SOFTWARE TRENDS

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13th of August 2024

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EXECUTIVE SUMMARY

- Web-based technologies will be in control for the next decade.

- Respondents follow simple syntax languages

INTRODUCTION

- I am using every developer's favorite website's survey to understand trends in technology.

- What direction is taken by the rapid development of software technologies?

- What are the current and next demands of software developing world?

- Who are the current developers and what are their needs?

METHODOLOGY

- **DATA COLLECTION & WRANGLING**
  - GitHub Jobs API collection
  - Web Scraping to get programming pay packages
  - Stackoverflow.com results m

- **VISUALIZATION & DATA ANALYSIS**
  - Dealing with data through data visualization
  - Enhancing the results via modifying the looks of the data
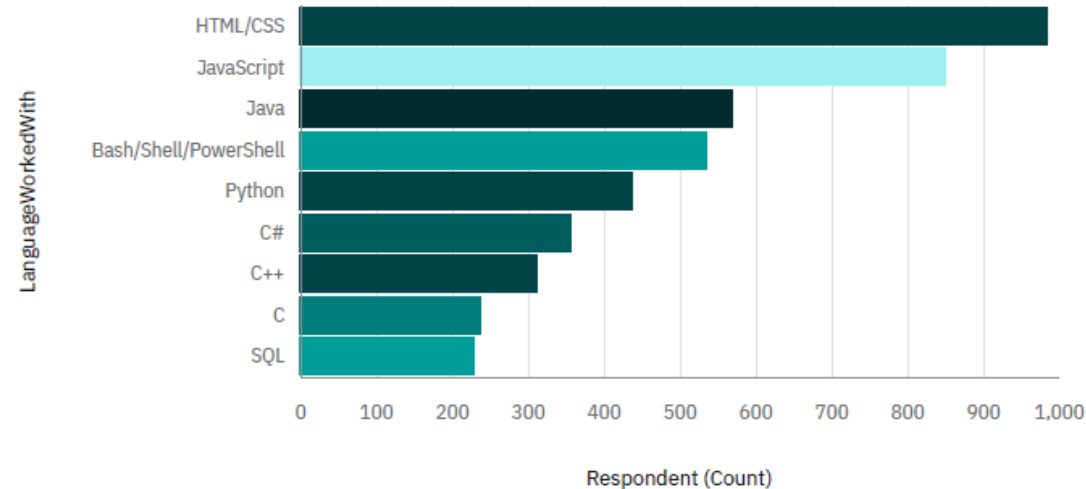 - Establishing dashboards with the visualized data
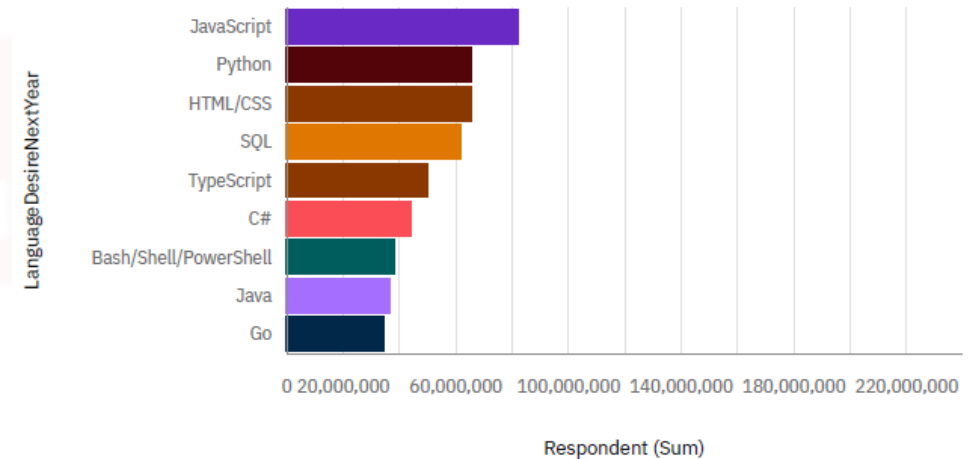
RESULTS

PROGRAMMING LANGUAGE TRENDS

Current Year

Next Year

Top 10 Languages

Top 10 LanguageDesireNextYear

PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- The most popular language to use and want to utilize is JavaScript.
- The need for Python is growing rapidly.
- The respondents' enthusiasm for Shell and Bash programming is waning.
- Web languages are at the top because the web is such a significant part of the computer industry.
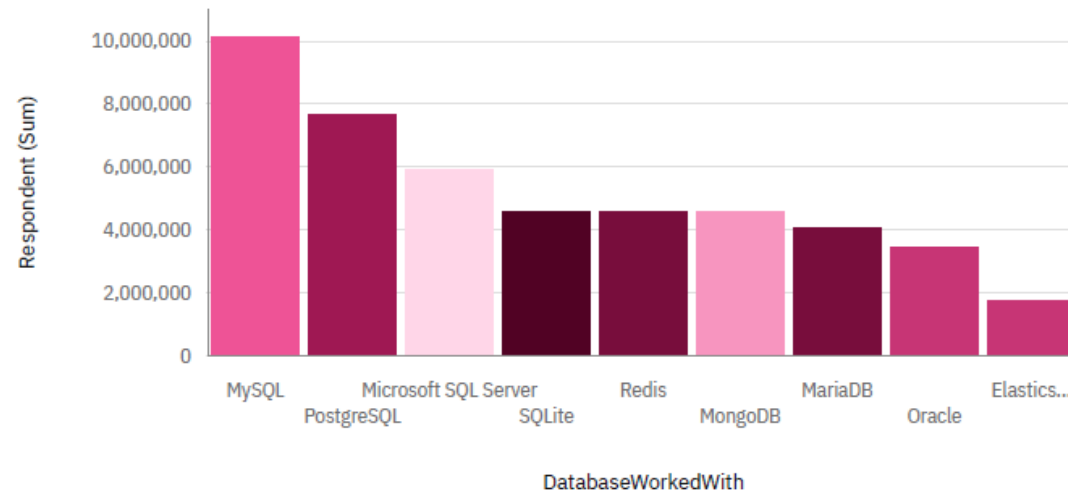
Implications

- Although JavaScript is constantly being improved and made simpler to use, one major drawback is that typing is still not supported. This could be the cause of the TypeScript rise.
- It's possible that PHP, Java, and C are becoming less popular since they're thought to be more outdated and need more work to use.
- In addition to having concise syntaxes and other features that make them easier to use languages like C, Go, and Kotlin also support typing.

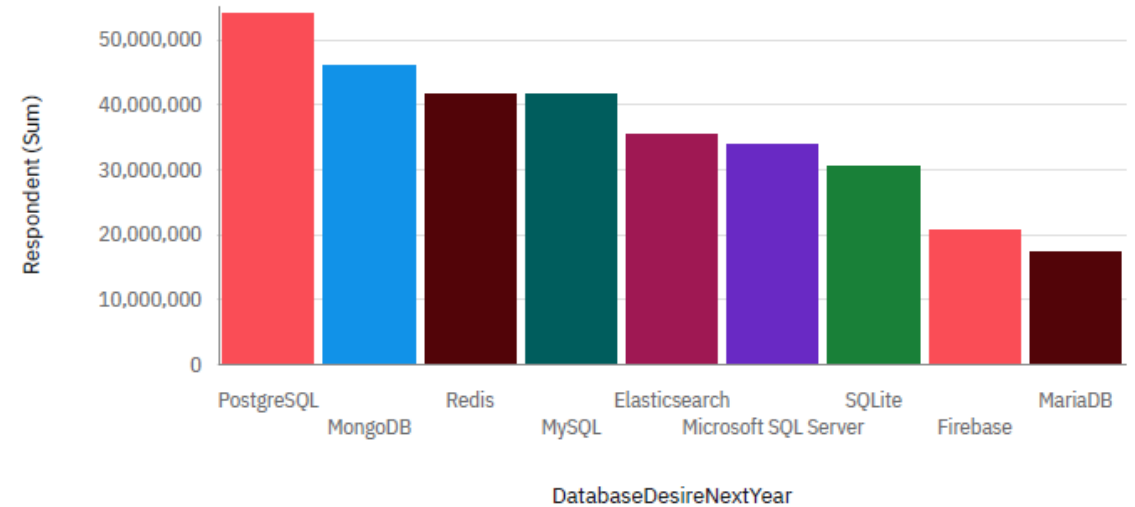**IBM Developer**

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DATABASE TRENDS

Current Year

Top 10 Databases

Next Year

Top 10 DatabaseDesireNextYear

DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- Interest in NoSQL (Non-Relational) databases, like MongoDB and DynamoDB, is growing.

- Even now, relational databases are widely used.

- Services like Firebase are becoming more and more popular.

- Demand for data stores like Redis is rising.

- Oracle is not among the ten most sought-after

- Developer enthusiasm for Microsoft SQL Server is waning

- PostgreSQL has a similar tendency to programming languages in that it is increasingly feature-rich and facilitates working with SQL.

Implications

- This indicates that simplicity and ease of use are crucial.

- The freedom that NoSQL offers with increasingly complicated data is tremendously enticing.

- PaaS tools are becoming more and more common, once more to make developers' lives easier.

- The rise of data repositories can be explained by the fact that data is becoming increasingly common and valuable to store

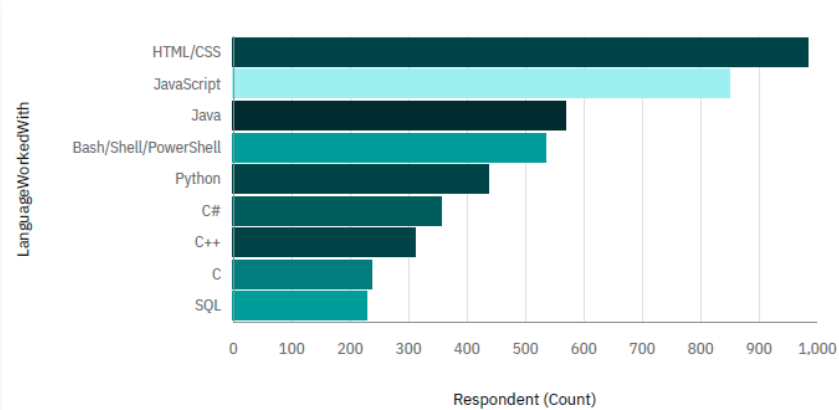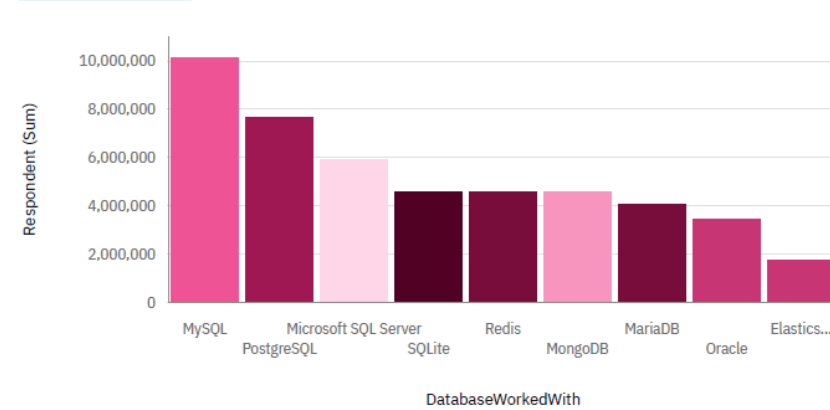IBM Developer   SKILLS NETWORK

DASHBOARD

https://github.com/SabahAlJanabi/IBM_data_analyst_capstone_Project

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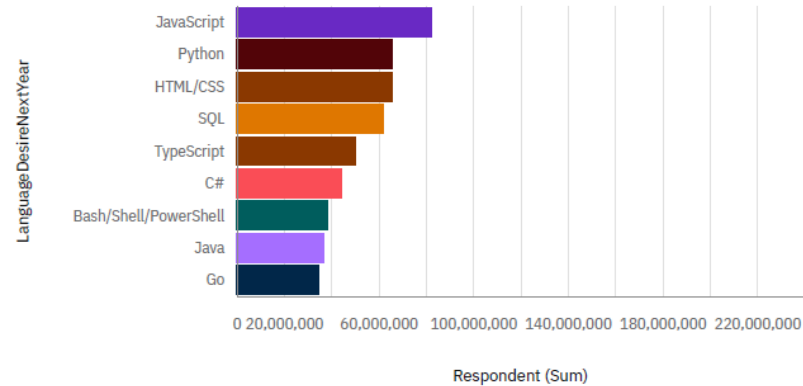
DASHBOARD TAB 1 CURRENT TECHNOLOGY USAGE
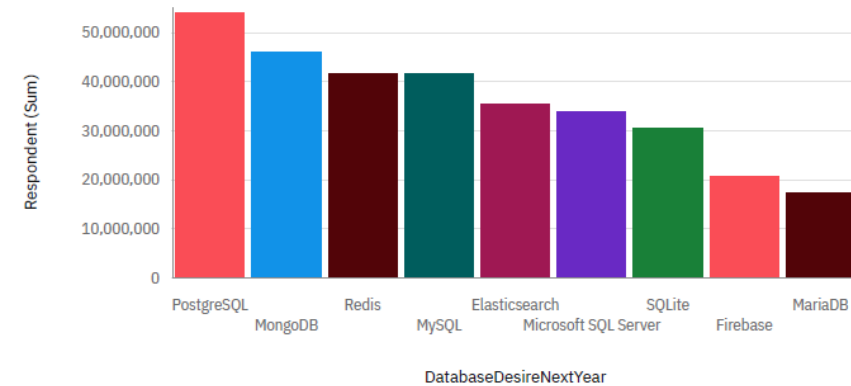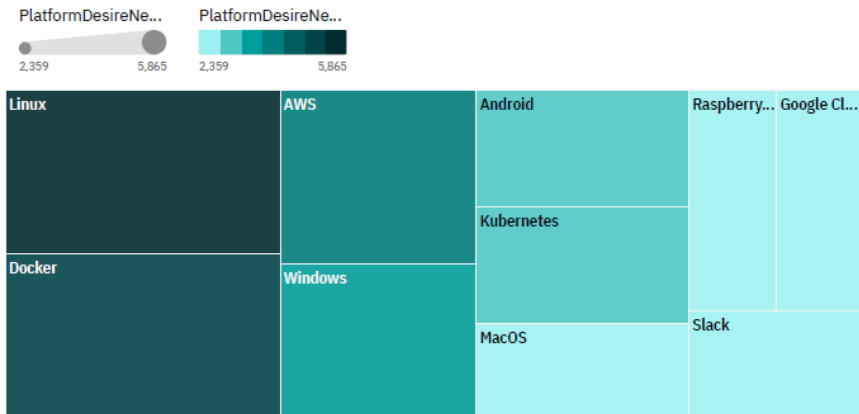

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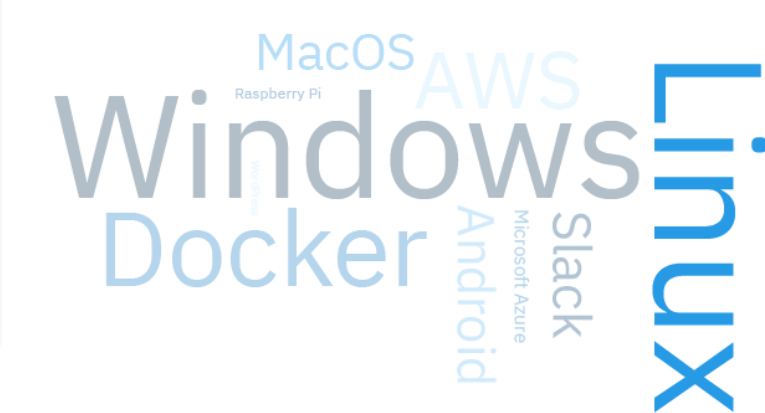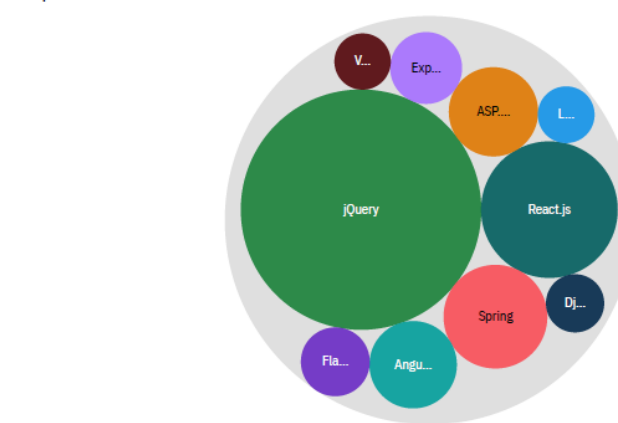
DASHBOARD TAB 2 FUTURE TECHNOLOGY TRENDS

Top 10 LanguageDesireNextYear

Top 10 DatabaseDesireNextYear

PlatformDesireNextYear

Top 10 WebFrameDesireNextYear

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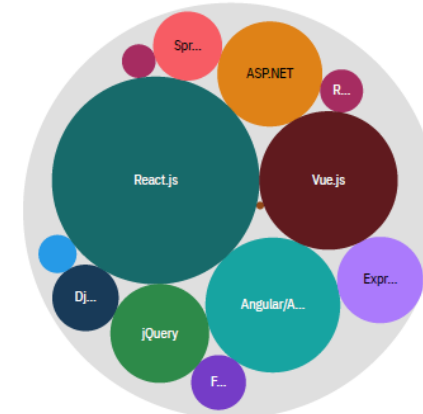
DASHBOARD TAB 3 DEMOGRAPHICS
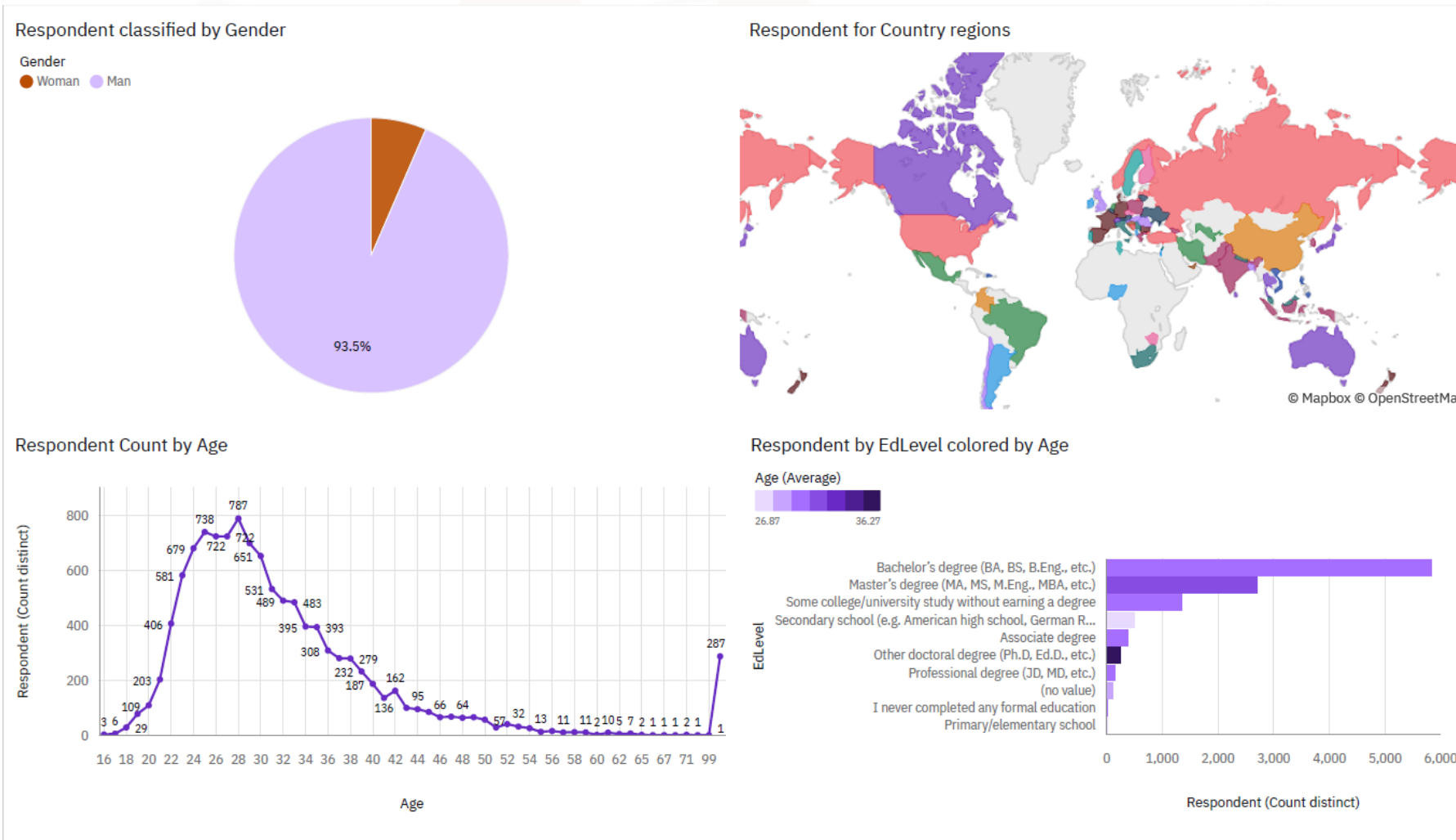
DISCUSSION

- The most crucial components of a job are the languages and technologies.

- Python offers some of the highest incomes and the most employment opportunities, which may account for the rise in interest.

- The younger age of the responders may account for their propensity to embrace more recent languages and technology.

- The survey's technologies are all based in English, which may be because most respondents are English speakers.

- Survey respondents who are men make up the majority.

- The majority of those surveyed were in the 22–32 age range.

- Employers may be persuaded to adopt certain technologies to attract talent, as developers tend to select positions according to the technologies utilized.

- Many responders are from English-speaking developed countries.

OVERALL FINDINGS & IMPLICATIONS

Overall Findings:

The survey reveals that the languages and technologies used in a job are critical factors influencing both employment opportunities and income potential.

Python, in particular, stands out as offering some of the highest incomes and most abundant opportunities, which explains its growing popularity.

The demographics of the survey respondents show a significant skew towards younger individuals, particularly those aged 22–32.

This younger cohort may be more inclined to adopt newer languages and technologies.

Additionally, the survey highlights a strong male majority among respondents and a high concentration of English-speaking participants from developed countries. These factors likely contribute to the predominance of English-based technologies in the survey results

Implications:

Employer Strategies: Employers may need to consider adopting or emphasizing certain languages and technologies, such as Python, to attract top talent. The alignment of a company's technological stack with popular languages can be a decisive factor for developers choosing their employment.

Targeted Recruitment: Given the demographic trends, companies might focus on targeting younger, tech-savvy candidates, particularly within the 22–32 age group. Gender diversity efforts may also be essential, considering the male-dominated respondent pool.

Globalization and Language: The reliance on English-based technologies suggests that English proficiency remains a vital skill in the global tech landscape.

Companies looking to expand their talent pool might consider offering resources and training in English to non-native speakers or exploring non-English technologies for a more diverse workforce.
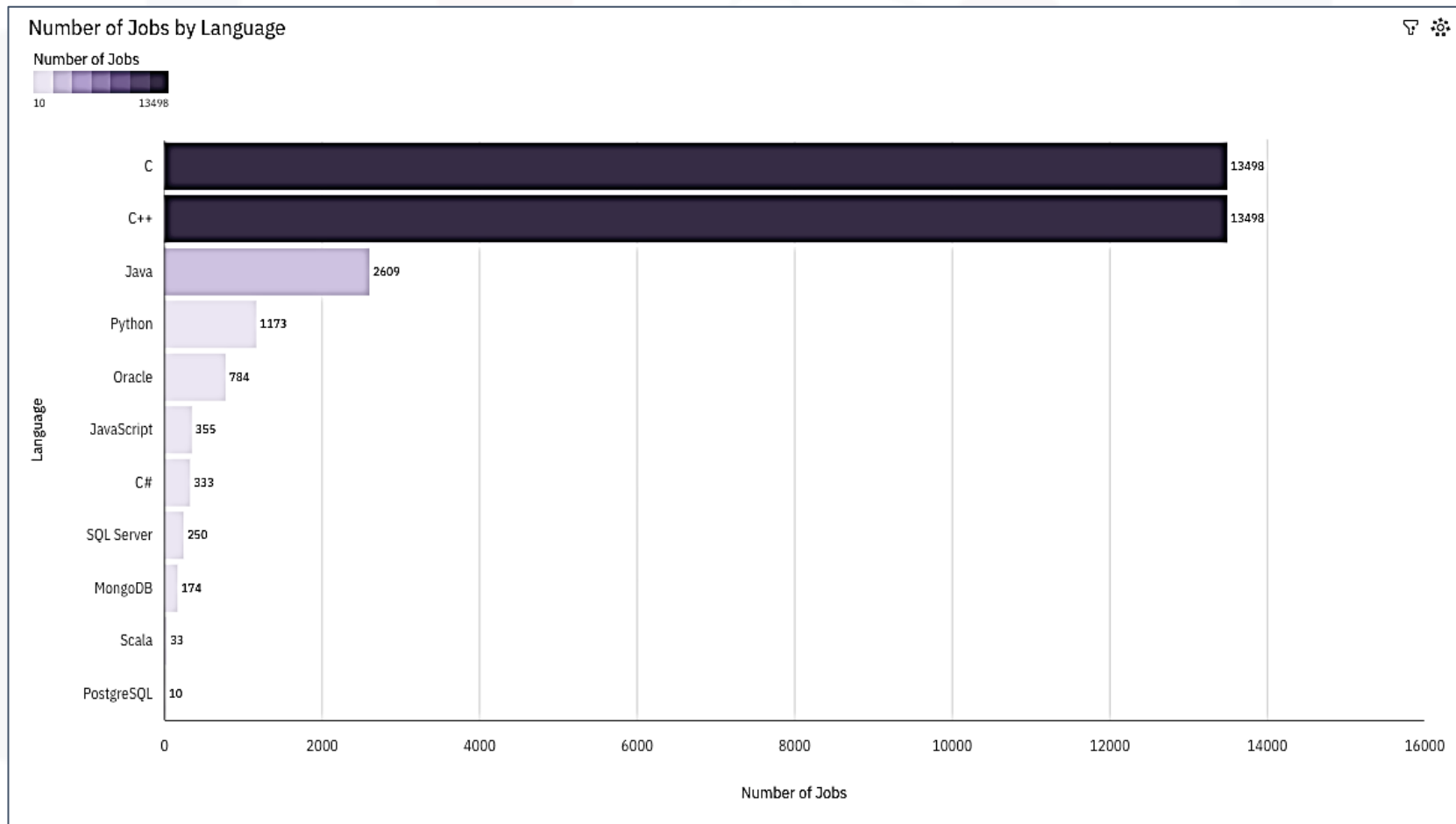
CONCLUSION

- THE EASY LANGUAGE IN TERMS OF SYNTAX.

- THE PREFERRED TOOLS ARE THE MOST EXPRESSIVE AND REACTIVE WHICH DEMAND MINIMAL OVERHEAD.

- LESS ERROR-PRONE TOOLS THAT CAN BE PERFORMED VIA TYPING.

APPENDIX

JOB POSTINGS

Number of Jobs by Language

Number of Jobs
10 ─ 13498

Language	Number of Jobs
C	13498
C++	13498
Java	2609
Python	1173
Oracle	784
JavaScript	355
C#	333
SQL Server	250
MongoDB	174
Scala	33
PostgreSQL	10

Number of Jobs

POPULAR LANGUAGES M1