



Assessment and Analysis of Technology

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OUTLINE



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- Methodology
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EXECUTIVE SUMMARY



- Current Technology Usage Trend
- Future Technology Trend
- Demographics Survey
- country and Gender gap in the technology

INTRODUCTION



- Evaluating technology trends in software and web development
- Identifying the top programming languages, database, platform, and web frame in demand
- Identifying which technologies are for the future
- Identifying the human resource gap in the IT industries

METHODOLOGY



- Data Collection from different sources
- Data Wrangling
- Data Exploration
- Data Cleaning and Visualization
 - Python
 - IBM Cognos

RESULTS

Respondent	LanguageWorkedWith	LanguageDesireNextYear	DatabaseWorkedWith	DatabaseDesireNextYear	PlatformWorkedWith	PlatformDesireNextYear
4	C	C	MySQL	MySQL	Linux	Linux
4	C++	C#	SQLite	SQLite	Windows	Windows
4	C#	JavaScript				
4	Python	SQL				
25141	Python					
25141	SQL					
25141	Swift					
25141	TypeScript					
25142	Bash/Shell/PowerShell	Bash/Shell/PowerShell	PostgreSQL	PostgreSQL	Linux	Docker
25142	C	C			Raspberry Pi	Linux
25142	C++	C++				Raspberry Pi
25142	Go	Python				
25142	HTML/CSS	R				
25142	PHP					
25142	Python					
25142	R					

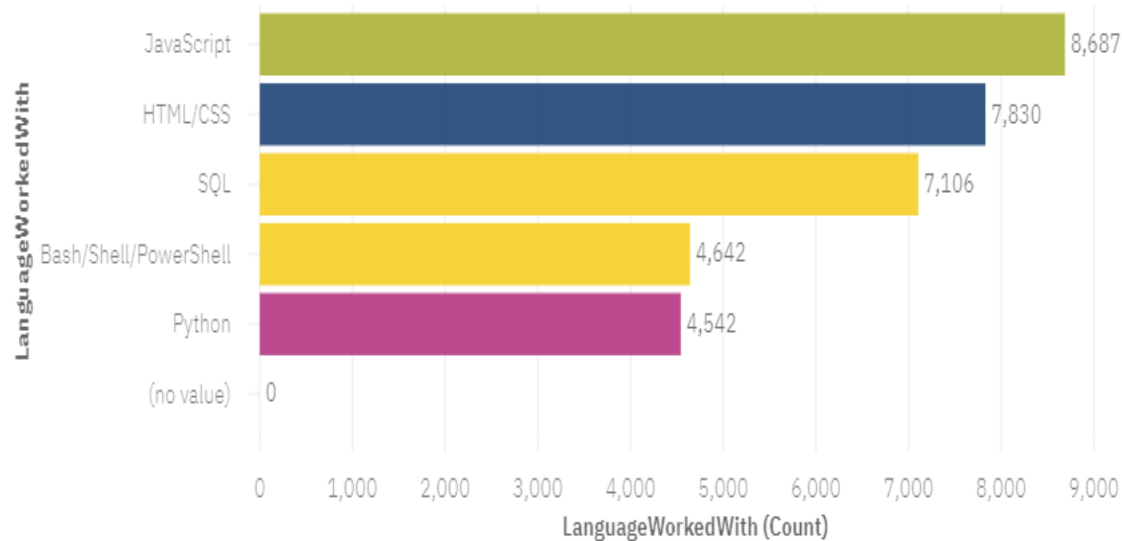
PROGRAMMING LANGUAGE TRENDS

Current Year

Top 5 Language Used

LanguageWorkedWith

(no value) Bash/Shell/PowerShell HTML/CSS JavaScript
Python SQL

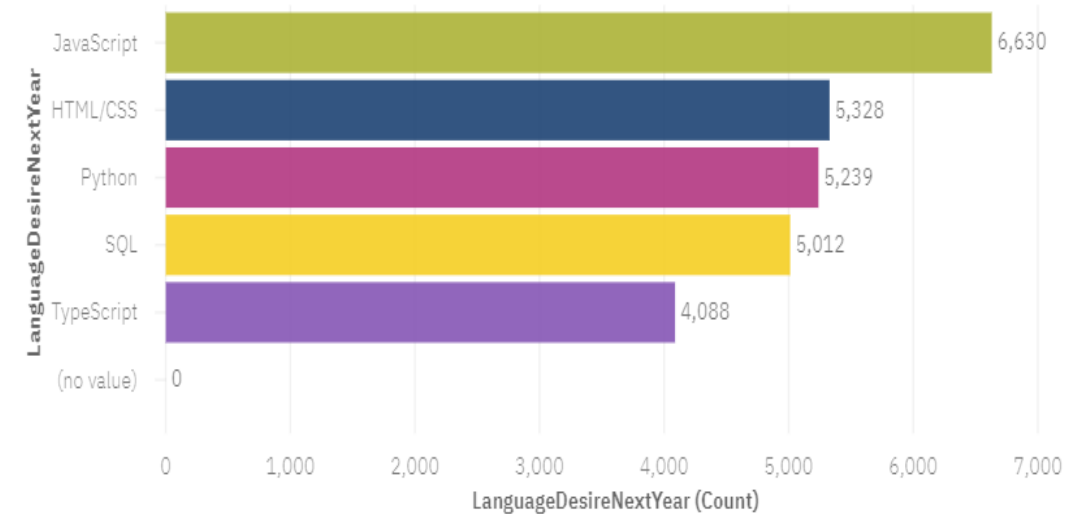


Next Year

Top 5 Language for Next year

LanguageDesireNextYear

(no value) HTML/CSS JavaScript Python SQL TypeScript



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript, HTML/CSS, and SQL are the most popular Languages
- Python and Typescript becoming popular next year
- PowerShell is not the desired language next year

Implications

- Web development languages are in high demand
- Python is becoming the most popular language
- Big data technology companies still require SQL.

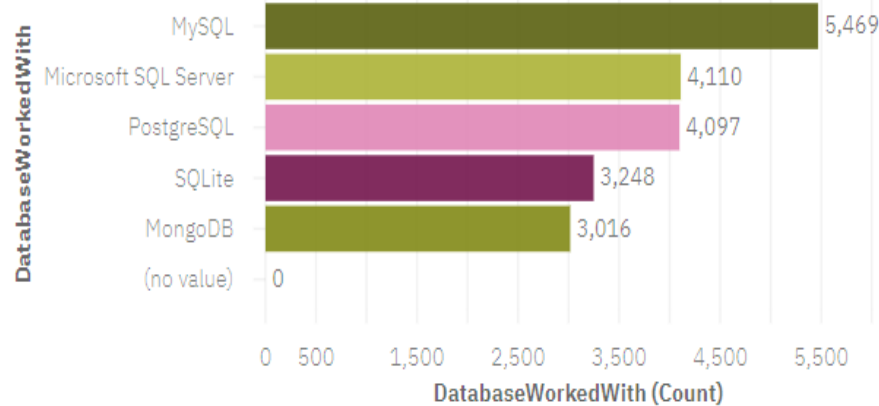
DATABASE TRENDS

Current Year

Top 5 Database used

DatabaseWorkedWith

(no value) Microsoft SQL Server MongoDB
MySQL PostgreSQL SQLite

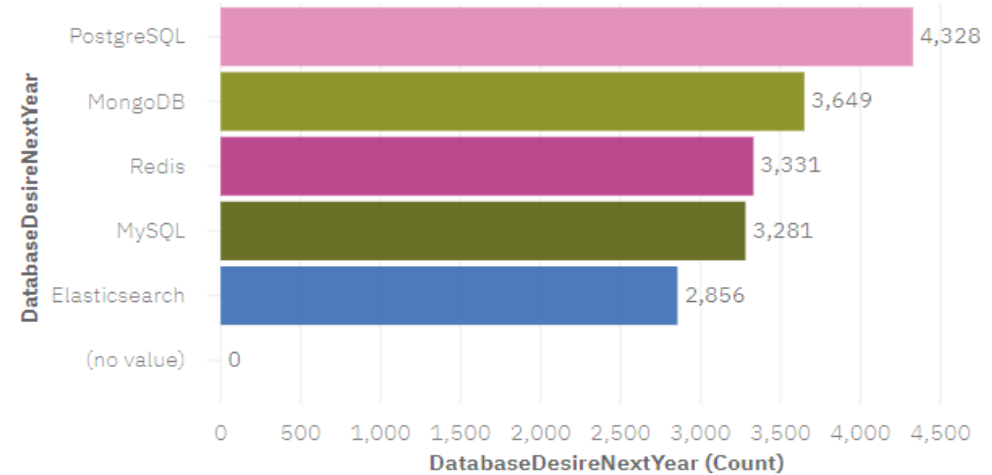


Next Year

Top 5 Database desired Next year

DatabaseDesireNextYear

(no value) Elasticsearch MongoDB MySQL PostgreSQL
Redis



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL is the most popular database
- Microsoft SQL is used by a lot of companies
- MongoDB and Redis are the most favorable NoSQL database

Implications

- NoSQL database will make an impact for storing nonrelational data
- Open-source databases like MySQL are still preferable
- BigData technology still requires SQL

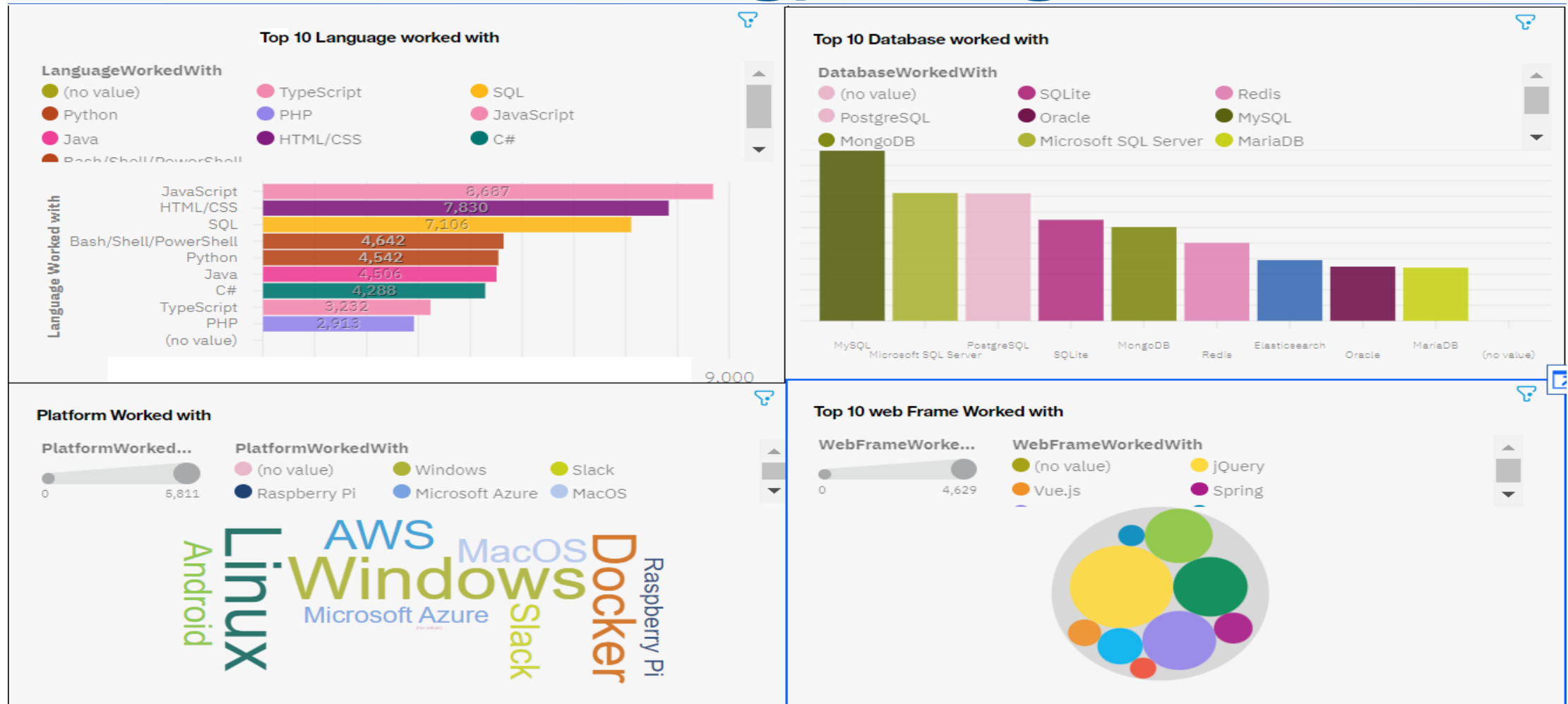
DASHBOARD



The permanent link of the read-only view of the Cognos dashboard goes here:

<https://dataplatform.cloud.ibm.com/dashboards/69eb4009-888c-49f2-a403-b3bee2c7bcc9/view/653ee01e149e30d74ee2d4e407992f527a657754b6bb8457d1847b495b677497f3381790c8274e528e435766a0eb175bcd>

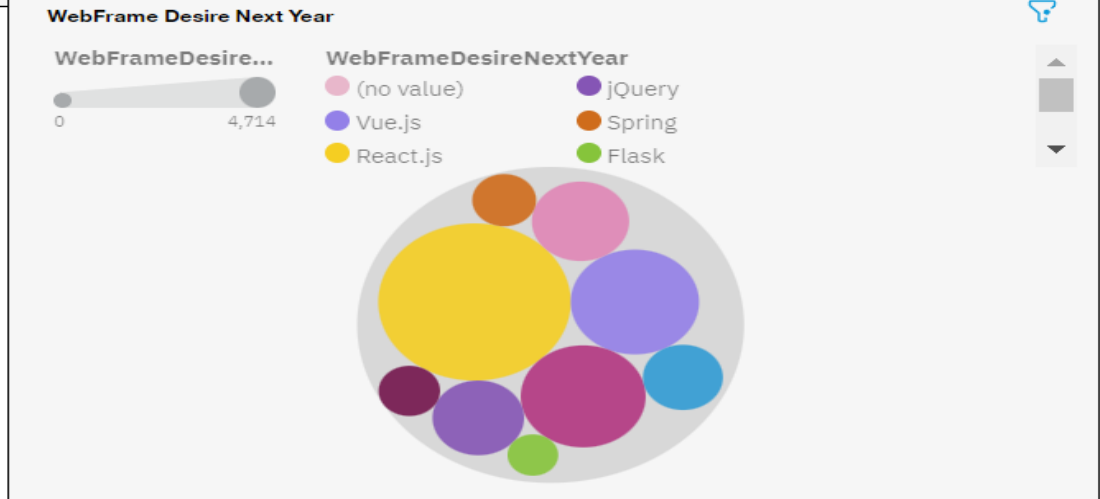
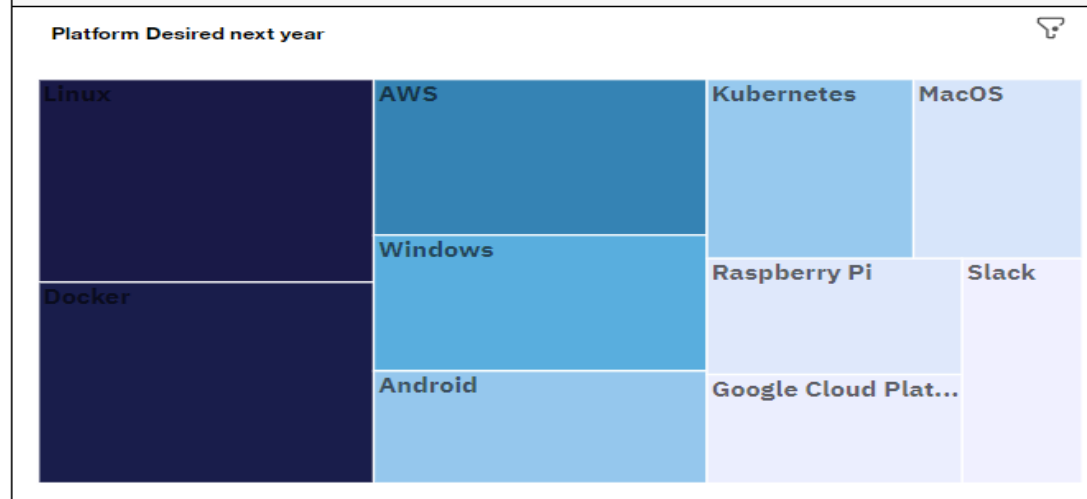
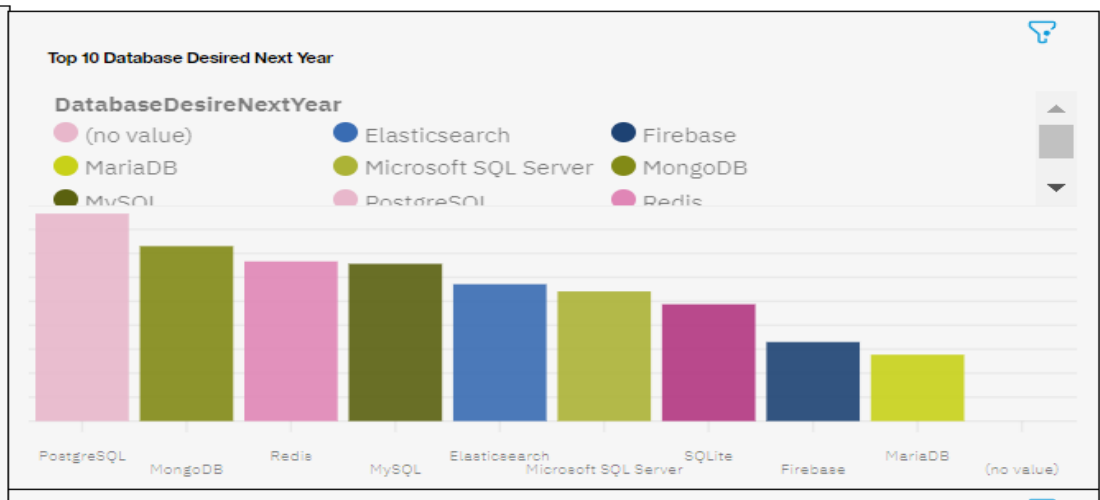
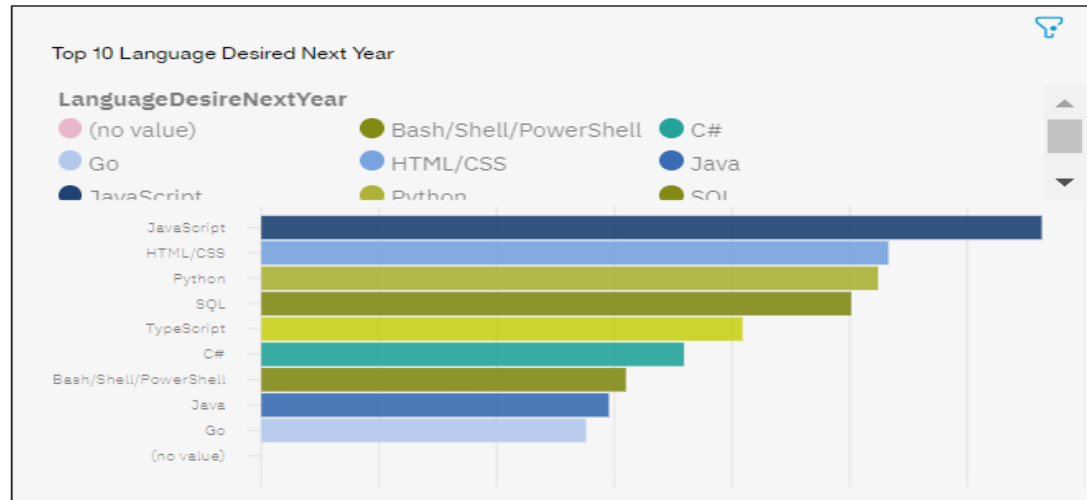
Current Technology Usage



Future Technology Usage

Future Technology Trend

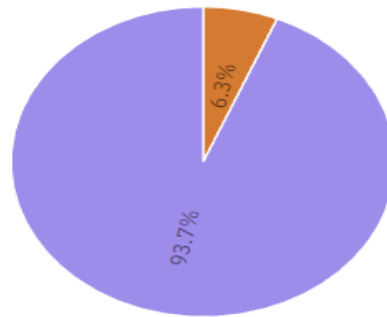
Demographics



Demographics

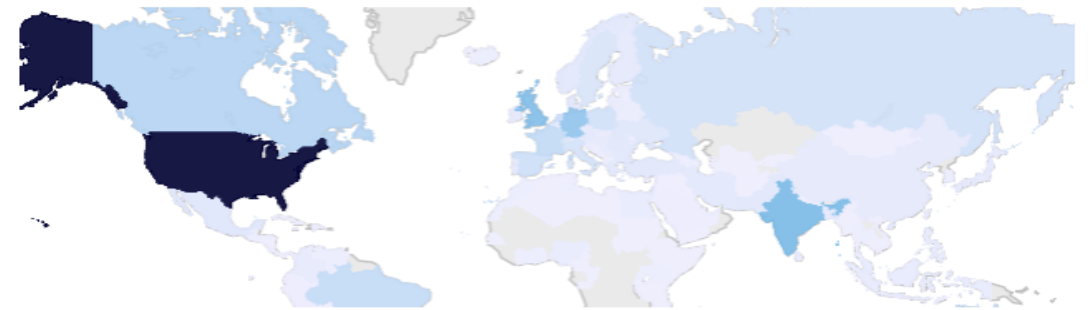
Respondent Classified by Gender

Gender
● Woman ● Man

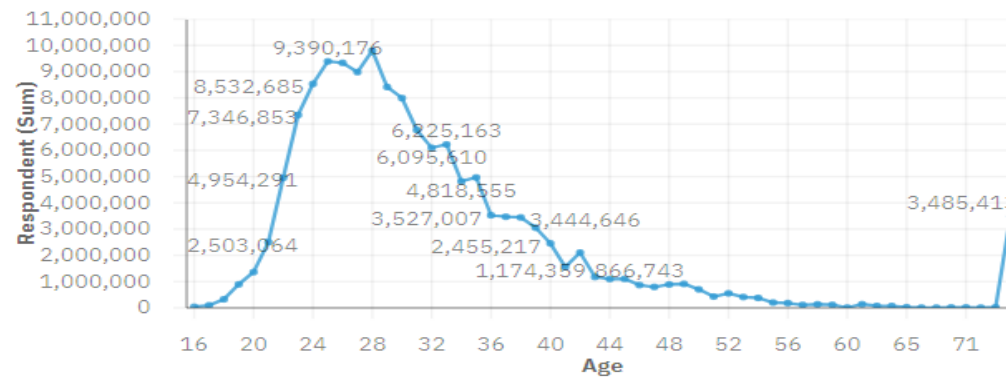


Respondent Count for Countries

Country (Count)



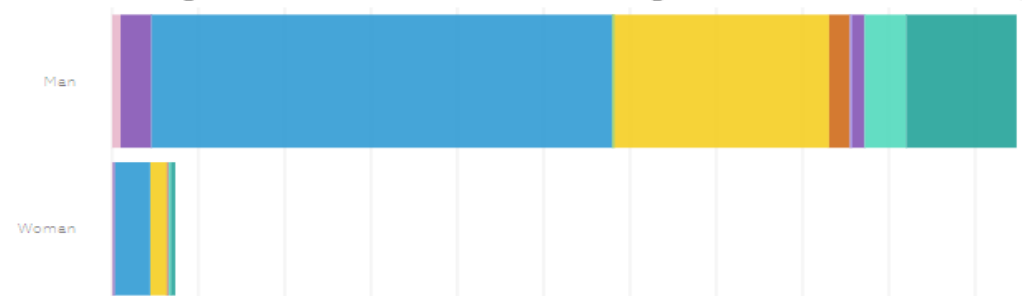
Respondent Count by Age



Respondent Count by Gender, Classified by Formal Education Level

EdLevel

● (no value) ● Associate degree
● Bachelor's degree (BA, BS, B.E... ● I never completed any formal ...
● Master's degree (MA, MS, M.E... ● Other doctoral degree (Ph.D, E...



DISCUSSION

- 
- Technology Trends currently and in the future
 - Female participation in the IT industry
 - Education gap

OVERALL FINDINGS & IMPLICATIONS

Findings

- Technology trends change every year
- The USA is the top technology country
- Platforms like Docker and AWS are growing

Implications

- Need to spread technology out of every world
- Developers should always follow the latest technology trend
- Gender and Age should not be a concern for the technology trend

CONCLUSION



- Technology Trends
- Programming Languages, Database, platform, and Web frame Trends
- Demographics
- Gender and Education

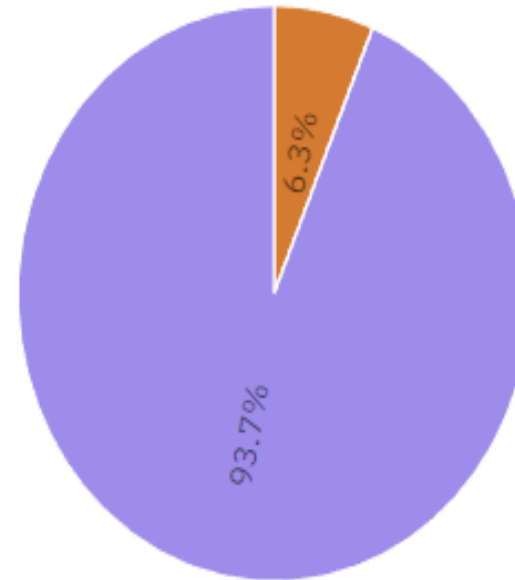
APPENDIX



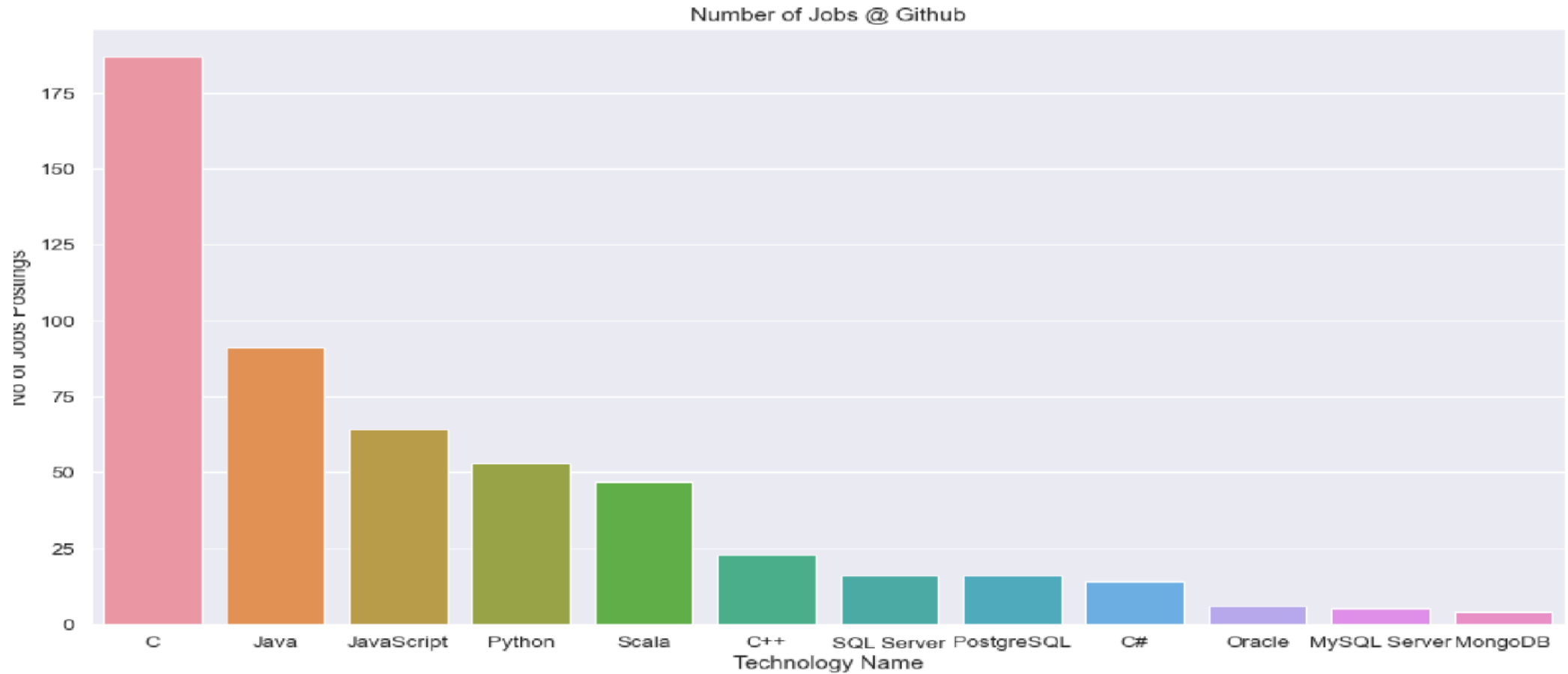
Respondent Classified by Gender

Gender

● Woman ● Man



JOB POSTINGS



POPULAR LANGUAGES

