Technology Trends Amongst Devs: Current and Future

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OUTLINE

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

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EXECUTIVE SUMMARY

Trends in Technology

Current popular languages, databases, platforms and

Frame works

Desire languages, databases, platforms and frameworks

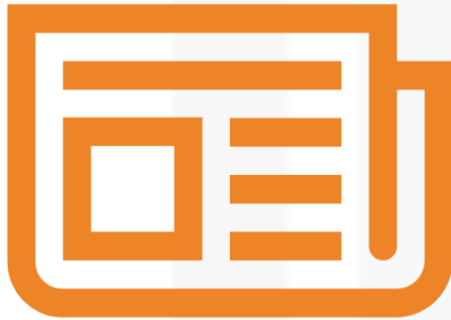Demographic gaps in developers

Age

Location

Gender

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INTRODUCTION

- This presentation is intended to analyze the current technology developers, and its covers their current technology, desired technology and also demographic analysis

- The analysis should aid in making data driven decisions on which technologies to invest with regards to training the current developers or in hiring.
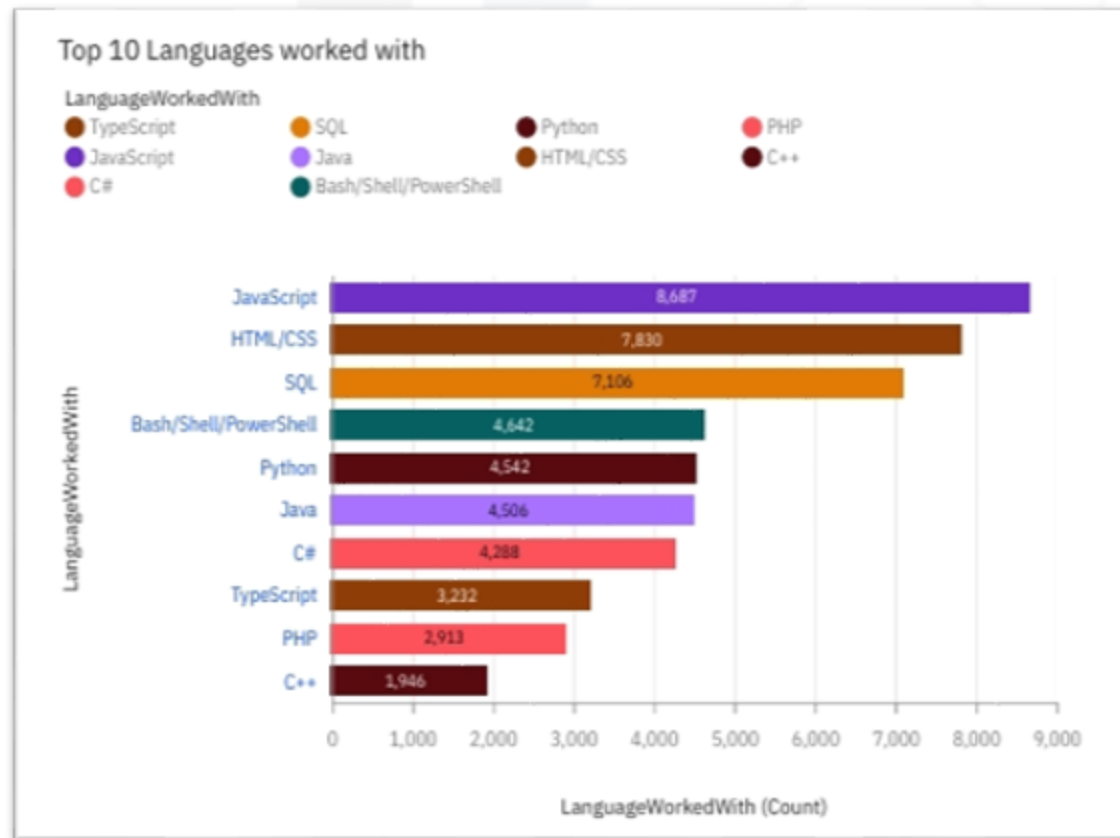
METHODOLOGY

- **Datasets**
  - GitHub Jobs API • Programming Languages and Annual Salary
  - Stack Overflow Developer Survey
- **Data Collection Methods**

  APIs and Web scraping
- **Data Cleaning**
  - Removing duplicated
  - Imputing missing values
  - Normalizing the data
- **Data Exploration and Visualization**
  - Python
- **Dashboard Creation**

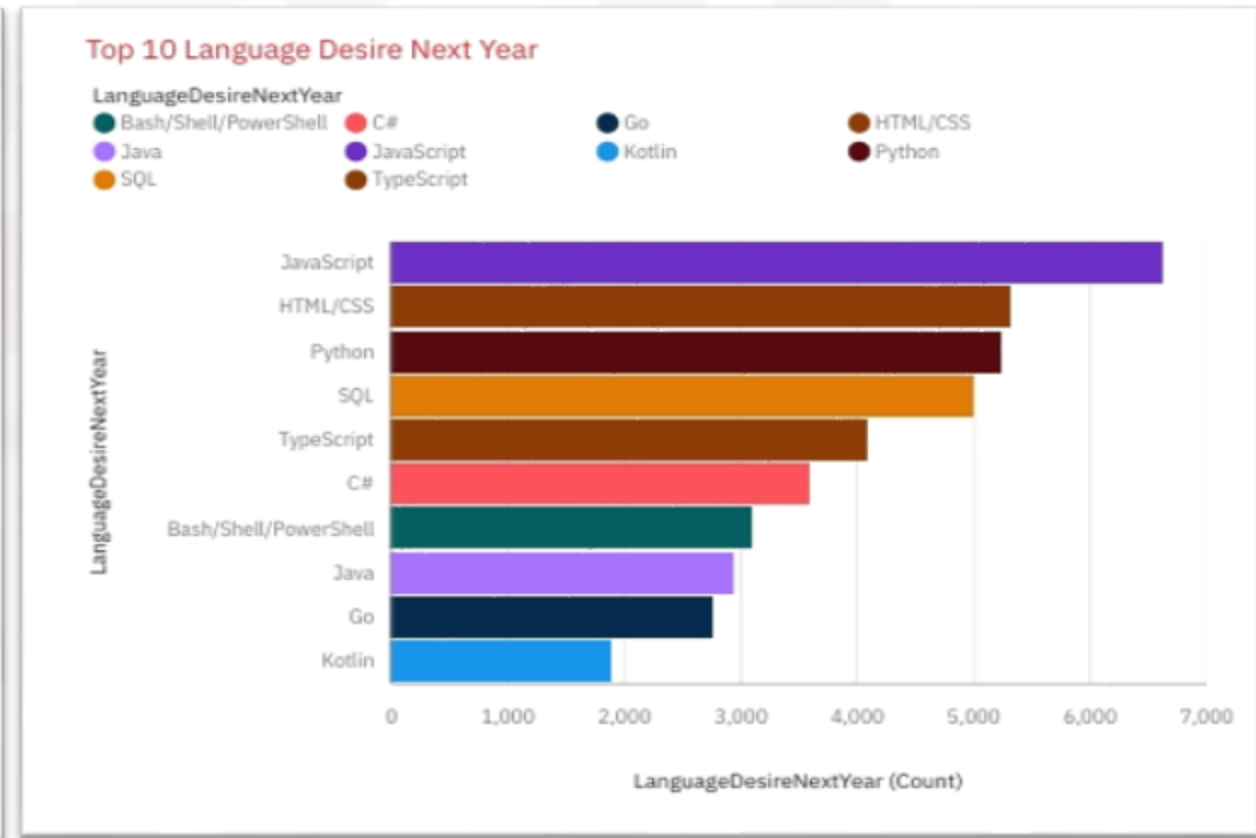 IBM Cognos Dashboard Embedded (CDE)

RESULTS

PROGRAMMING LANGUAGE TRENDS

Current Year

Next Year

Top 10 Languages worked with

LanguageWorkedWith
- TypeScript
- SQL
- Python
- PHP
- JavaScript
- Java
- HTML/CSS
- C++
- C#
- Bash/Shell/PowerShell

Language	Count
JavaScript	8,687
HTML/CSS	7,830
SQL	7,106
Bash/Shell/PowerShell	4,642
Python	4,542
Java	4,506
C#	4,288
TypeScript	3,232
PHP	2,913
C++	1,946

Top 10 Language Desire Next Year

LanguageDesireNextYear
- Bash/Shell/PowerShell
- C#
- Go
- HTML/CSS
- Java
- JavaScript
- Kotlin
- Python
- SQL
- TypeScript

PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- Web development languages continue to be popular, e.g. JavaScript and HTML/CSS
- Increased popularity in Python indicates a move towards Data Science, AI and Machine Learning
- Increased interest in languages
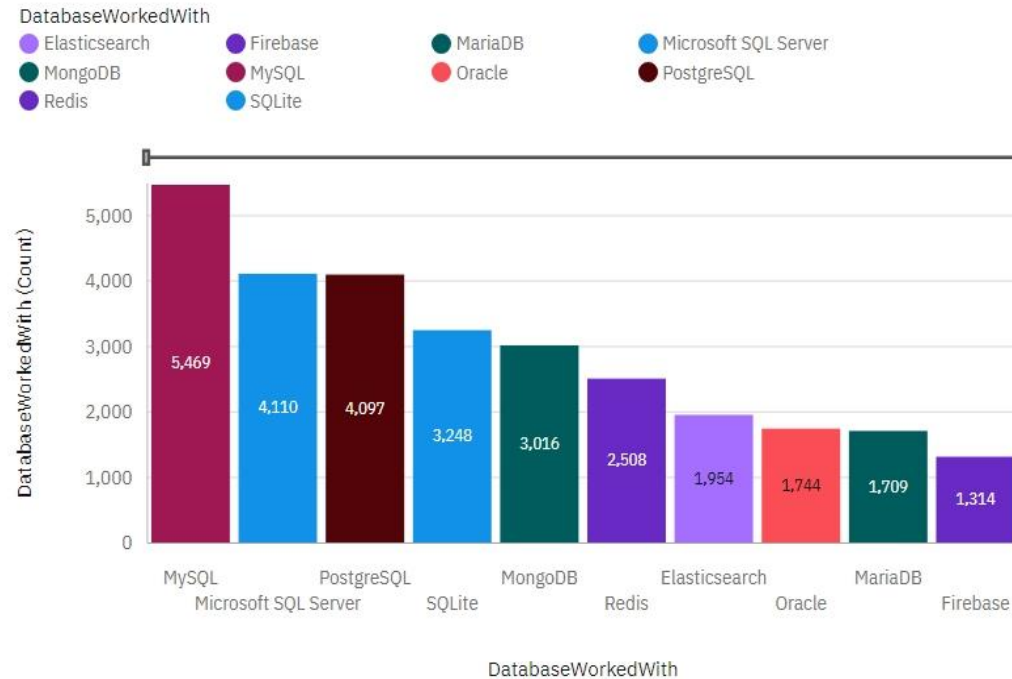- used in mobile development,
- e.g. Kotlin

Implications

- Continue to employ or train current developers in JavaScript and HTML/CSS
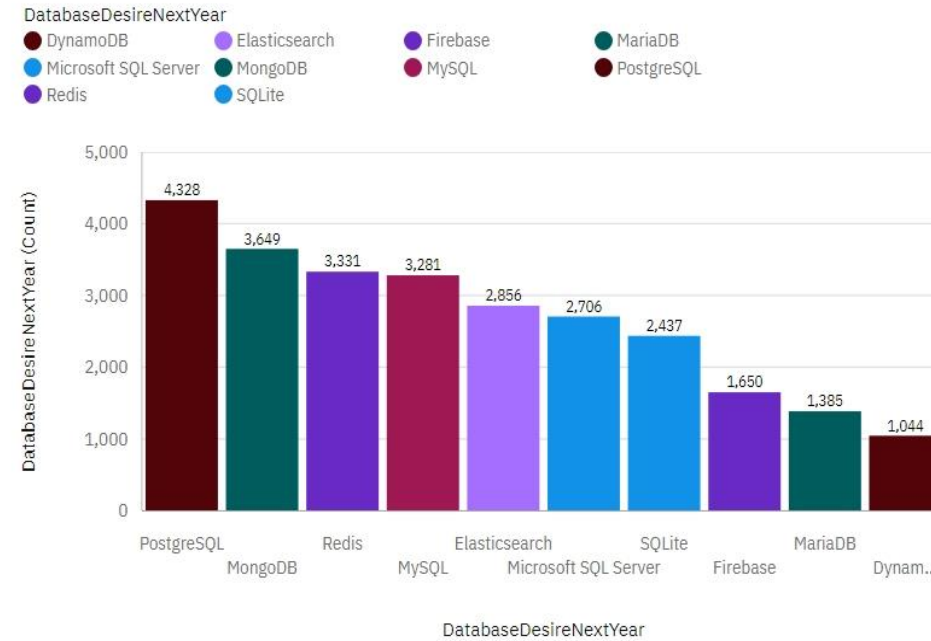- Invest in Data Science, AI and Machine Learning, as well as mobile development

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DATABASE TRENDS

Current Year

Next Year

Top 10 databases worked with

DatabaseWorkedWith
- Elasticsearch
- Firebase
- MariaDB
- Microsoft SQL Server
- MongoDB
- MySQL
- Oracle
- PostgreSQL
- Redis
- SQLite

Top 10 Database Desire Next Year

DatabaseDesireNextYear
- DynamoDB
- Elasticsearch
- Firebase
- MariaDB
- Microsoft SQL Server
- MongoDB
- MySQL
- PostgreSQL
- Redis
- SQLite

DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- There is significant decrease in interest in MySQL and Microsoft SQL Server
- While there is increased interest in modern databases such as PostgreSQL and MongoDB
- There is no longer any significant interest in Oracle
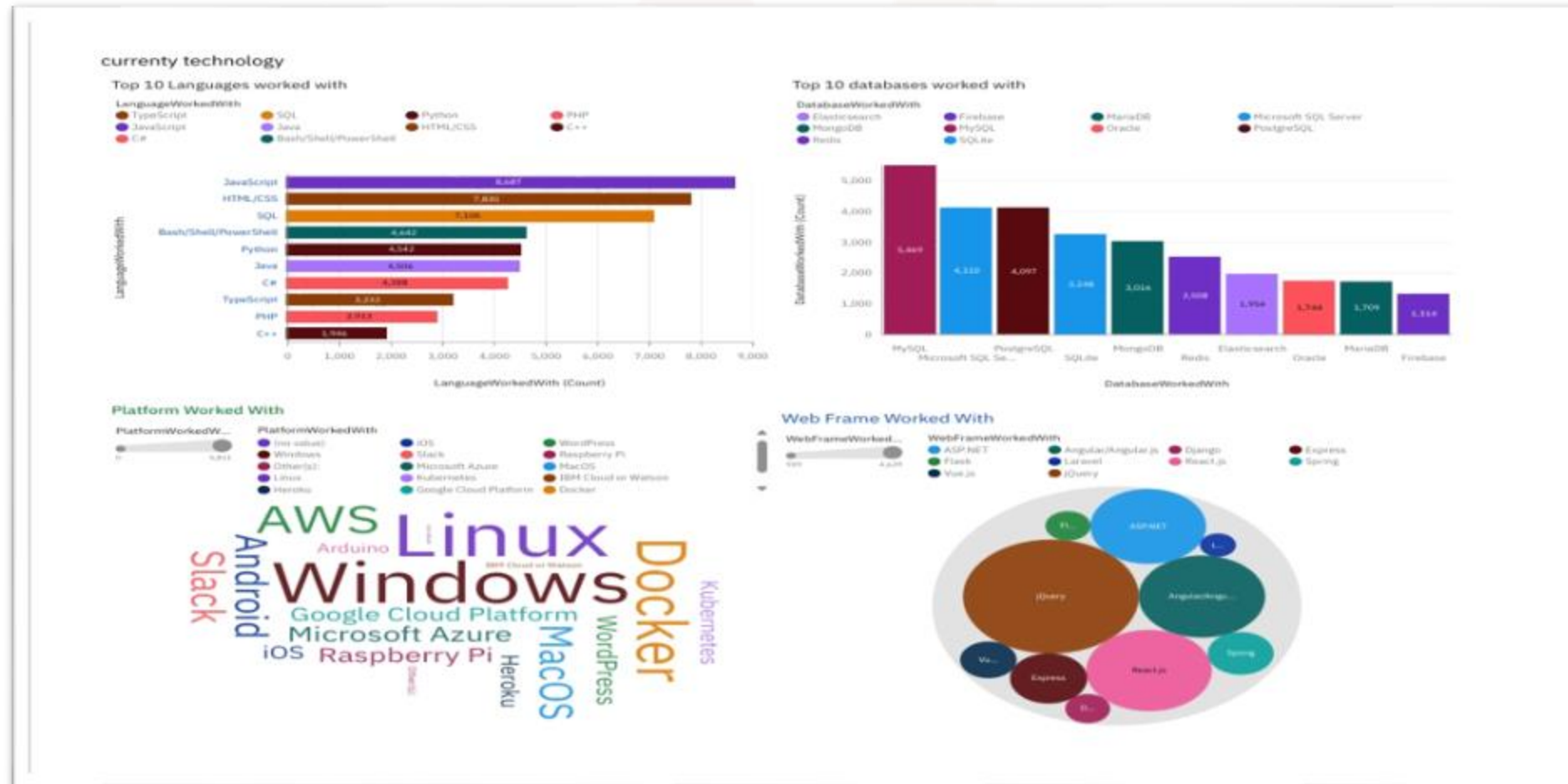
Implications

- There is no longer any significant interest in Oracle
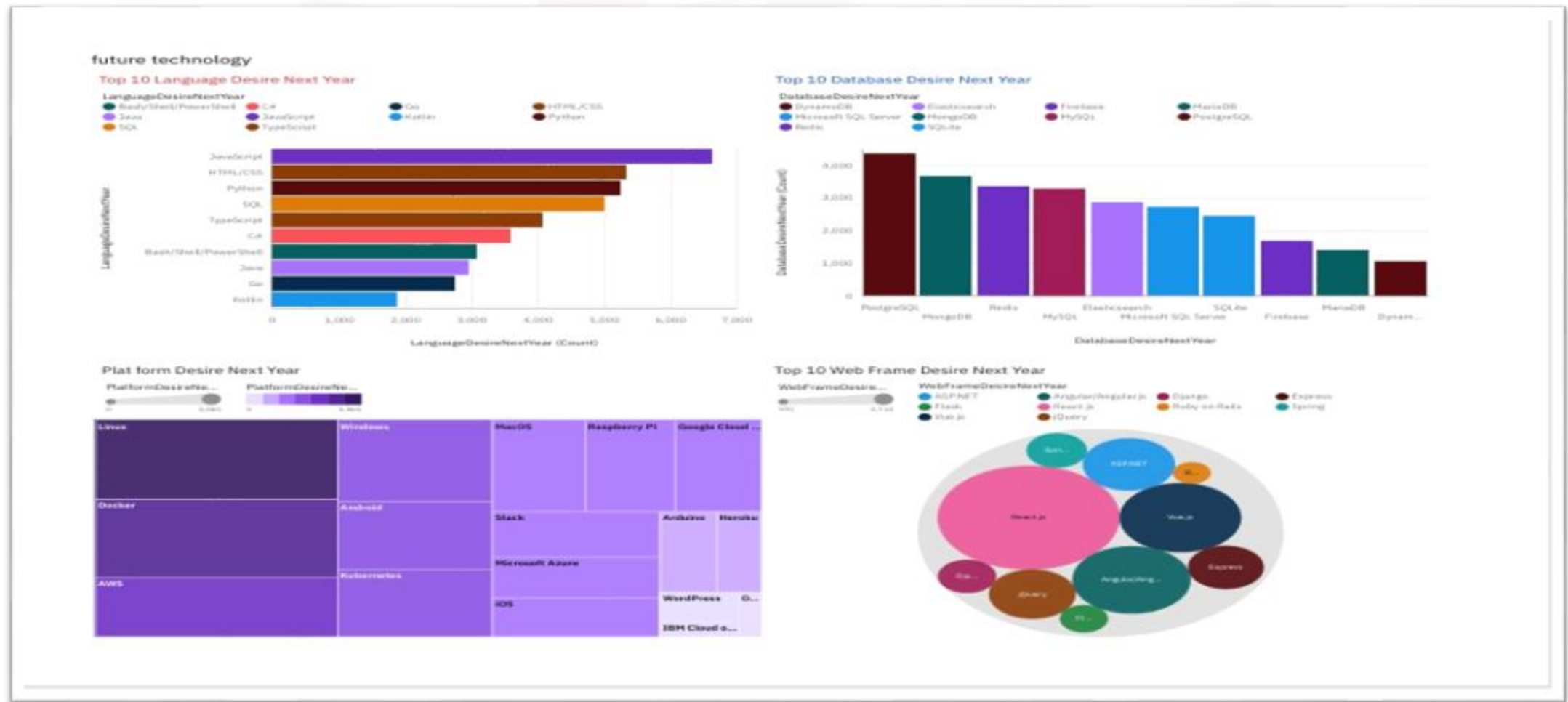- It is not necessary to train, or higher developers experienced with Oracle

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DASHBOARD

refactored-octo-parakeet/_ sample dashboard 2.pdf at main · malloqoorciin/refactored-octo-parakeet (github.com)
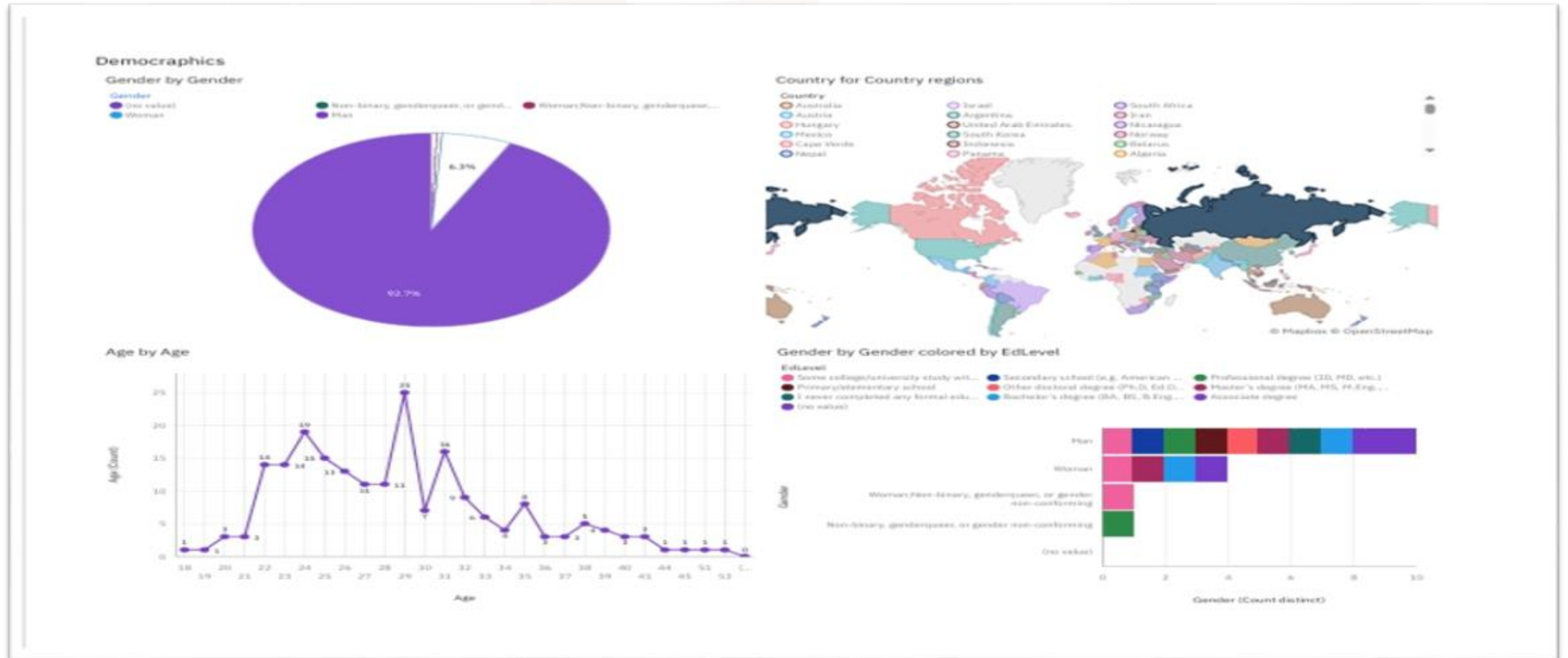
DASHBOARD TAB 1

DASHBOARD TAB 2

DASHBOARD TAB 3

DISCUSSION

- Technology trends
- Demographics of developer

OVERALL FINDINGS & IMPLICATIONS

Findings

- Wide gender disparity in developers with 93.5% being men, and only 6.5% women
- Concentration of developer talent being in the USA and India
- Web development languages continue their popularity, along with Data Science, Big Data, AI an Machine Learning language

Implications

- Companies not primarily located in USA and India would have to consider outsourcing dev talent or investing in training local talent

- Intentional investments need to be made in getting more women involved in software development
- Continue to invest in web development and increase use of data

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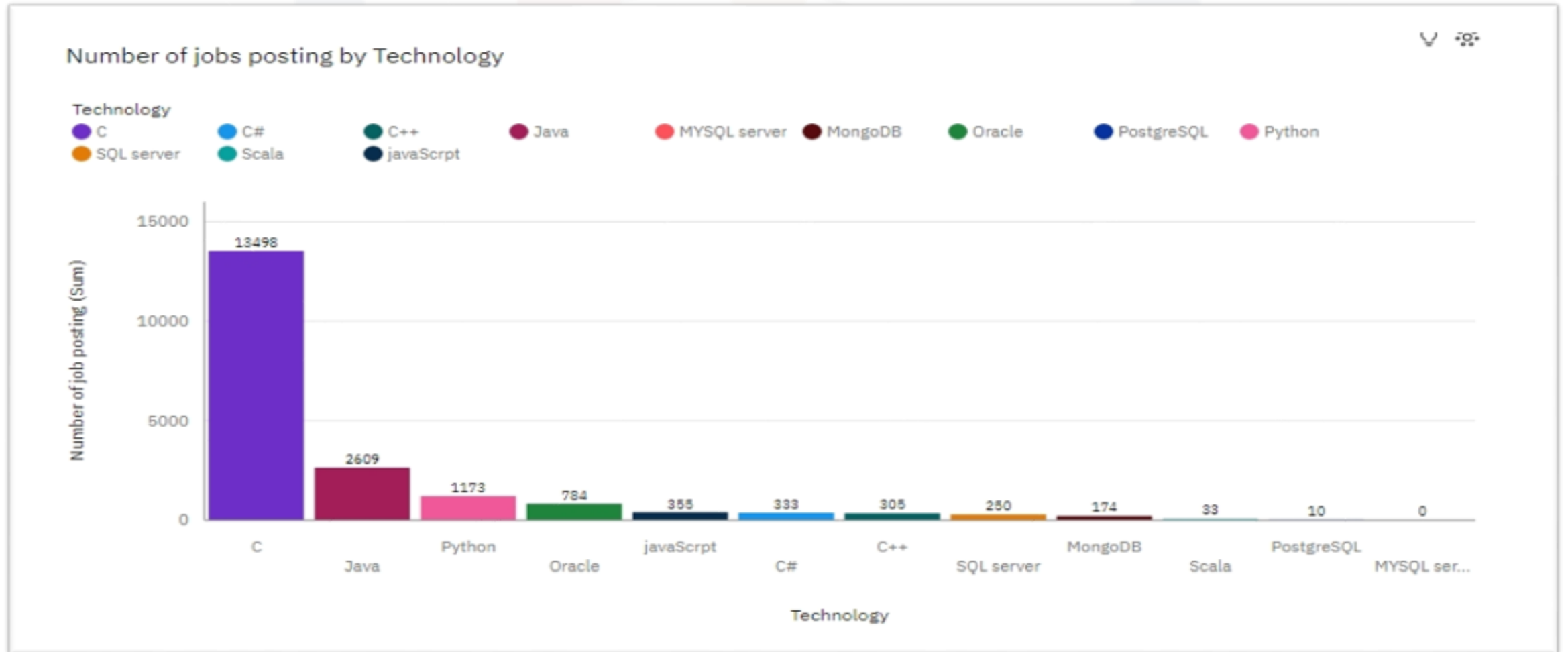
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CONCLUSION

- Invest in local developer talent or outsource developers if located outside of the US and   India

- Get more women into tech and software development space

- Make use of data in making business decisions

- Continue focus a web development

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APPENDIX

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

JOB POSTINGS

Number of jobs posting by Technology

Technology
- C
- C#
- C++
- Java
- MYSQL server
- MongoDB
- Oracle
- PostgreSQL
- Python
- SQL server
- Scala
- javaScrpt

Technology	Number of job posting (Sum)
C	13498
Java	2609
Python	1173
Oracle	784
javaScrpt	355
C#	333
C++	305
SQL server	250
MongoDB	174
Scala	33
PostgreSQL	10
MYSQL ser...	0

POPULAR LANGUAGES

Average Annual Salary by Language colored by Language