Dynamic Relationship between Technology Trends and Demographics

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11 March, 2024

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- Discussion
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EXECUTIVE SUMMARY

- Current Technology Usage
- Future Technology Trends
- Demographics

INTRODUCTION

- Current Technology Usage
  - Top 10 Languages worked with
  - Top 10 Databases worked with
  - Platforms worked with
  - Top 10 Web frame worked with
- Future Technology Trend
  - Top 10 Languages desire next year
  - Top 10 Databases desire next year
  - Platforms desire next year
  - Top 10 Web frame desire next year
- Demographics
  - Respondent Classified by Gender
  - Respondent Count for Countries
  - Respondent count by Age
  - Respondent count by gender classified by formal education level

METHODOLOGY

- Data Collection
  - The dataset used in this assignment comes from the following
  - source: https://stackoverflow.blog/2019/04/09/the-2019-stackoverflow-developer-survey-results-are-in/
  - m5_survey_data_demographics.csv and m5_survey_data_technologies_normalised.csv.
- Data Exploration
- Data Wrangling
- Data Cleaning
- Data Visualization (Preparing Dashboards)
- Report Preparation and Presentation

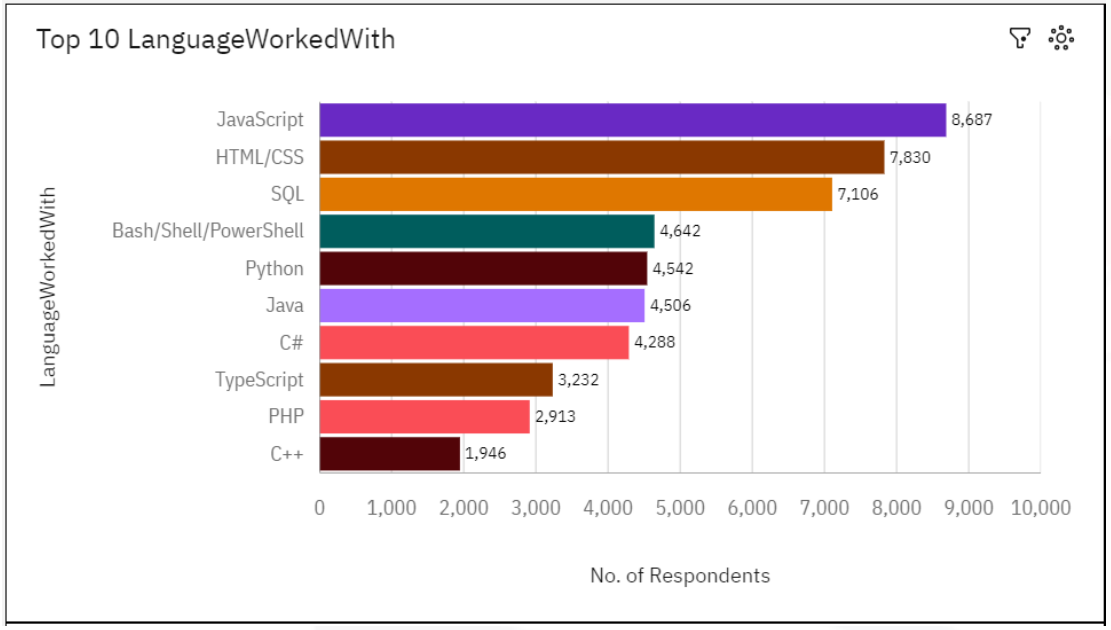
RESULTS

The dashboards which are following:

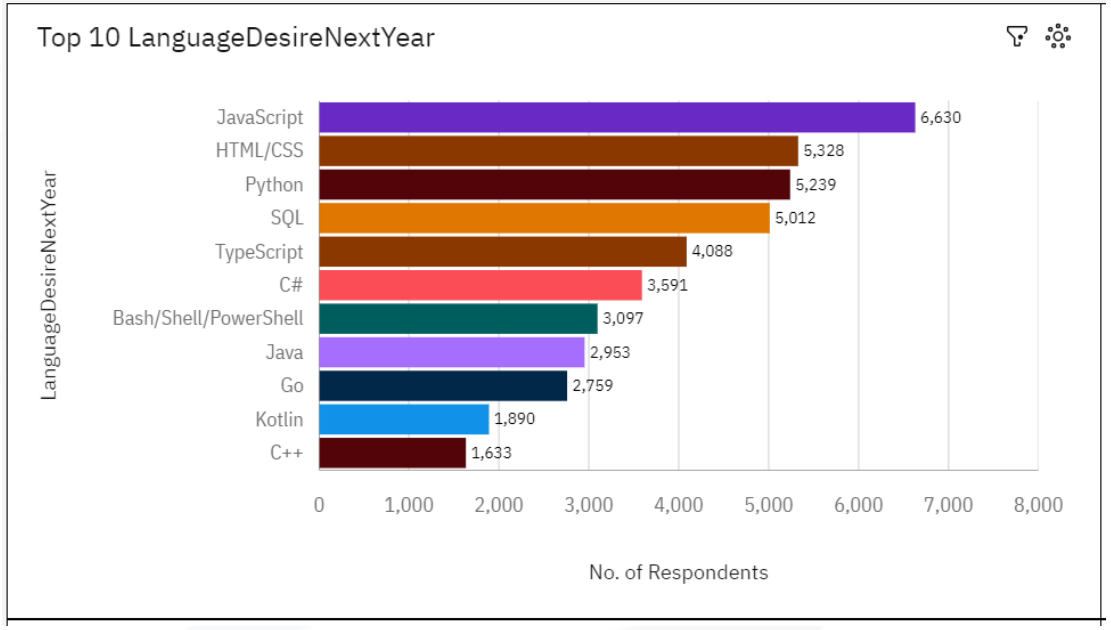
- Current Technology Usage
- Future Technology Trends
- Demographics

PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

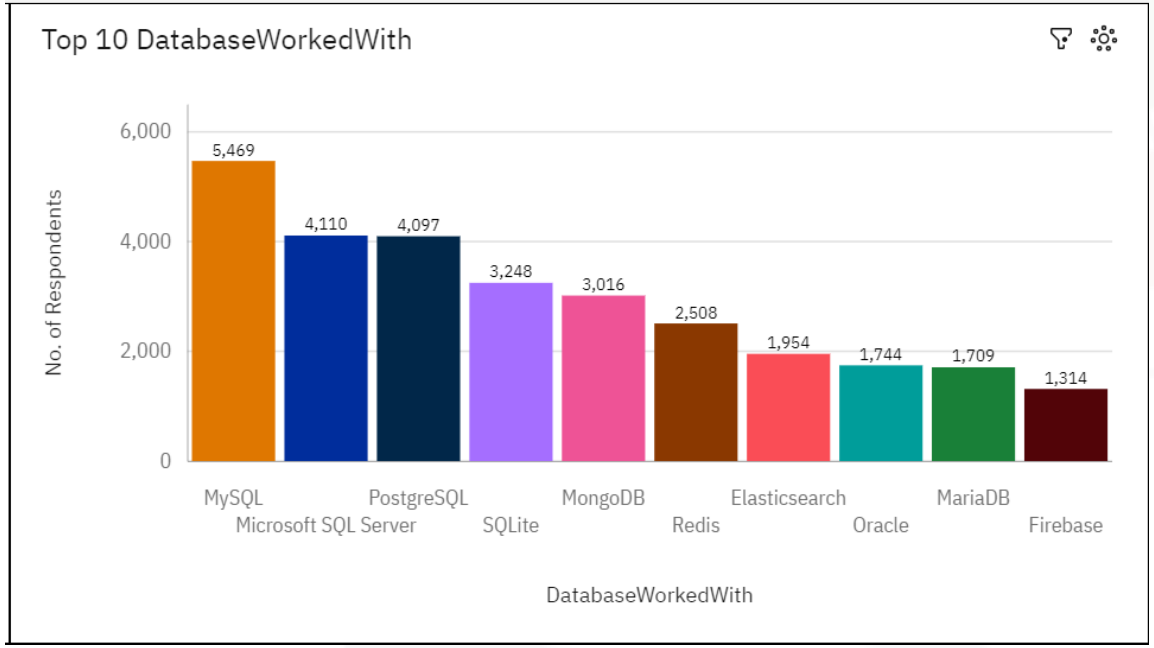
- JavaScript and HTML/CSS maintain their top two positions in both the current and upcoming year survey responses.
- Python takes the place of SQL in upcoming technologies, it still maintains its position at 4th place.
- TypeScript is gaining increasing appeal for the future.

Implications

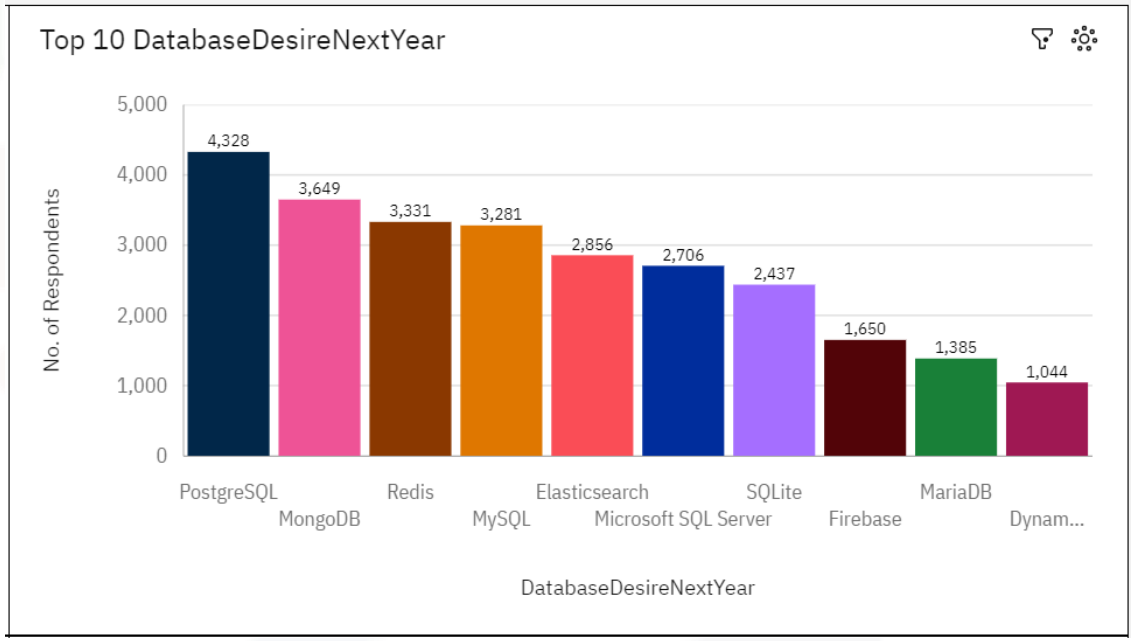
- Web development continue to have widespread demand and preference.
- Despite Python's popularity as an easily accessible scripting language, SQL remains in demand, particularly for big data applications.
- Given the rising prominence of AI and ML, Python and TypeScript have become essential.

DATABASE TRENDS

Current Year



Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- PostgreSQL ascended from the 3rd position in the current year to become the top choice for databases in the coming year.
- MongoDB advanced to the 2nd spot in the preferred category, climbing up from the 5th position.
- Redis made a significant move to the 3rd position in the desired category, up from the 6th position.

Implications

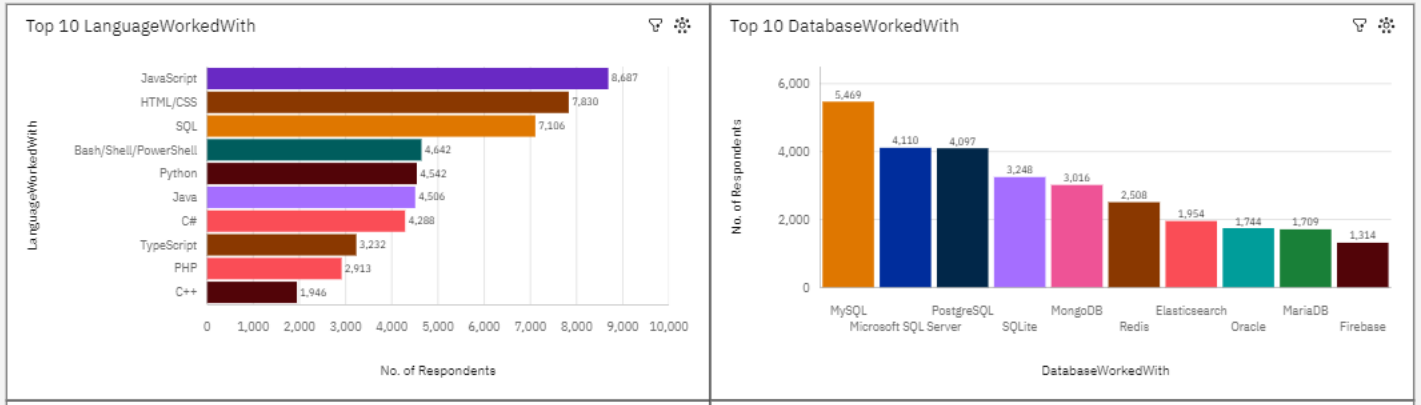
- PostgreSQL stands out as a dependable and feature-rich open-source relational database management system.
- MongoDB, a widely embraced NoSQL database, excels in effectively managing unstructured and semi-structured data.
- Redis, known for its outstanding performance and versatility, stands as a notable database option.

DASHBOARD

IBM Cognos Dashboard

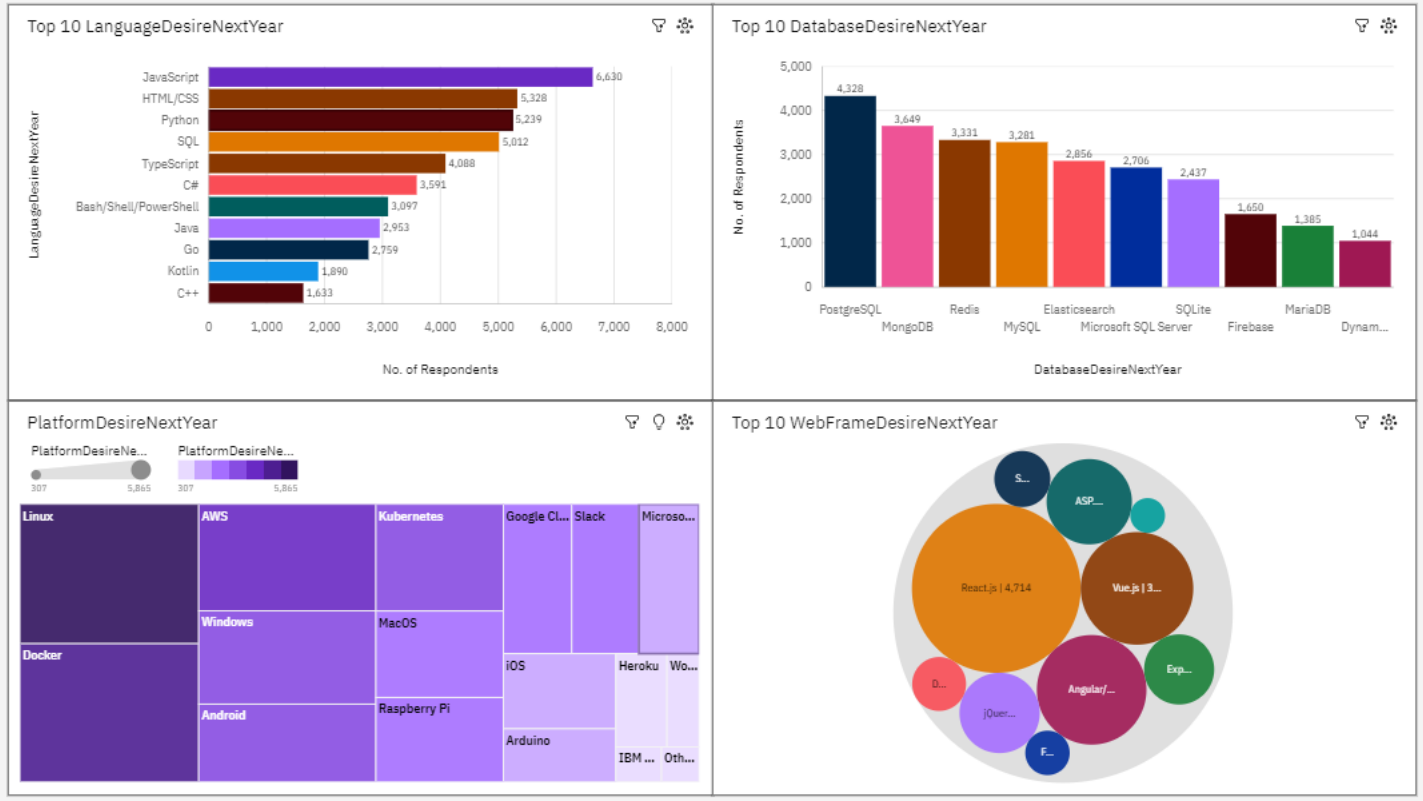
DASHBOARD TAB 1

Current Technology Usage | Future Technology Trend | Demographics

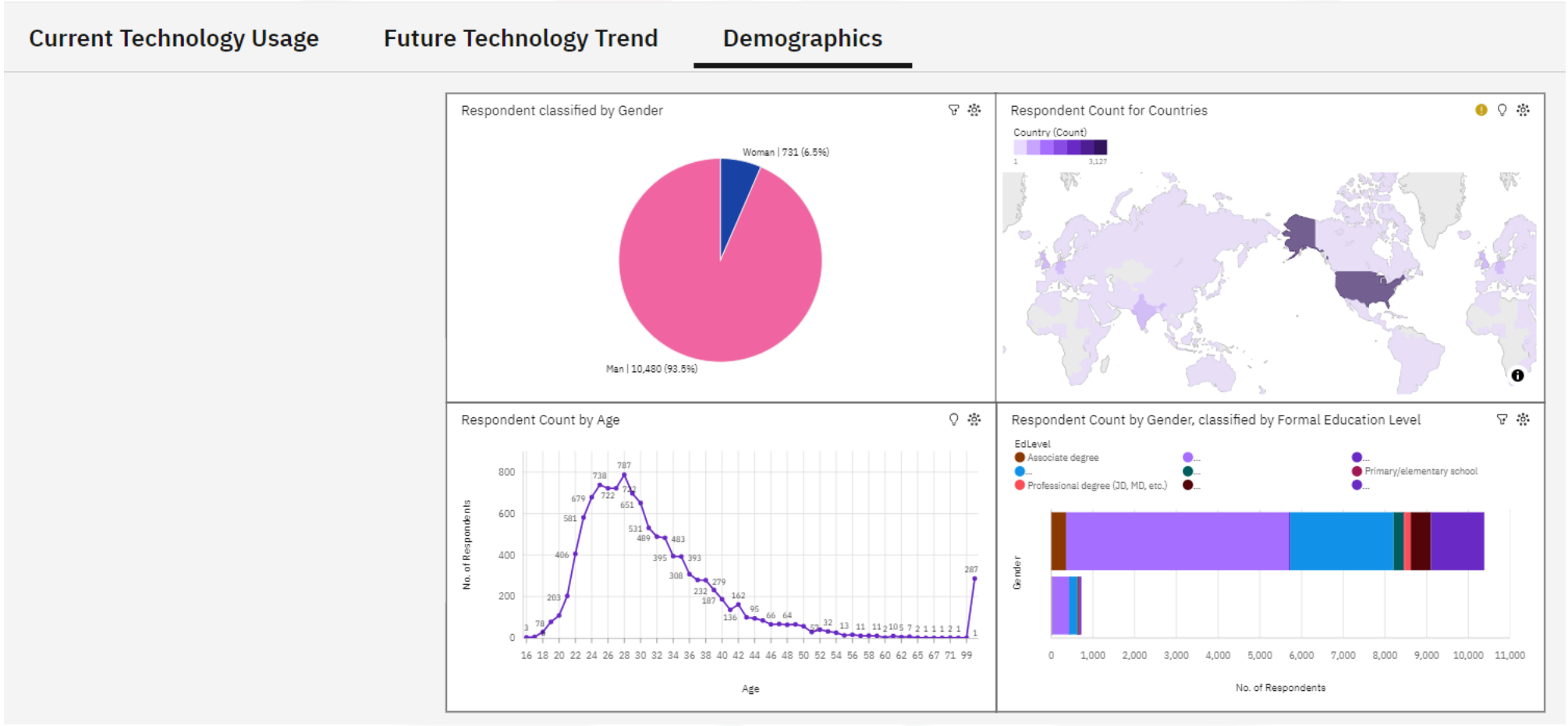


DASHBOARD TAB 2

Current Technology Usage | Future Technology Trend | Demographics



DASHBOARD TAB 3



DISCUSSION

The evolution of technology trends prompts:

- Enhancing skills to align with these changes
- Examining gender-based involvement in the upgrading process
- Assessing country-specific technological shifts
- Evaluating the impacts of age and education levels on these changes

OVERALL FINDINGS & IMPLICATIONS

Findings

- JavaScript and HTML/CSS maintain their top two positions in both the current and upcoming year survey responses.
- Python takes the place of SQL in upcoming technologies, it still maintains its position at 4th place.
- TypeScript is gaining increasing appeal for the future.
- PostgreSQL ascended from the 3rd position in the current year to become the top choice for databases in the coming year.
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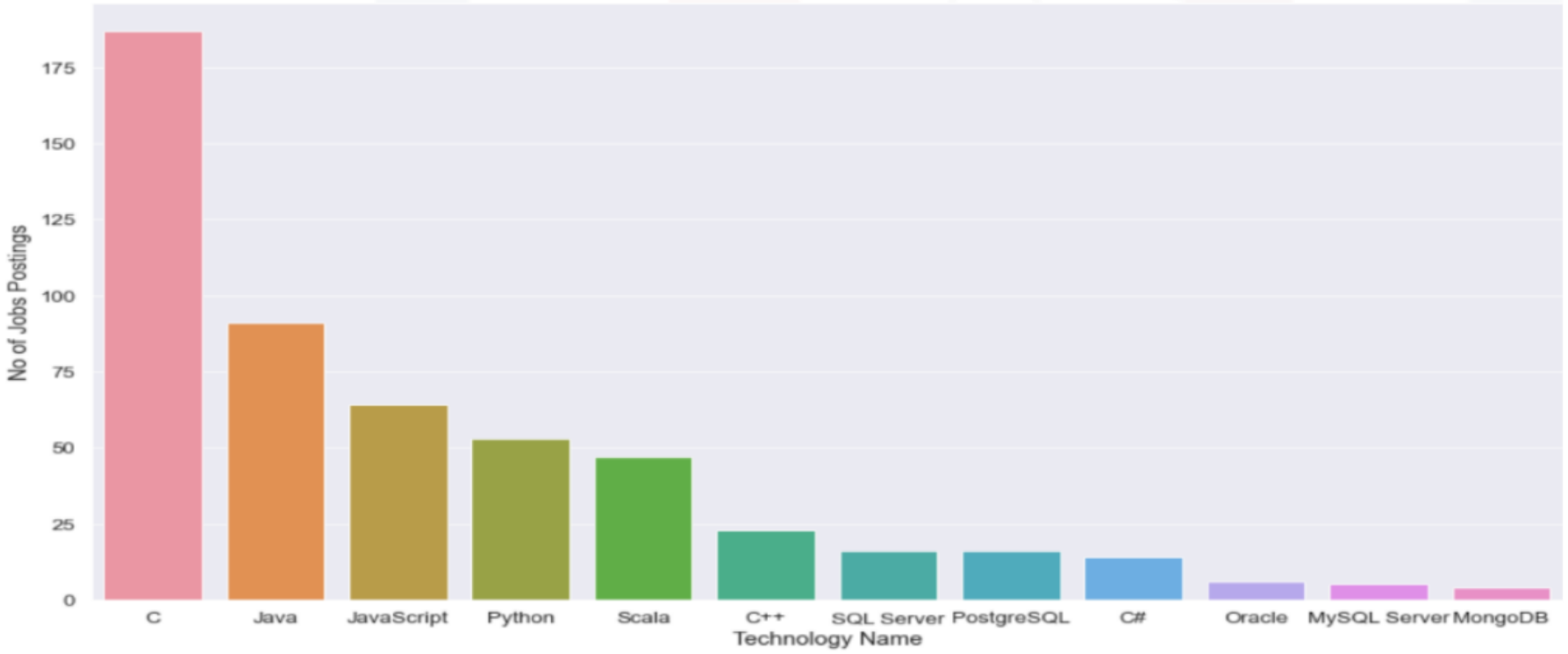
Implications

- Web development continue to have widespread demand and preference.
- Despite Python's popularity as an easily accessible scripting language, SQL remains in demand, particularly for big data applications.
- Given the rising prominence of AI and ML, Python and TypeScript have become essential.
- PostgreSQL stands out as a dependable and feature-rich open-source relational database management system.
- MongoDB, a widely embraced NoSQL database, excels in effectively managing unstructured and semi-structured data.
- Redis, known for its outstanding performance and versatility, stands as a notable database option.

CONCLUSION

- The demand and preference for web development and programming persist as popular choices.
- Given the widespread popularity of AI and ML, Python and TypeScript have become indispensable.
- PostgreSQL, MongoDB, and Redis stand out as robust and feature-rich open-source relational database management systems.
- Organizations are actively seeking alternative options to Oracle.

JOB POSTINGS



POPULAR LANGUAGES