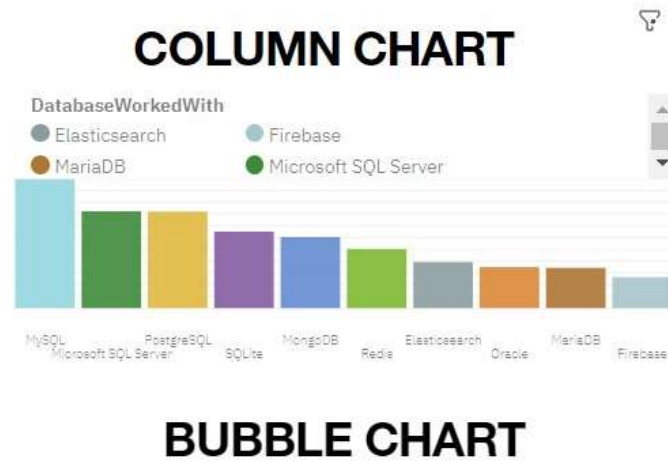
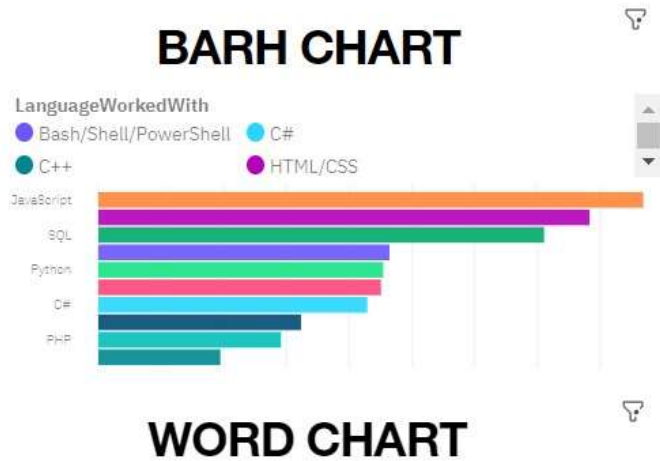
DASHBOARD

Github link:

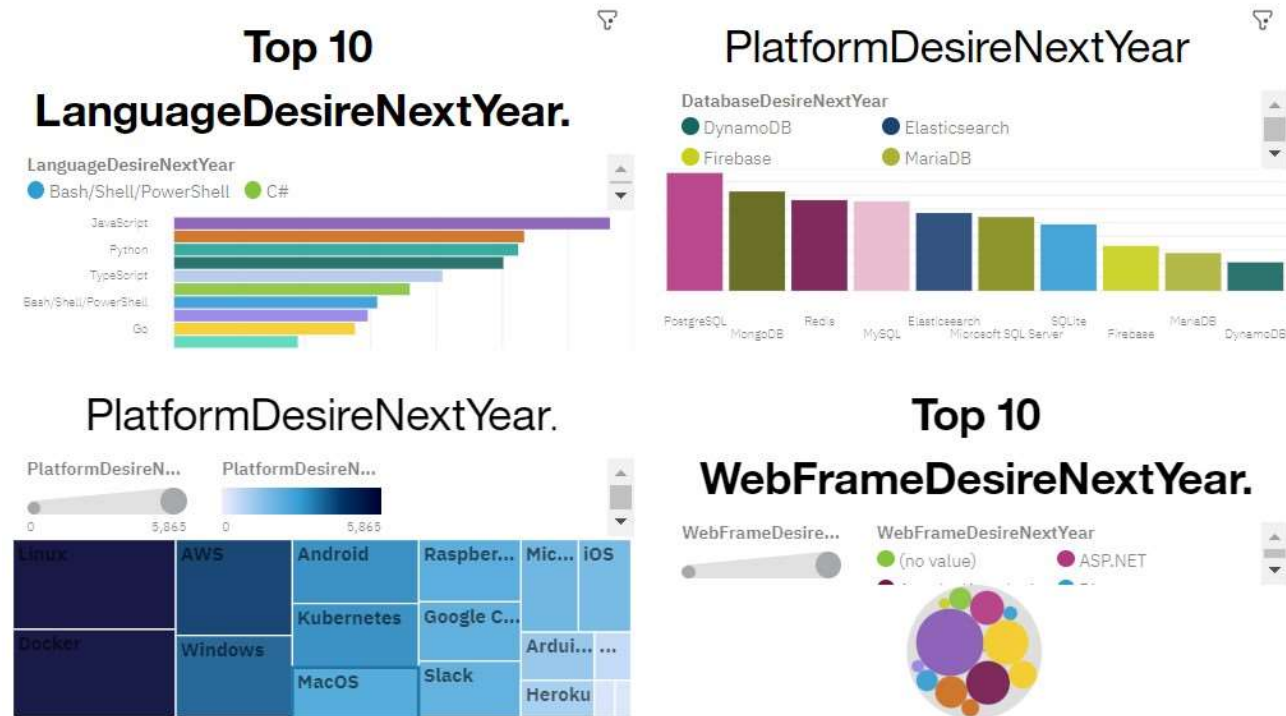
[Oziomahenry/capstone final project](https://github.com/Oziomahenry/capstone_final_project)
github.com



CURRENT TECHNOLOGY USAGE DASHBOARD



FUTURE TECHNOLOGY TREND DASHBOARD



DEMOGRAPHICS DASHBOARD

Respondent classified by Gender

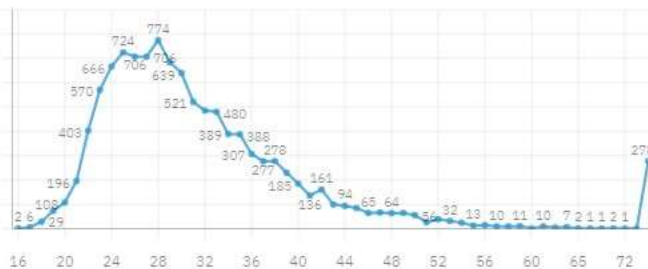
Gender
● Woman ● Man



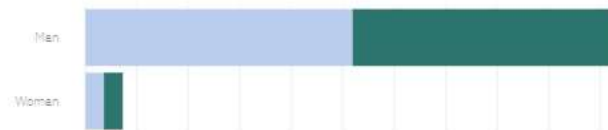
Respondent Count for Countries.



Respondent Count by Age



Respondent Count by Gender, classified by Formal Education level.



DISCUSSION



- 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

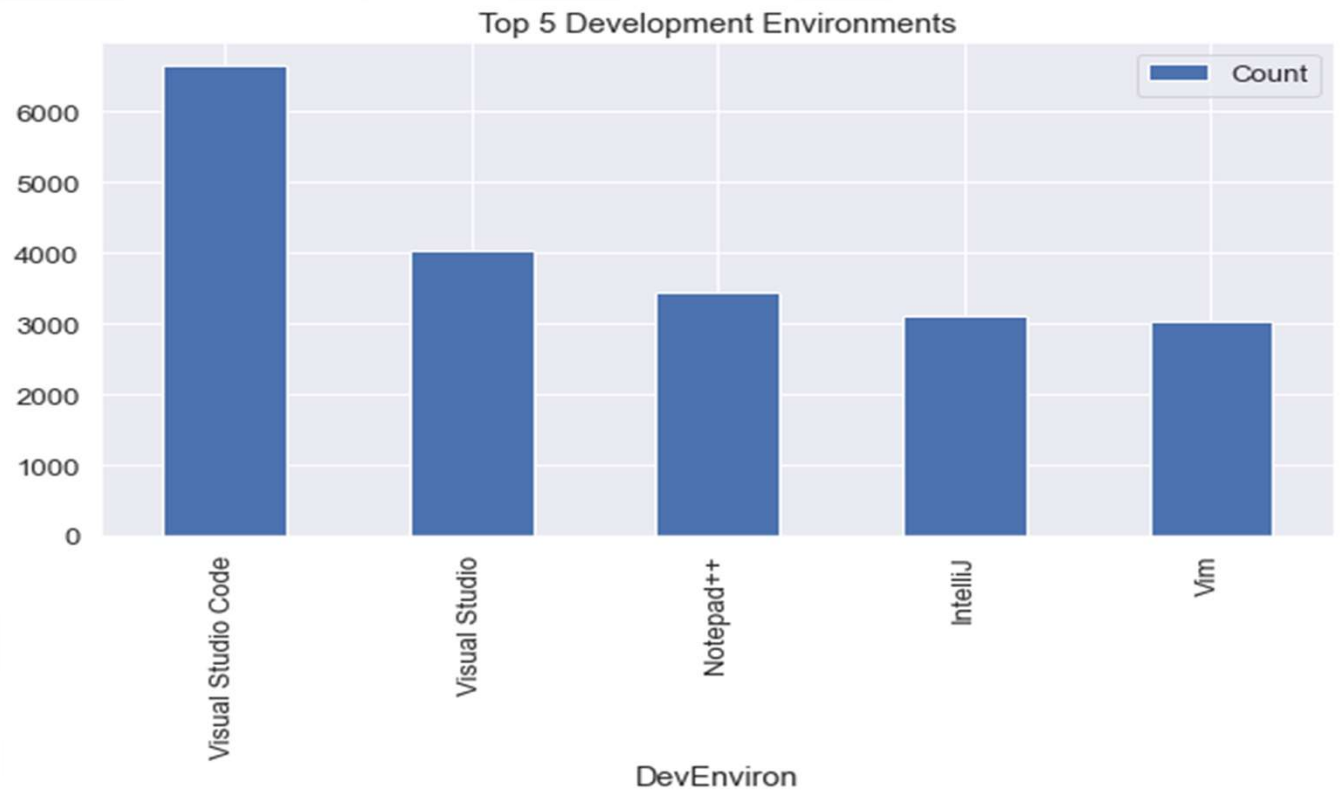
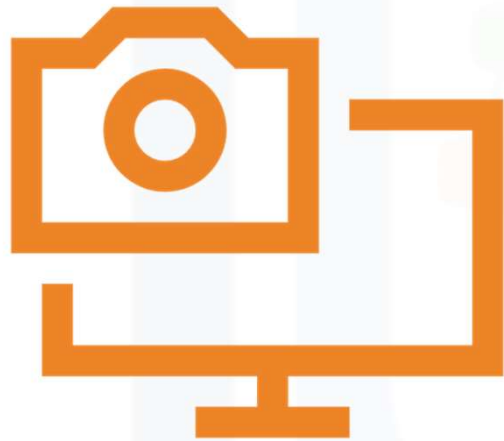
- Companies need to be flexible and adjust to rapid changes
- Need to spread technology out to lagging countries
- Impact of job hiring's
- Shift to faster app deployments and cloud services in future

CONCLUSION

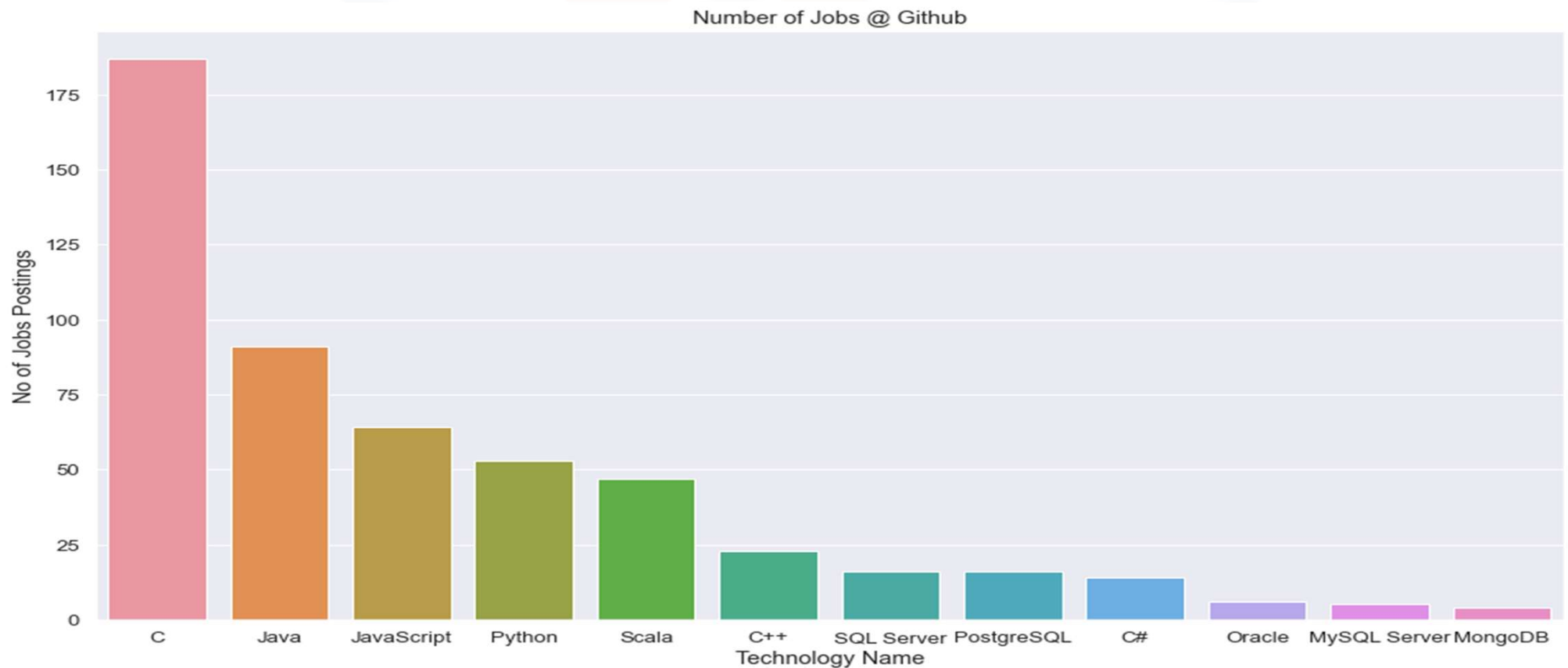


- Technology Trends for current and next year
- Programming Languages, Database and Platform overview
- Demographics overview
- Actions to be taken
- In future, incorporate Machine Learning to predict trends and salaries

APPENDIX



GITHUB JOB POSTINGS



POPULAR LANGUAGES BY SALARY

