Data Analyst Capstone Project

Abid

March 2024

OUTLINE

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

IBM Developer

SKILLS NETWORK

EXECUTIVE SUMMARY

- Python, HTML/CSS, JavaScript and TypeScript are the most used programming languages.

- MongoDB, PostgreSQL, Redis, MySQL are the most used databases.

IBM Developer

SKILLS NETWORK

INTRODUCTION

- Stack Overflow conducted a survey among developers about technology trends in 2019.

IBM Developer
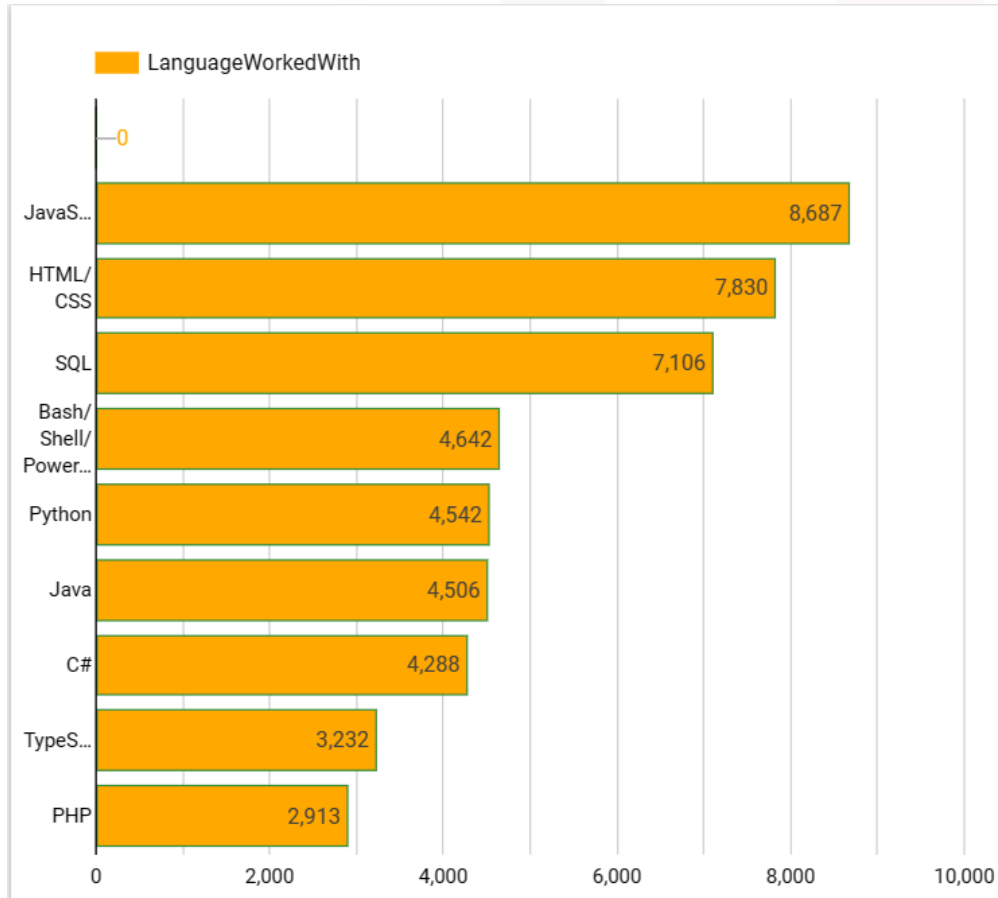
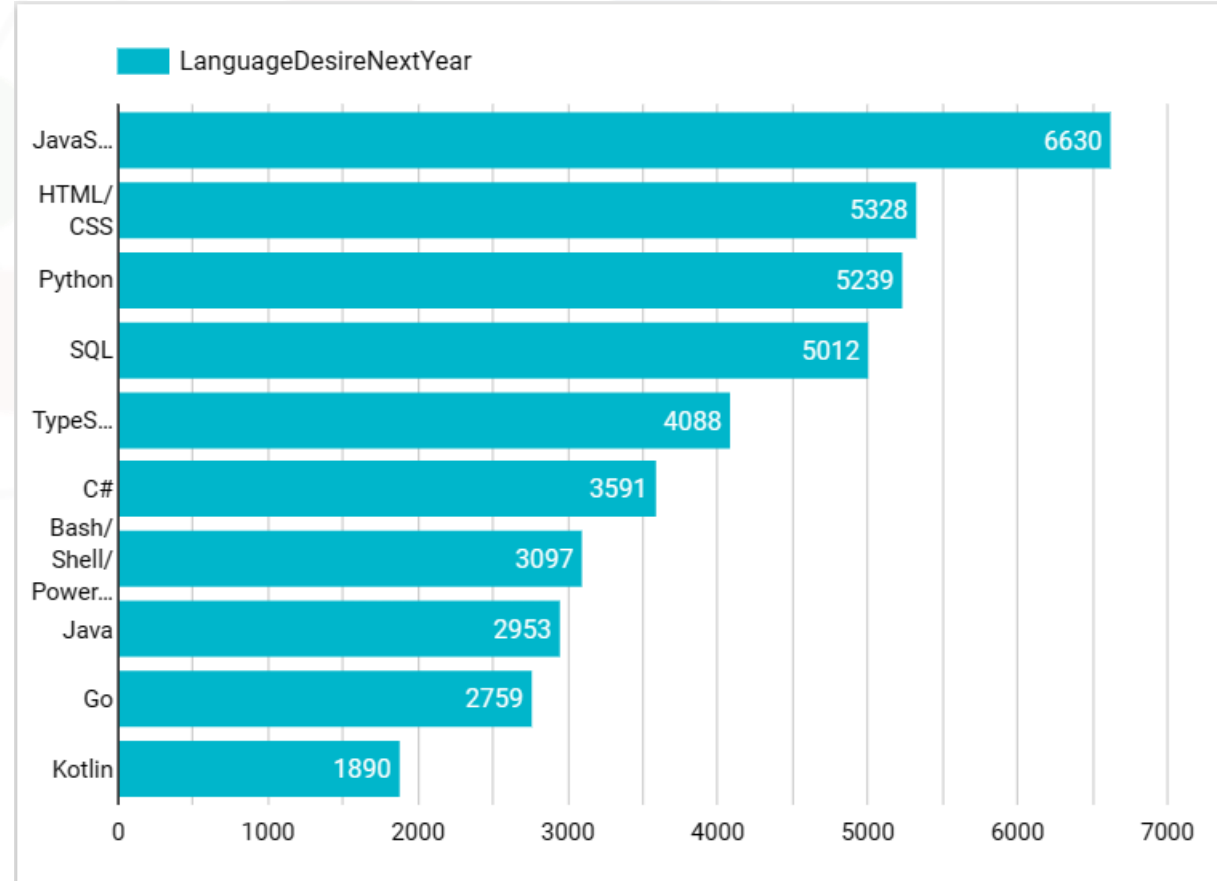SKILLS NETWORK

METHODOLOGY

- Data Sources:
  - ➤ Stack overflow survey 2019
  - ➤ GitHub Job Posting
  - ➤ Programming Language Annual Salary
- Data Exploratory Analysis
  - ➤ Python
- Data Visualization
  - ➤ Google Studio
- Presentation

PROGRAMMING LANGUAGE TRENDS

Current Year

LanguageWorkedWith

Language	Value
0	
JavaS...	8,687
HTML/CSS	7,830
SQL	7,106
Bash/Shell/Power...	4,642
Python	4,542
Java	4,506
C#	4,288
TypeS...	3,232
PHP	2,913

Next Year

LanguageDesireNextYear

Language	Value
JavaS...	6630
HTML/CSS	5328
Python	5239
SQL	5012
TypeS...	4088
C#	3591
Bash/Shell/Power...	3097
Java	2953
Go	2759
Kotlin	1890

IBM Developer

SKILLS NETWORK

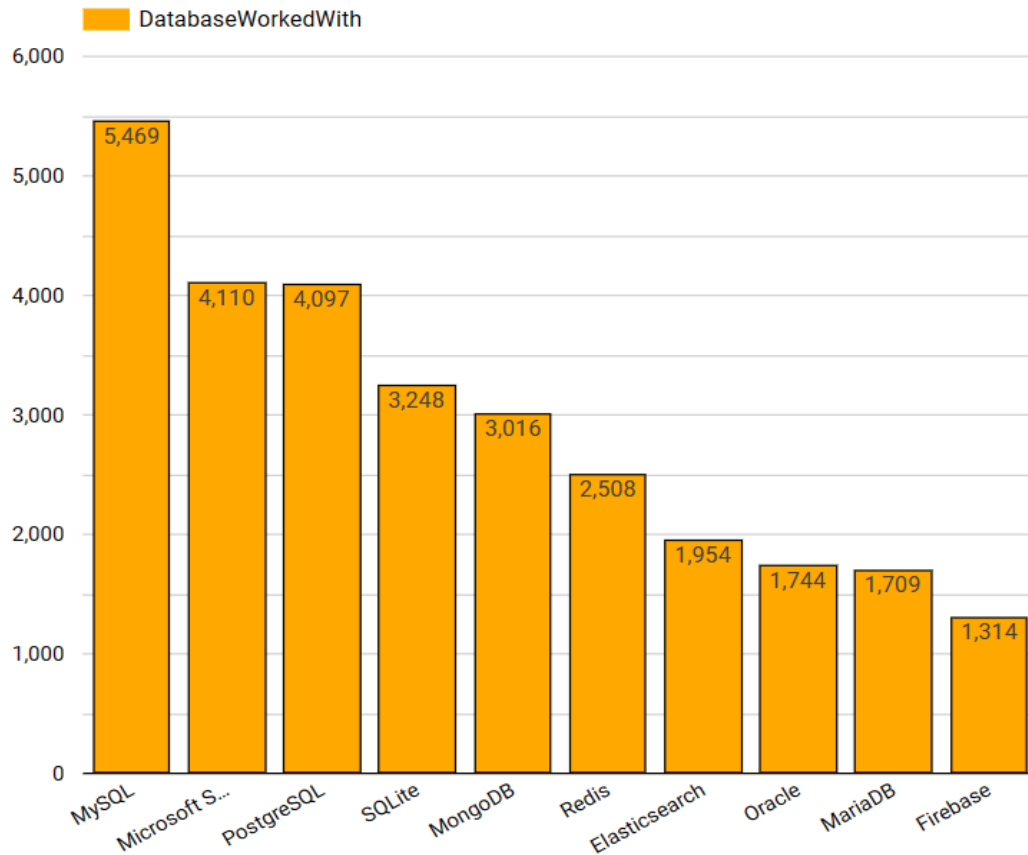# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- Popular languages JavaScript
- Then- HTML/CSS, Python and SQL.
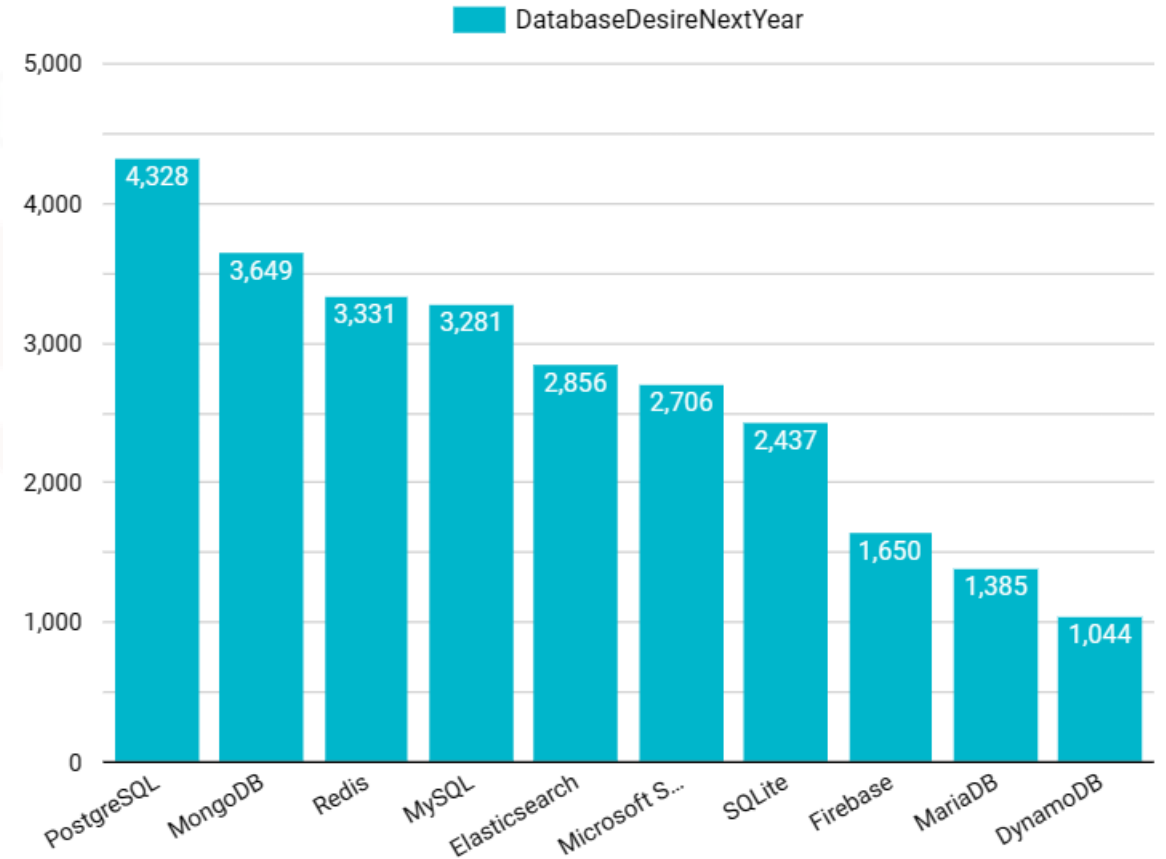- TypeScript is more desired than bash/shell.

Implications

- Python may increase.
- Demand for HTML/CSS, SQL, Java and Python.
- Web development has high demand.

IBM Developer

SKILLS NETWORK

DATABASE TRENDS

Current Year

DatabaseWorkedWith

Database	Value
MySQL	5,469
Microsoft S...	4,110
PostgreSQL	4,097
SQLite	3,248
MongoDB	3,016
Redis	2,508
Elasticsearch	1,954
Oracle	1,744
MariaDB	1,709
Firebase	1,314

Next Year

DatabaseDesireNextYear

Database	Value
PostgreSQL	4,328
MongoDB	3,649
Redis	3,331
MySQL	3,281
Elasticsearch	2,856
Microsoft S...	2,706
SQLite	2,437
Firebase	1,650
MariaDB	1,385
DynamoDB	1,044

IBM Developer

SKILLS NETWORK

DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- Demand has increased for PostgreSQL and MongoDB.

- Demand decrease: MySQL

- Desire increase: Redis - ElasticSearch

Implications

- Demand consistency: PostgreSQL and MongoDB
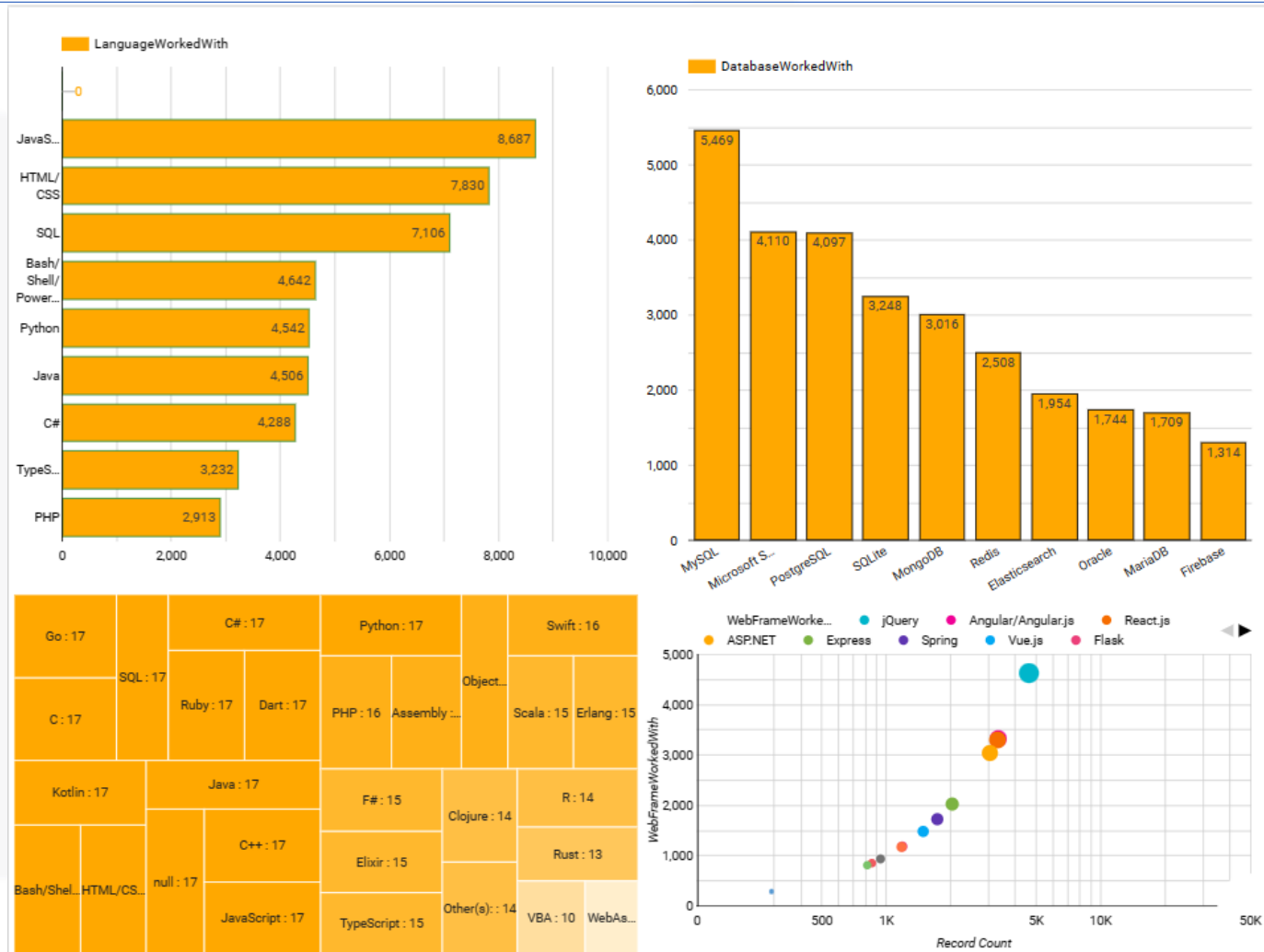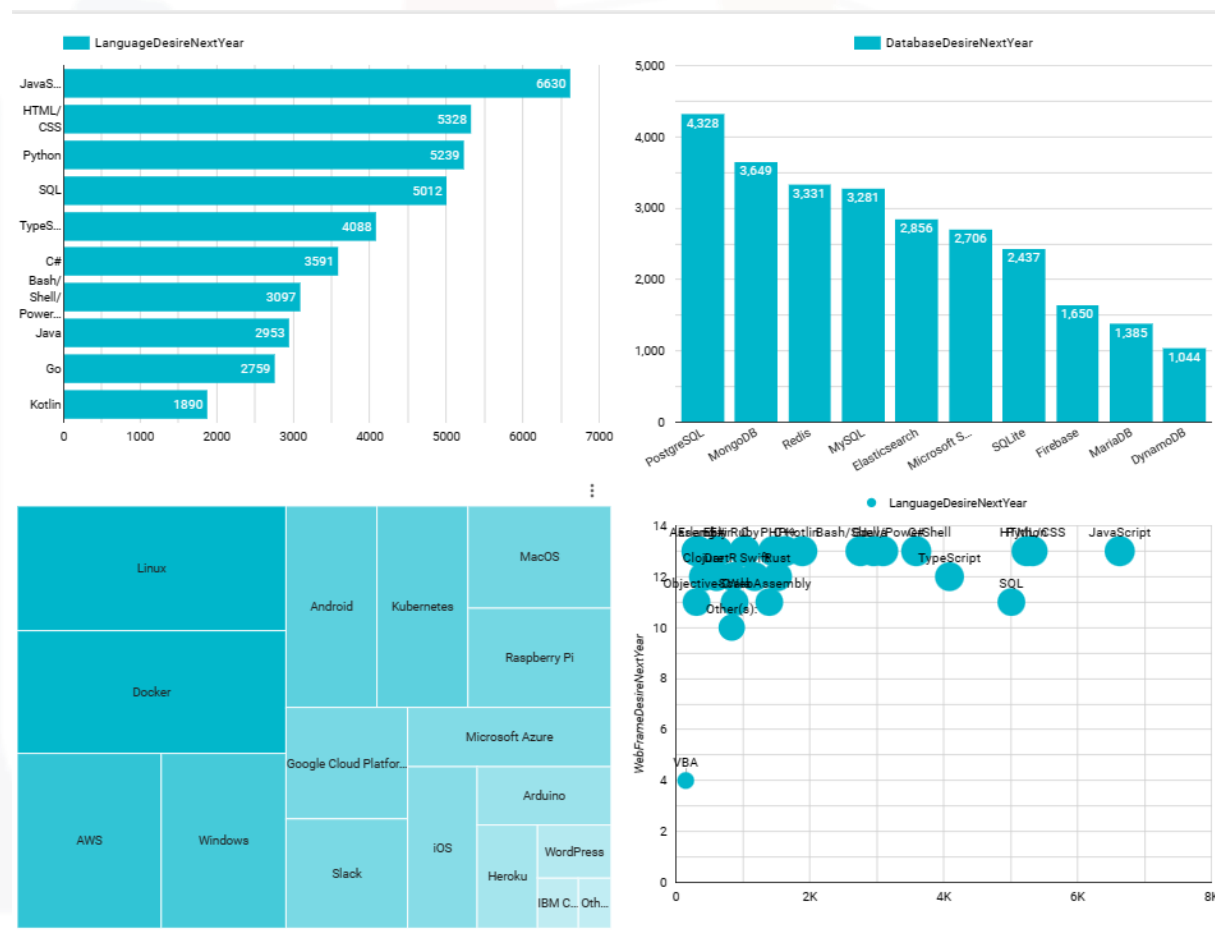
- Open Source database is much preferred

IBM **Developer**

SKILLS NETWORK

DASHBOARD

<abid0-07/IBM-data-analyst (github.com)>
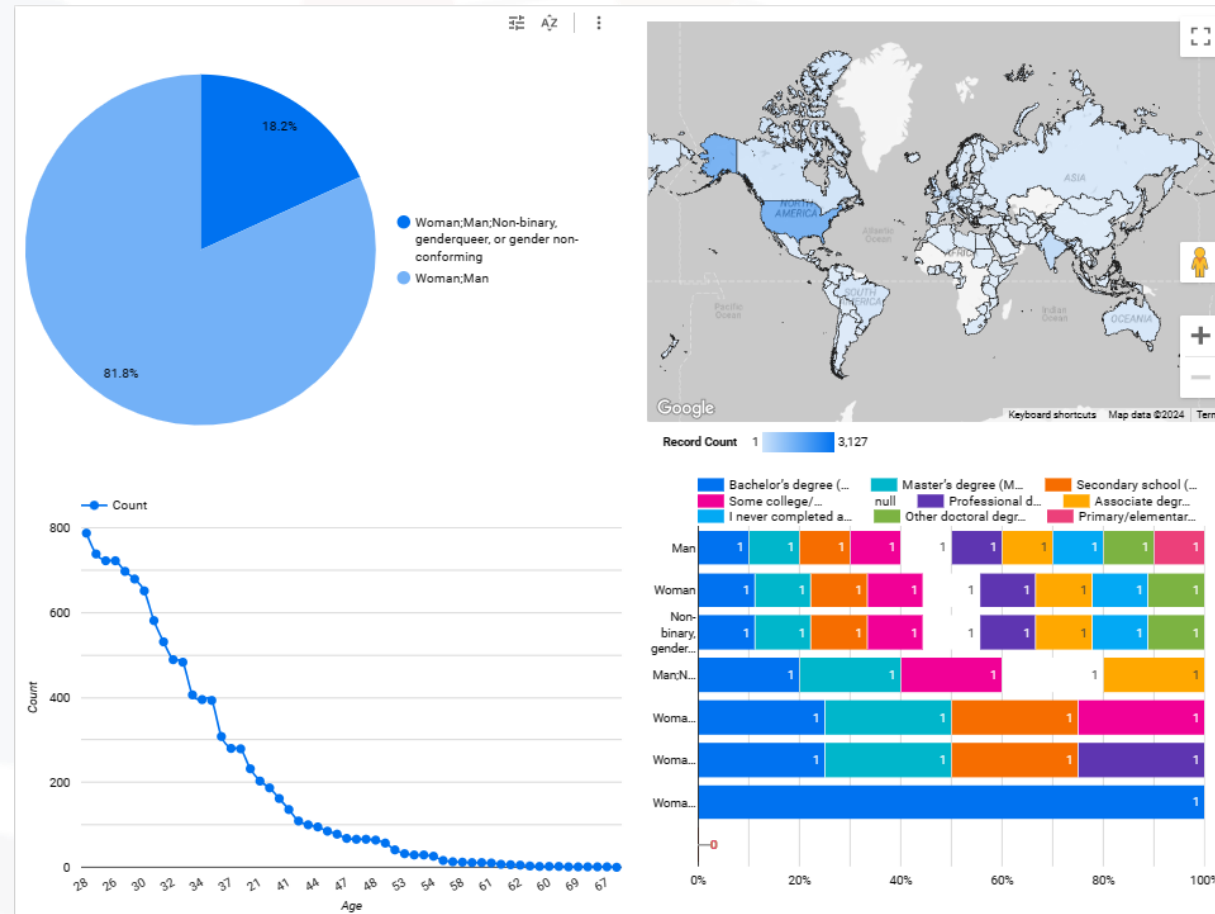
DASHBOARD TAB 1

DASHBOARD TAB 2

DASHBOARD TAB 3

DISCUSSION

- New technology is emerging leading to change in demand.
- The IT industry need to change in order to eliminate gender gap.

OVERALL FINDINGS & IMPLICATIONS

Findings

- Demands and trends can vary based on new technologies.

- Popular Languages: JavaScript - Python

- Popular Databases: PostgreSQL

Implications

- Companies and individuals need to adapt the new demands

- New technology proficiency has higher demand and has a lot of opportunities.

IBM **Dev**eloper

SKILLS NETWORK

CONCLUSION

- New technology leads to varied trend and demands

- Most popular programming Languages: JavaScript - Python

- Most popular database: PostgreSQL

POPULAR LANGUAGES

Annual Average Salary

Language	Salary
PHP	$84,727
SQL	$84,793
C#	$88,726
R	$92,037
Go	$94,082
Java	$101,013
Javascript	$110,981
C++	$113,865
Python	$114,383
Swift	$130,801

IBM Developer

SKILLS NETWORK