



Final  
Capstone  
Presentation  
Sultan A.  
2024-08-05

# OUTLINE

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

# EXECUTIVE SUMMARY

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- JavaScript, Python, HTML/CSS, SQL, and TypeScript are the most desirable programming languages.
- PostgreSQL, MongoDB, Redis, MySQL, and ElasticSearch are the most desirable databases.
- There is a gender gap in the IT industry as it's dominated by males.

# INTRODUCTION

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- Stack Overflow conducted a survey among developers about technology trends in 2019.
- Target audience:
  - IT professionals
  - Individuals in the IT field

# METHODOLOGY

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- Data Sources:
  - - Stack Overflow Survey 2019
- Data Visualization:
  - - Google Looker
- Data Exploration and Cleaning:
  - - Python
- Presentation

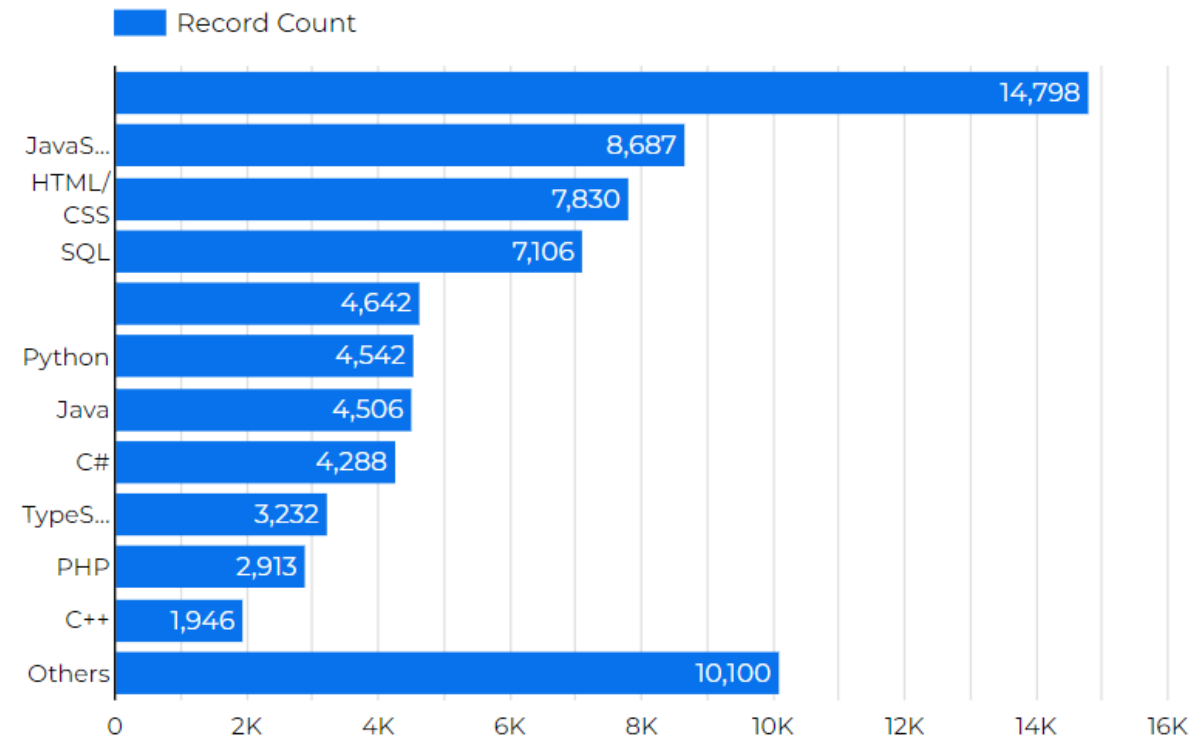
# RESULTS

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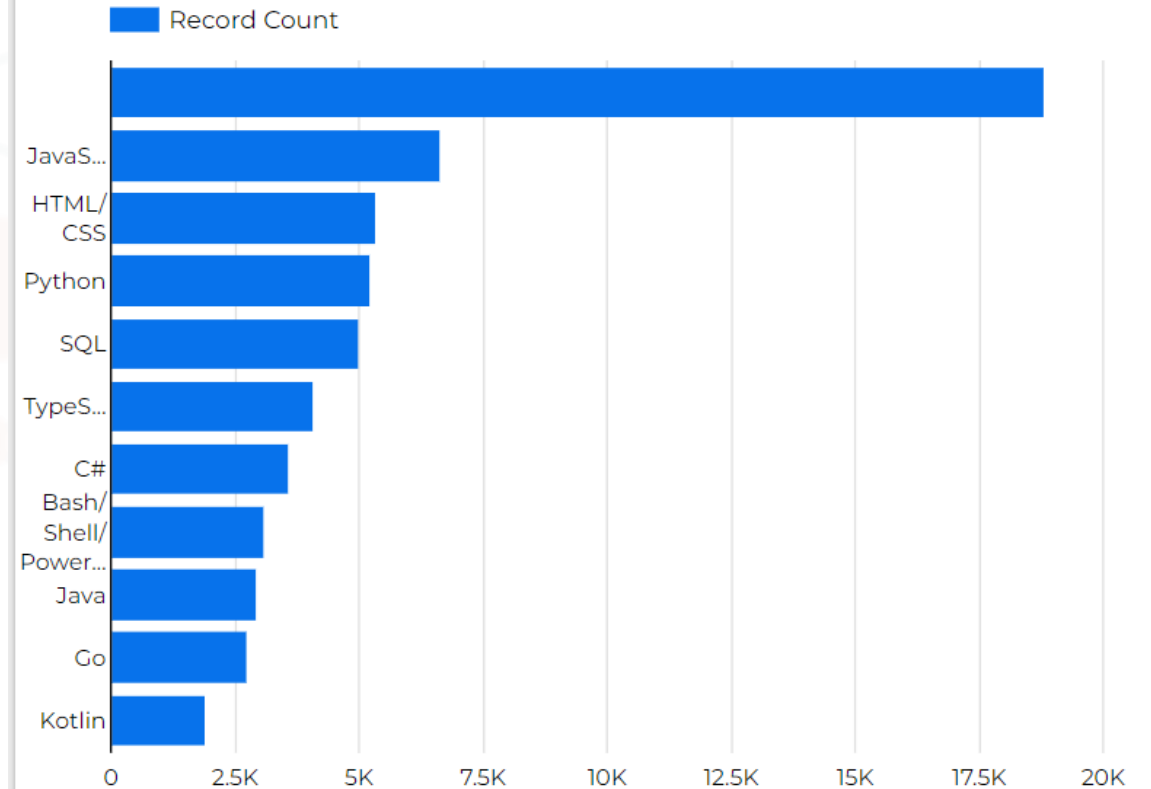


# PROGRAMMING LANGUAGE TRENDS

Top Programming 10 Languages Worked With



Top 10 Language Desire for the Next Year



# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- JavaScript is the most demanded language
- Other popular languages are Python, HTML/CSS and SQL
- TypeScript more desirable than Bash/Shell/PowerShell

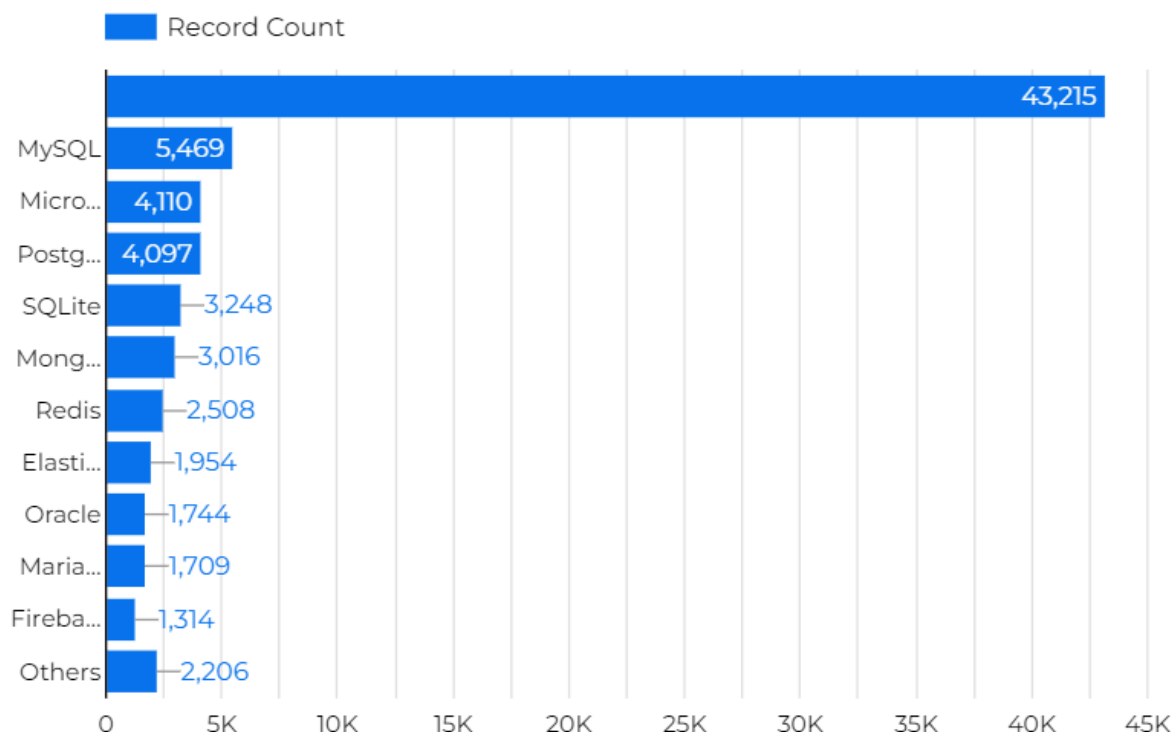
## Implications

- Interest in Python can surpass JS in the future
- Consistent demand for HTML/CSS, Java, SQL and Python
- Web Development in high demand

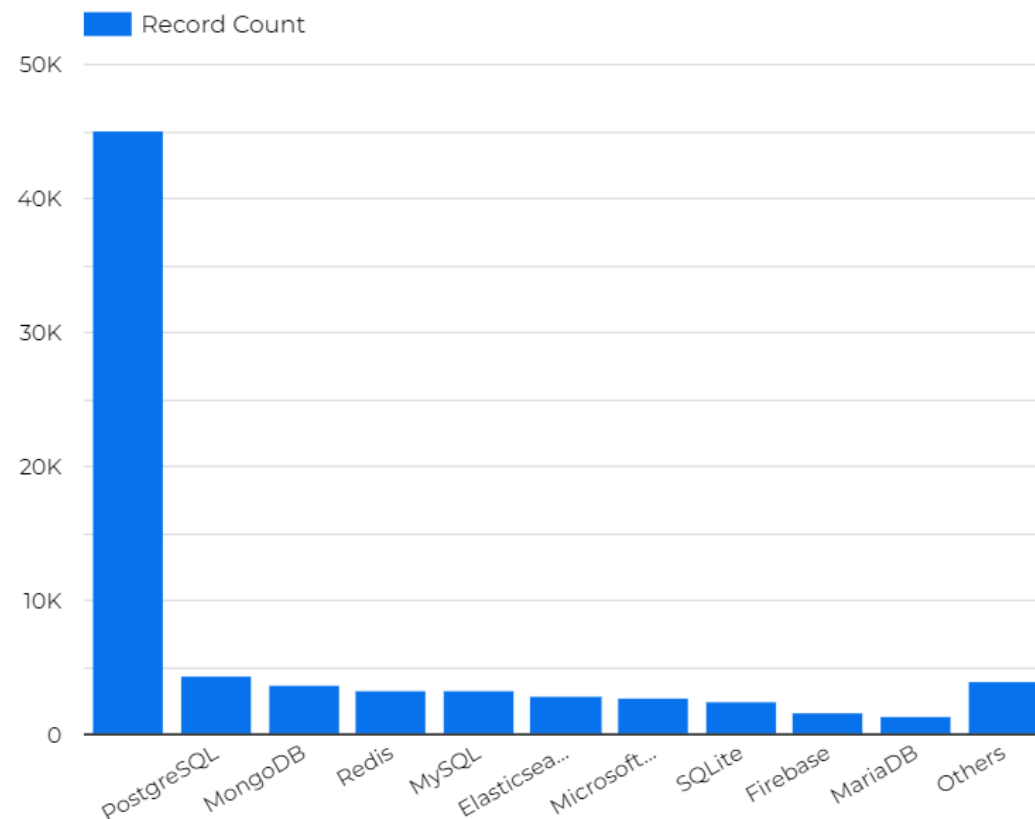


# DATABASE TRENDS

Top 10 Databases Worked With



Top 10 Database Desired for the Next Year



# DATABASE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- Demand increase: PostgreSQL - MongoDB
- Demand decrease: MySQL
- Desire increase: Redis - Elasticsearch

## Implications

- Demand consistency: PostgreSQL - MongoDB
- Preferred databases: Open Source

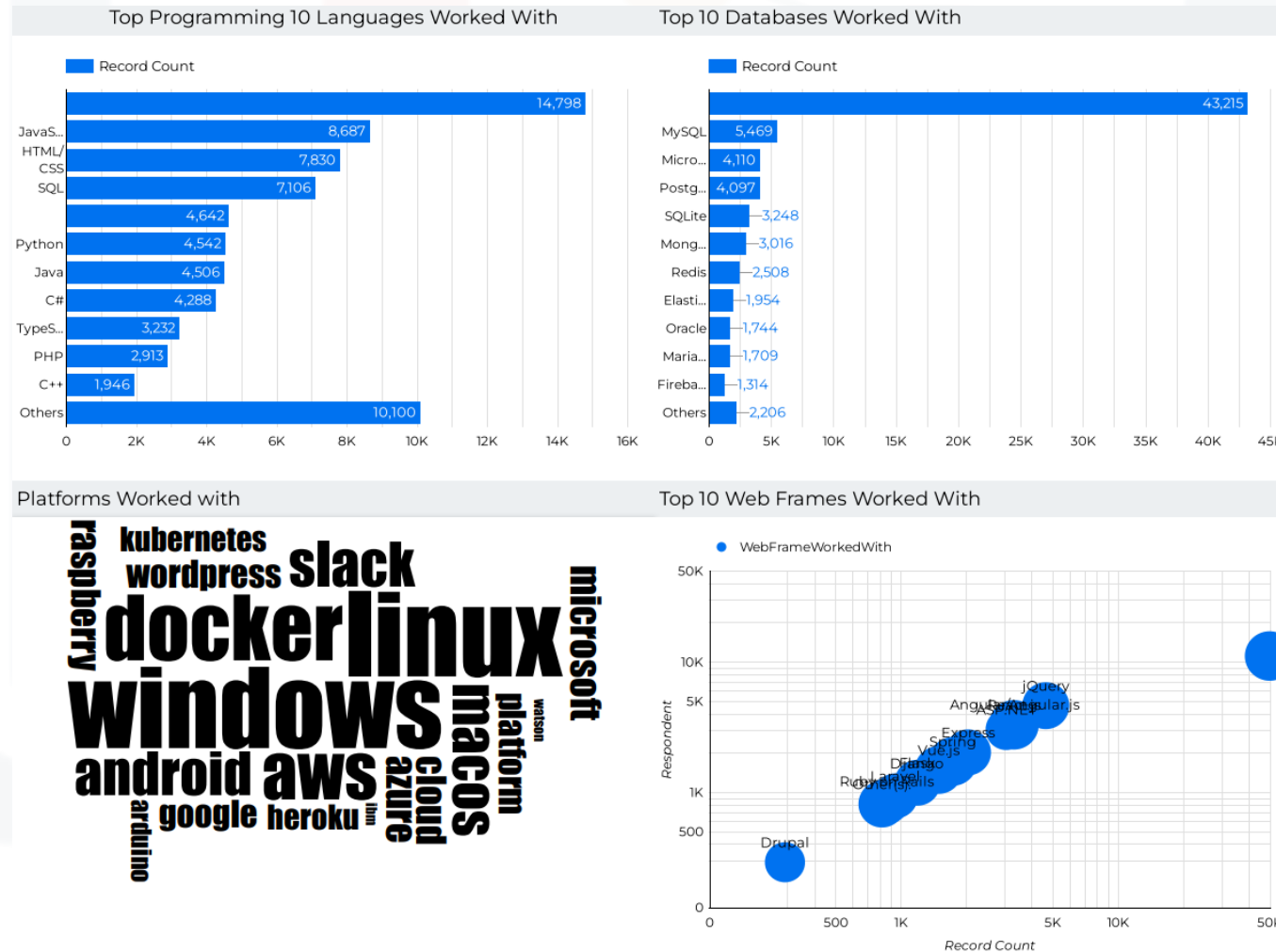
# DASHBOARD

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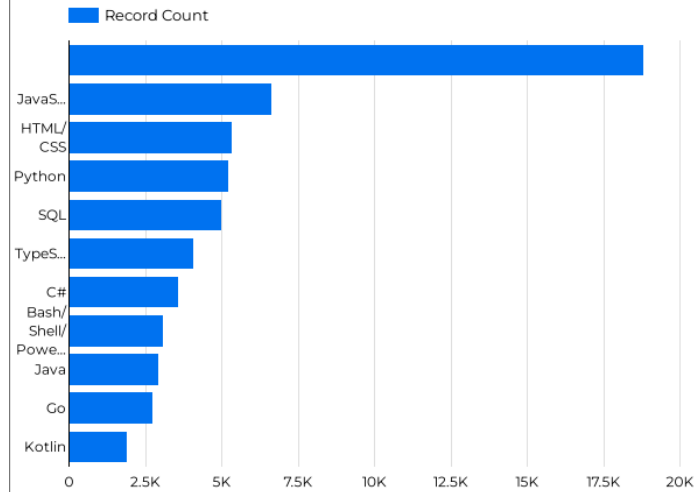
<https://github.com/sultan-ai13/IBM-Data-Analyst-Capstone>

# DASHBOARD TAB 1

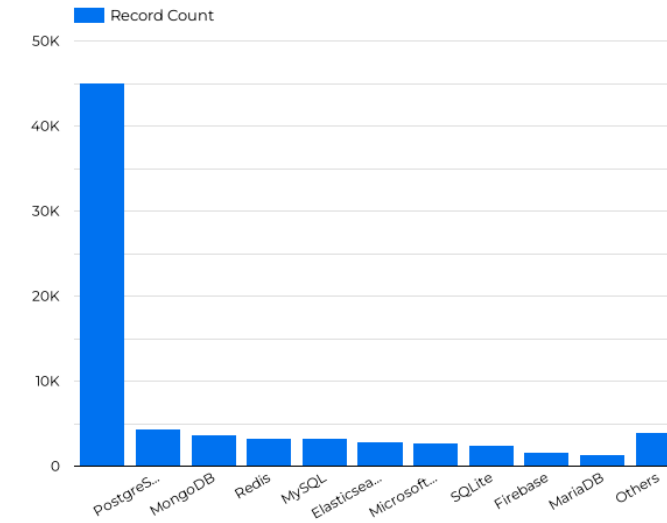


# DASHBOARD TAB 2

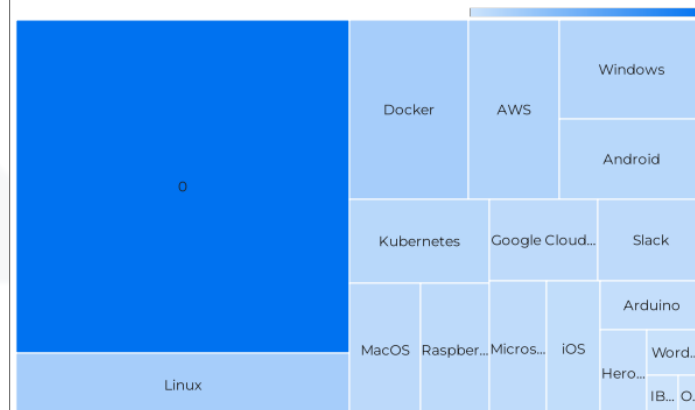
Top 10 Language Desire for the Next Year



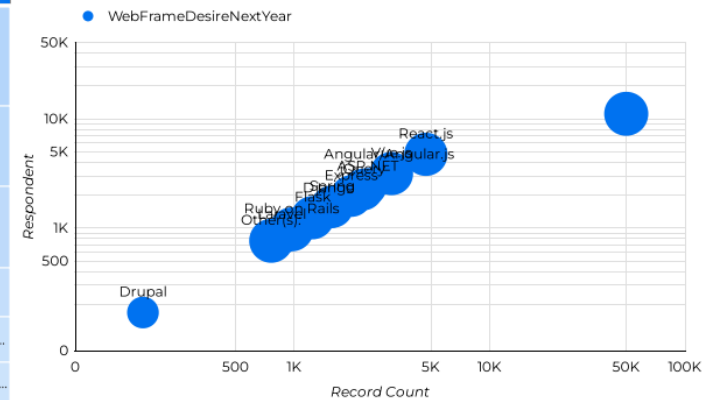
Top 10 Database Desired for the Next Year



Top 10 Platforms desired for the Next Year

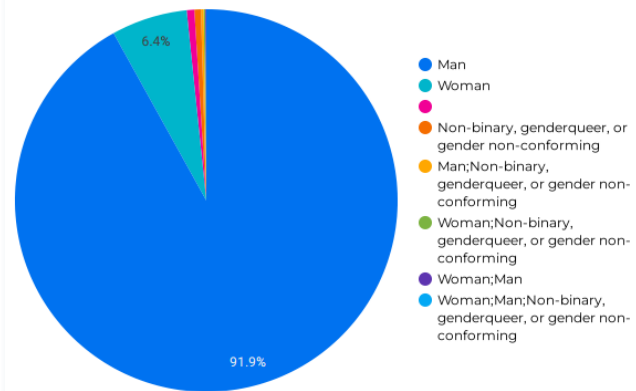


Top 10 Web Frame Desired for the Next Year

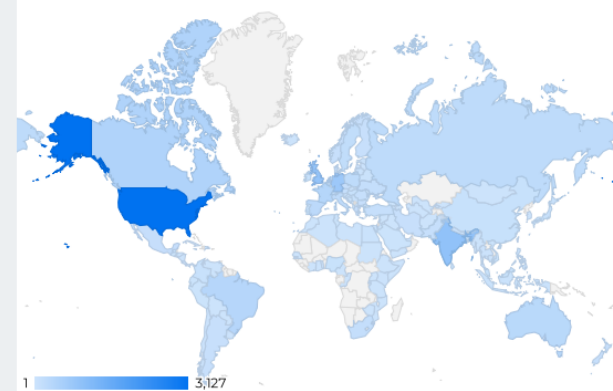


# DASHBOARD TAB 3

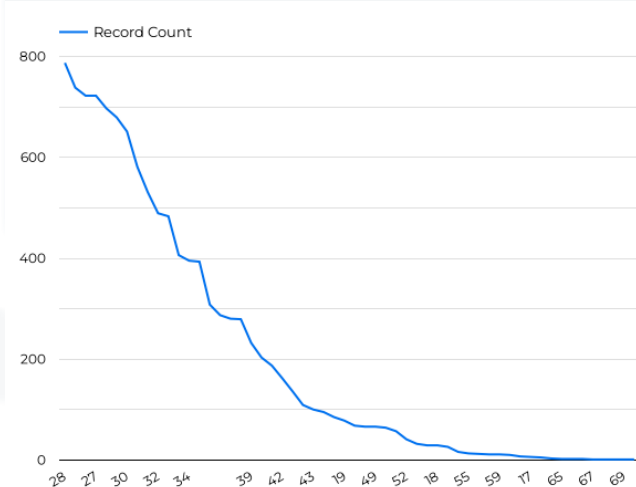
Respondents Classification by Gender



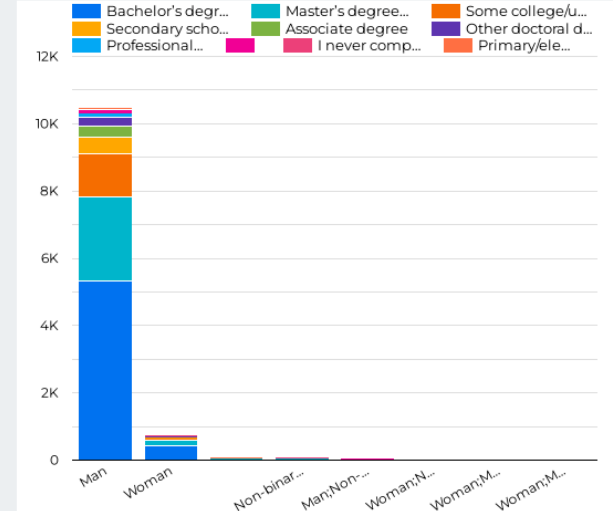
Respondent Count for Countries



Respondents Count by Age



Respondent Count By Gender



# DISCUSSION

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- The IT industry needs to diversify in order to eliminate gender gap
- New technology constantly emerges leading to changes in demand.

# OVERALL FINDINGS & IMPLICATIONS

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## 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
- Proficiency in higher demand skills can lead to more opportunities.



# CONCLUSION

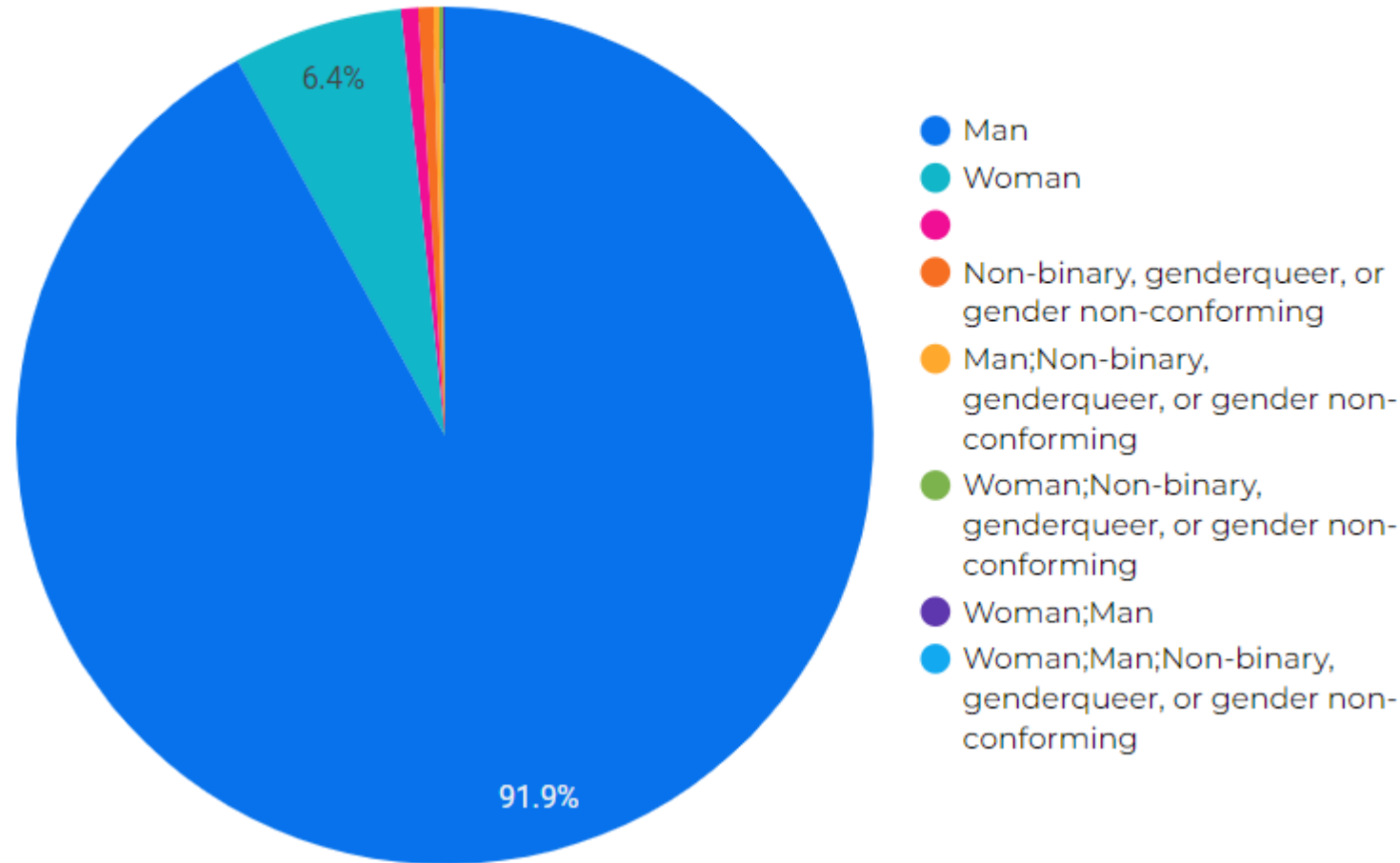
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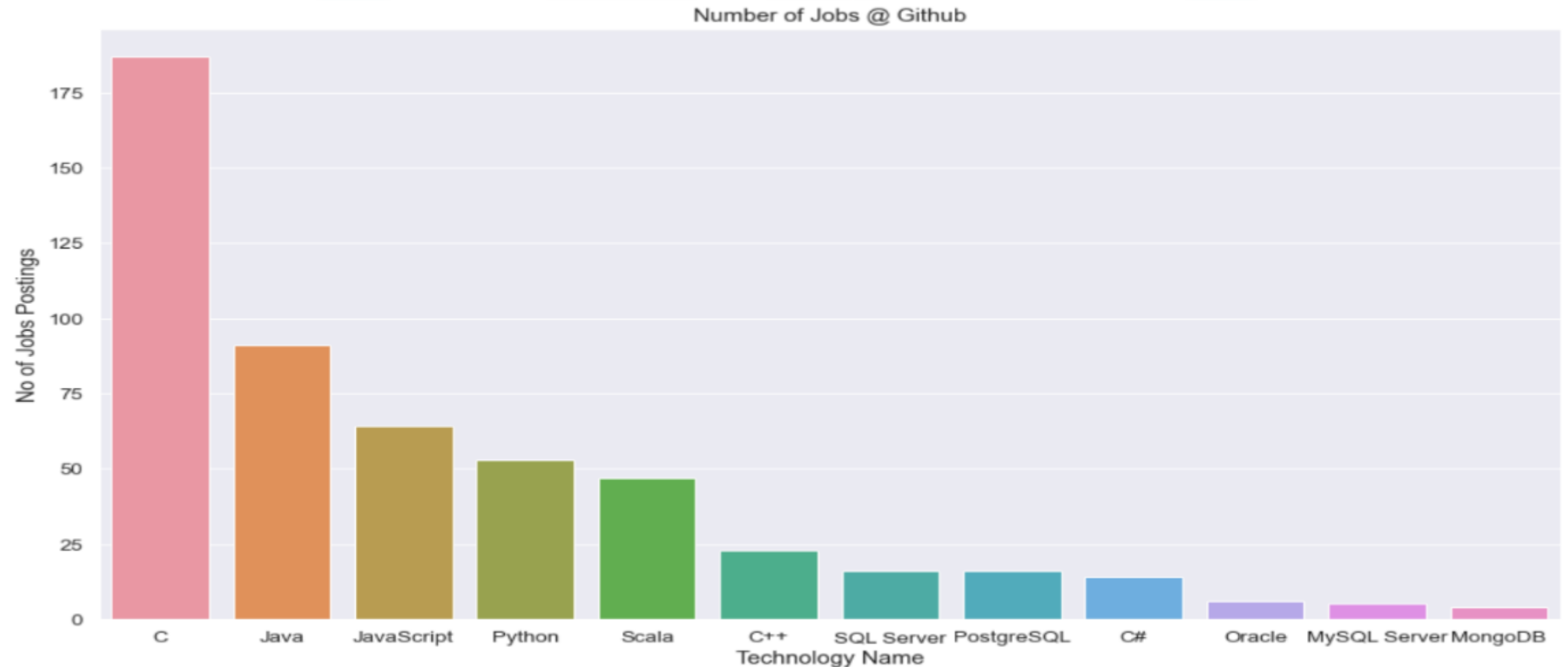
- New technologies lead to varied trends and demands.
- Most popular programming Languages: JavaScript - Python
- Most popular database: PostgreSQL
- The Information Technology field needs diversity.

# APPENDIX: example of gender inequality

Respondents Classification by Gender



# JOB POSTINGS



# POPULAR LANGUAGES

