



IBM Data Analyst Capstone Project

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OUTLINE



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- Methodology
- Results
 - Visualization – Charts
 - Dashboard
- Discussion
 - Findings & Implications
- Conclusion
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EXECUTIVE SUMMARY



In order to keep pace with changing technologies and remain competitive, we try to identify current and future skill requirements.

INTRODUCTION



The following reports consists of three parts

- What Technology Developers using currently
- What Technology Developers willing to use in future
- Detail Information of Respondent

METHODOLOGY



- The dataset we are using comes from Stack Overflow
- Collect job data from GitHub Jobs API
- Cleaning data using Python
- Visualized result by IBM Cognos

RESULTS



PROGRAMMING LANGUAGE TRENDS

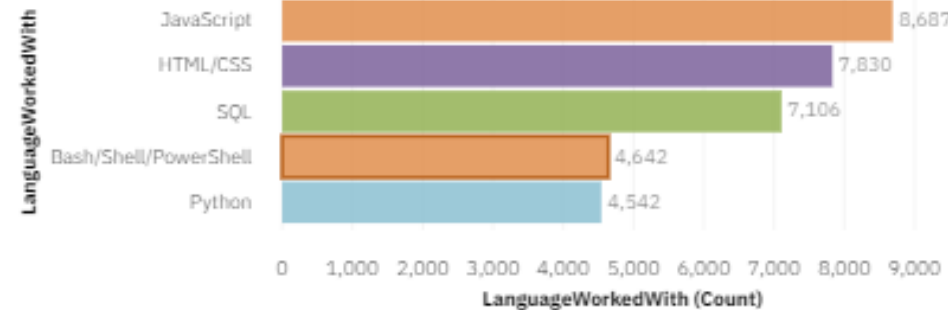
Current Year

Next Year

Top 5 Language Developers Worked With Nowadays

LanguageWorkedWith

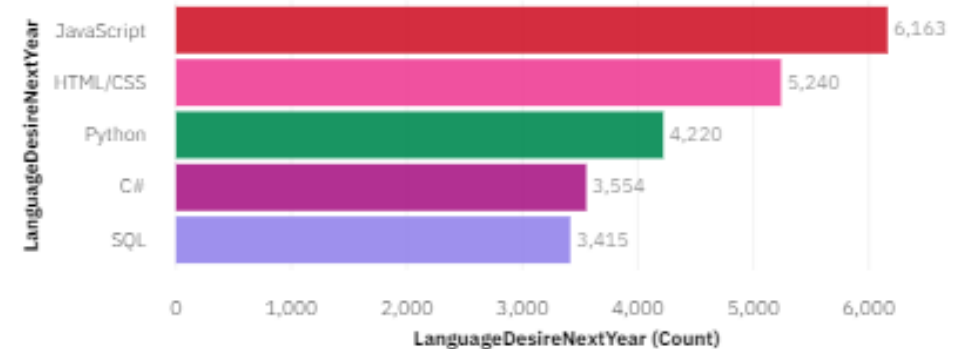
JavaScript
HTML/CSS
SQL
Python
Bash/Shell/PowerShell



Top 5 Language Developers Desire Next Year

LanguageDesireNextYear

JavaScript
HTML/CSS
Python
C#
SQL



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Current year top 5

1. Javascript
2. HTML/CSS
3. SQL
4. Bash/Shell/PowerShell
5. Python

Future year top 5

- 1. Javascript
- 2. HTML/CSS
- 3. Python
- 4. C#
- 5. SQL

Implication : Javascript and HTML/CSS are the most famous language now and in the future.

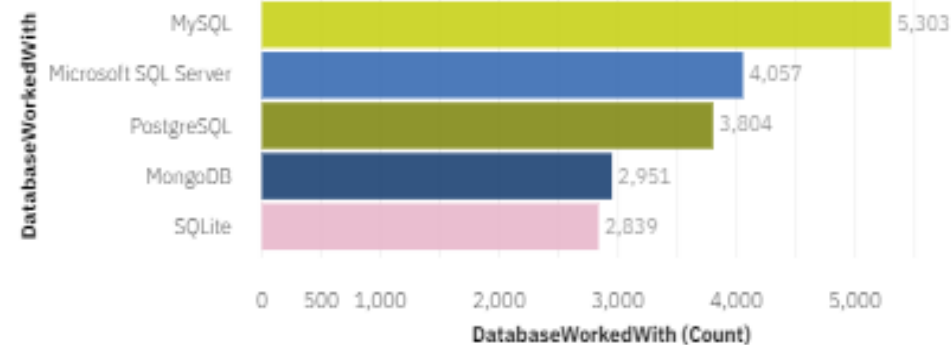
DATABASE TRENDS

Current Year

Top 5 Database Developers Worked With Nowadays

DatabaseWorkedWith

● Microsoft SQL Server ● MongoDB ● MySQL ● PostgreSQL
● SQLite

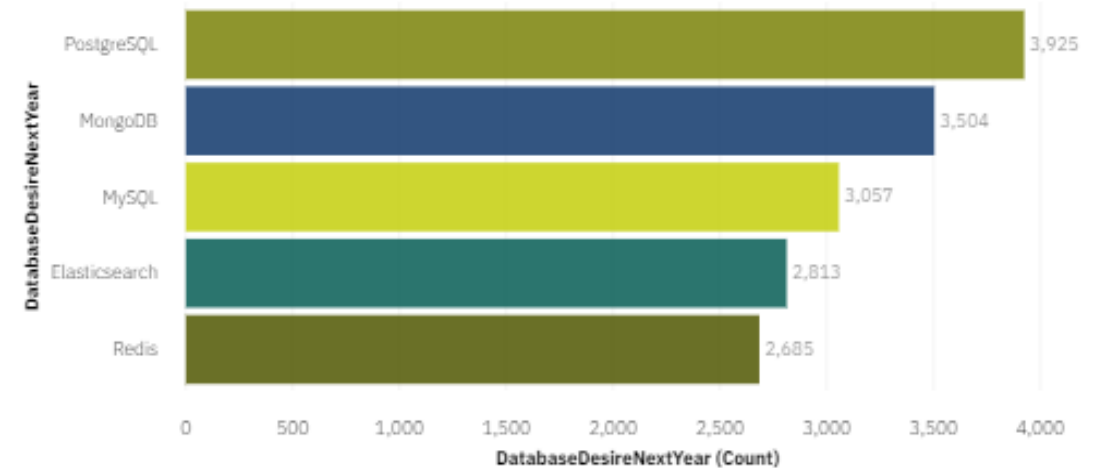


Next Year

Top 5 Database Developers Desire Next Year

DatabaseDesireNextYear

● Elasticsearch ● MongoDB ● MySQL ● PostgreSQL ● Redis



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Current year top 5

1. MySQL
2. Microsoft SQL Server
3. PostgreSQL
4. MongoDB
5. SQLite

Future year top 5

1. PostgreSQL
2. MongoDB
3. MySQL
4. Elasticsearch
5. Redis

Implication : MySQL, PostgreSQL and MongoDB have lots of demand either now or future.

DASHBOARD



DashBoard Link :

<https://dataplatform.cloud.ibm.com/dashboards/0e721634-e4cf-4c87-bb21-9f7368919425/view/7d17f51718ea0bf651e5b1e407987f0528307708b2bbd70384877b495d627197f36141c5c8791f0bd844016aa7ba405ccd>

DASHBOARD TAB 1

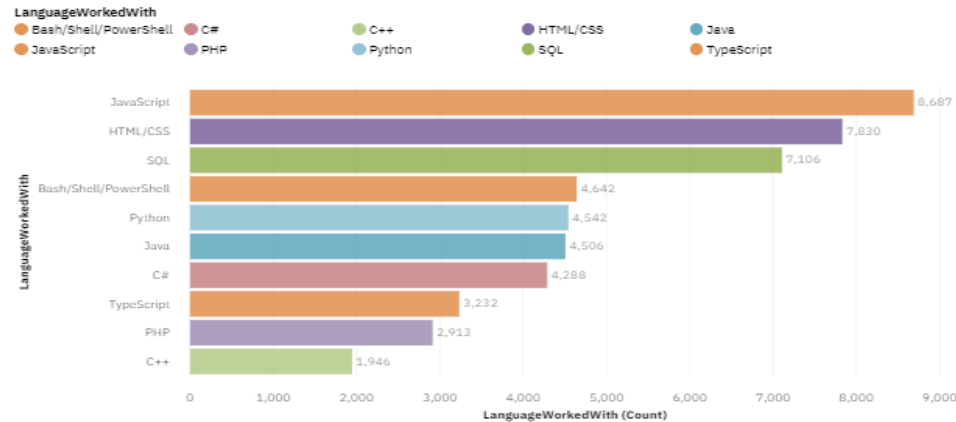
Current Technology Usage

Future Technology Trend

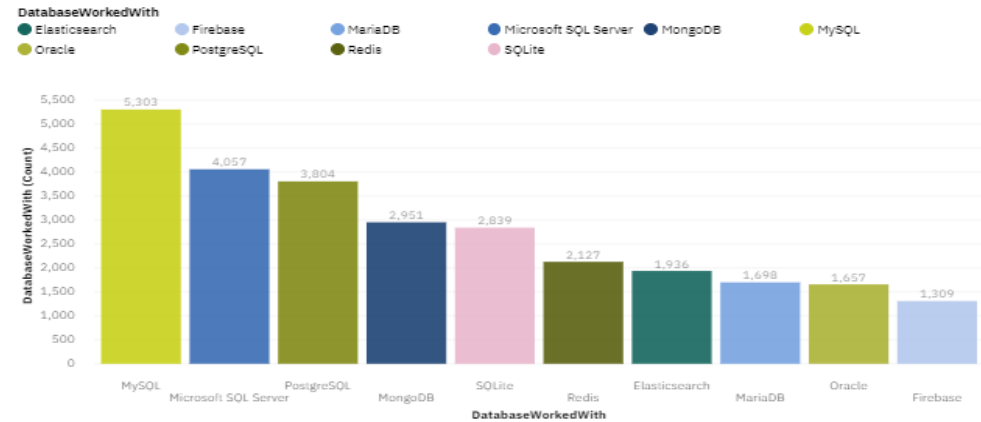
Demographics



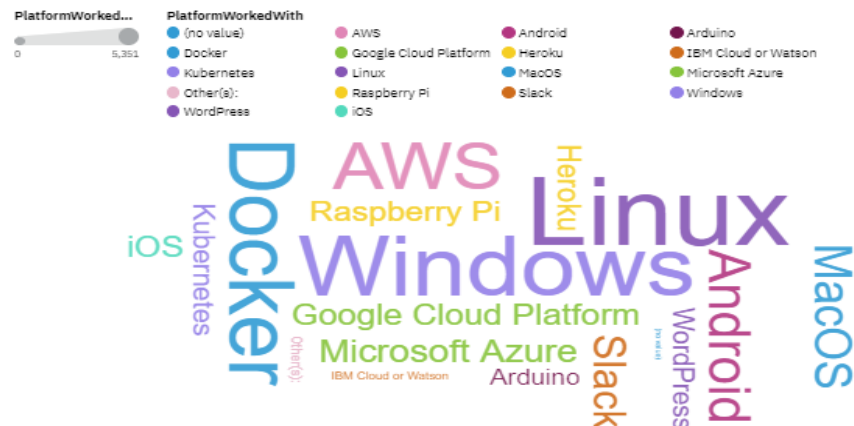
Top 10 Language Developers Worked With Nowadays



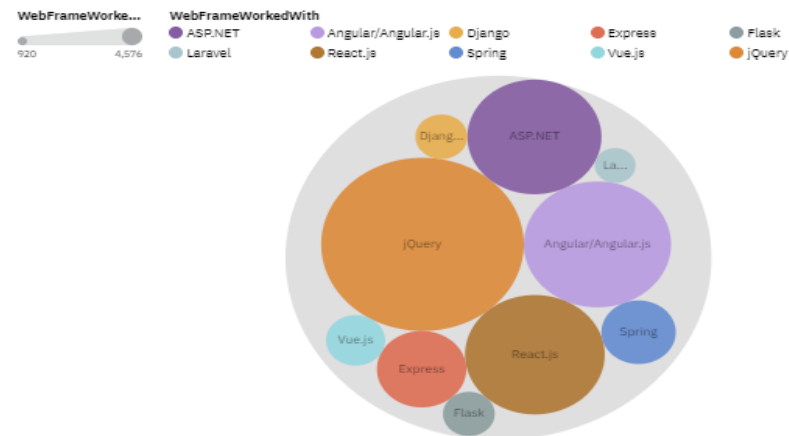
Top 10 Database Developers Worked With Nowadays



Platform Developers Worked With Nowadays



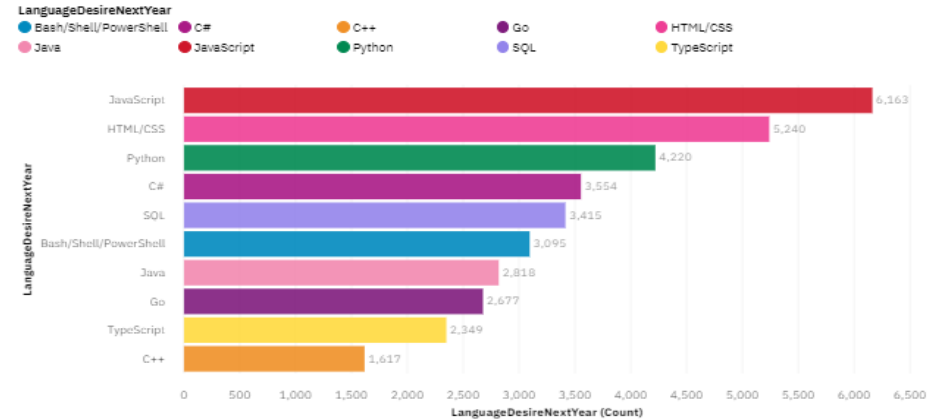
Top 10 Web Frame Developers Worked With Nowadays



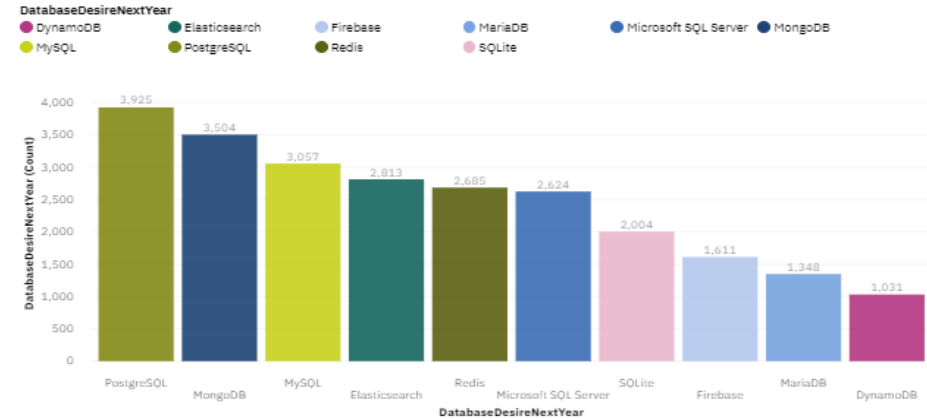
DASHBOARD TAB 2

Current Technology Usage **Future Technology Trend** Demographics +

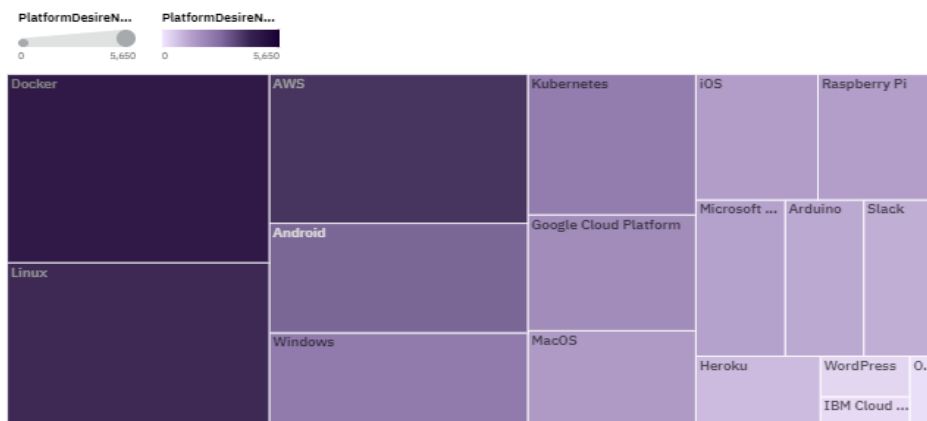
Top 10 Language Developers Desire Next Year



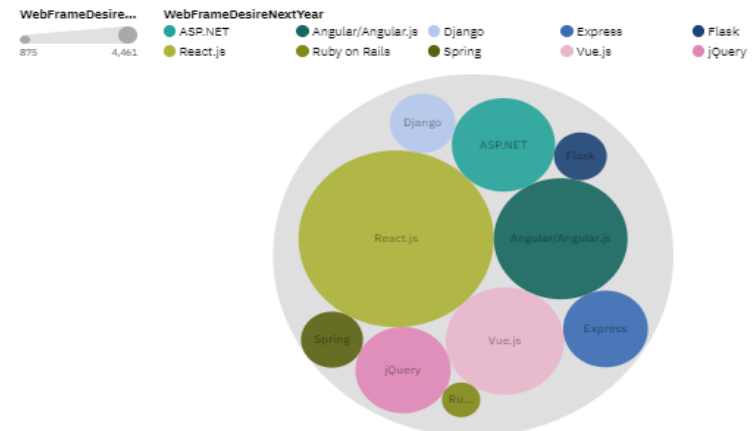
Top 10 Database Developers Desire Next Year



Platform Developers Desire Next Year



Top 10 Web Frame Developers Desire Next Year

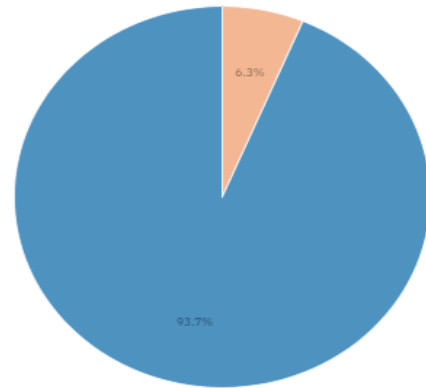


DASHBOARD TAB 3

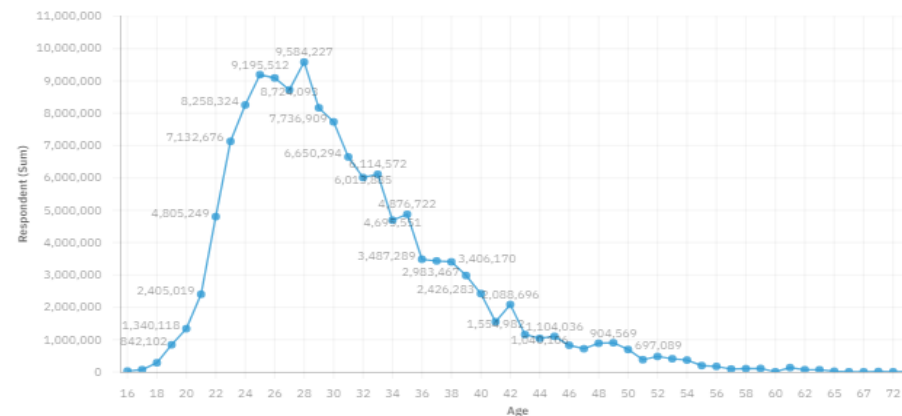
Current Technology Usage Future Technology Trend **Demographics** +

Gender Ratio Of Developers

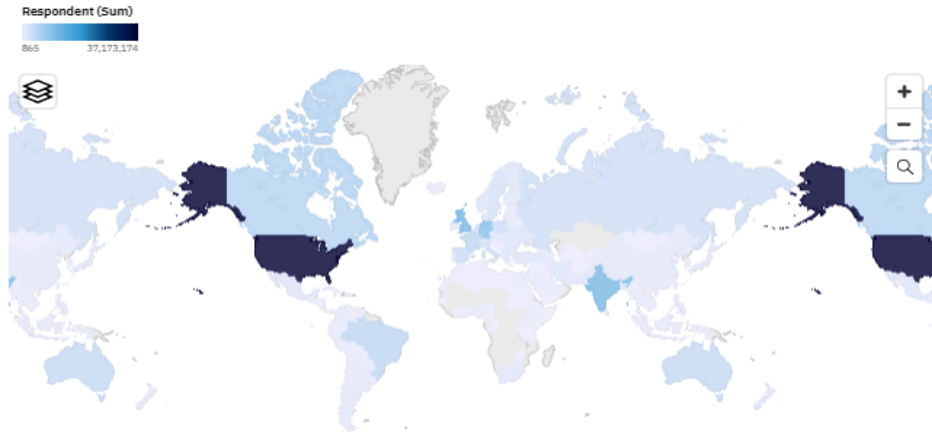
Gender
● Woman ● Man



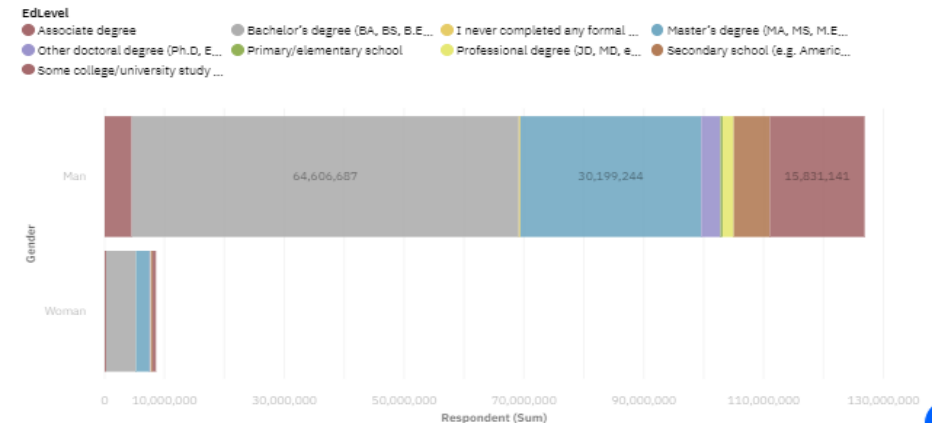
Age Distribution Of Developers



Geographical Distribution Of Developers



Education Level Of Developers In Different Gender



DISCUSSION



- **Technology changing very fast**
- **IT Industry concentrated in USA**
- **Male dominated the IT industry**

OVERALL FINDINGS & IMPLICATIONS

Findings

- Javascript and HTML/CSS are the most famous language
- MySQL, PostgreSQL and MongoDB have lots of demand

Implications

- Javascript and HTML/CSS are good to learn as many developers think they are useful
- MySQL, PostgreSQL are in top3 in now and future, so it is recommended to learn it

CONCLUSION



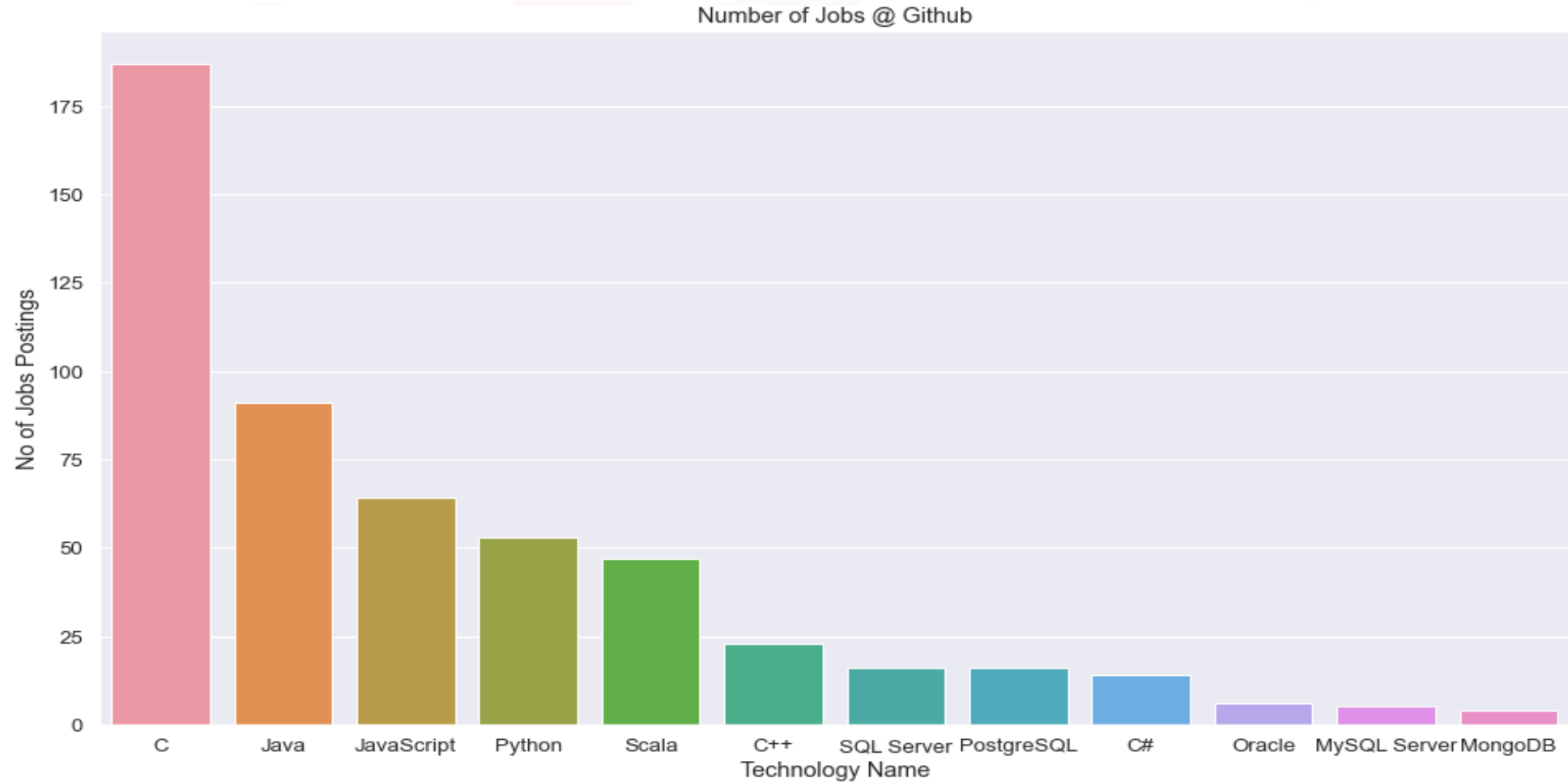
- Learn JavaScript, HTML/CSS
- Learn MySQL, PostgreSQL
- Never stop learning, some language would be eliminated by the trends.

APPENDIX



- Include any relevant additional charts, or tables that you may have created during the analysis phase.

GITHUB JOB POSTINGS



POPULAR LANGUAGES

