Stack over flow Developer Survey Data Analysis

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OUTLINE

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EXECUTIVE SUMMARY

- Relevant skills required in the field of IT and business consulting are ever-changing and evolving

- It is important to identify future skill requirements and trends to keep peace with changing technologies and remain competitive.

- This presentation will show current and future trends in Programming Languages, Databases, Platforms and Webframes.

- Consequently, the aim in identifying future skill requirements and trends is to help the firm make more informed data-driven hiring and budgetary decisions.

INTRODUCTION

- This presentation has been crated for stakeholders and business decision makers within the global IT and business consulting services firm.

- The presentation will help identify future skill requirements in the global IT sector neccesarry for the firm to keep pace with changing technologies and reamain competitive.

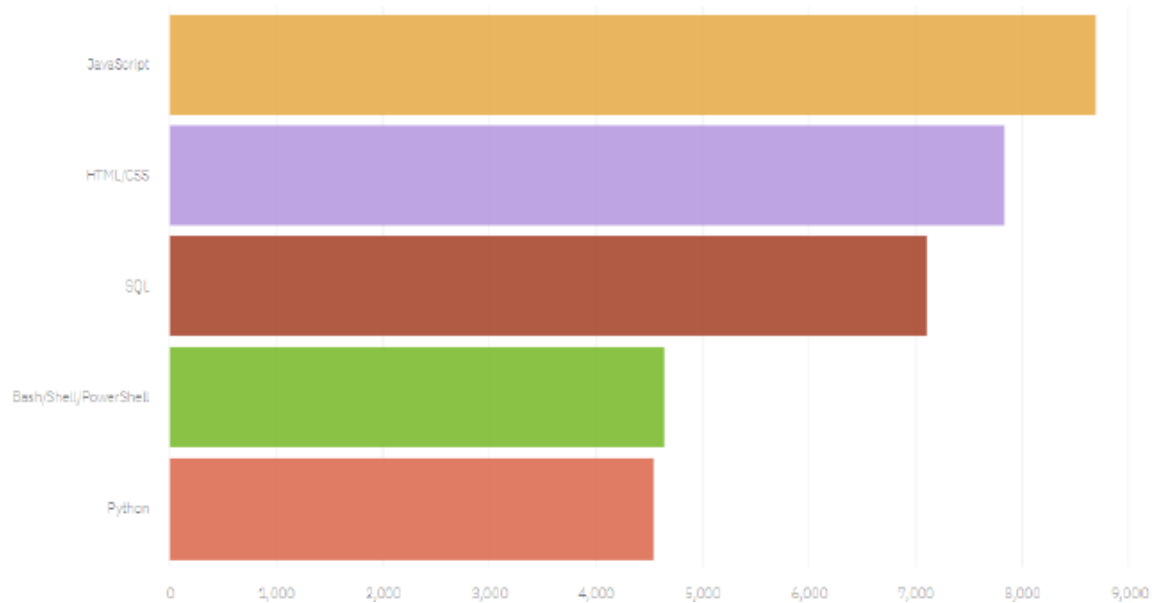- Recommendations will be stated based on the analysis.

METHODOLOGY
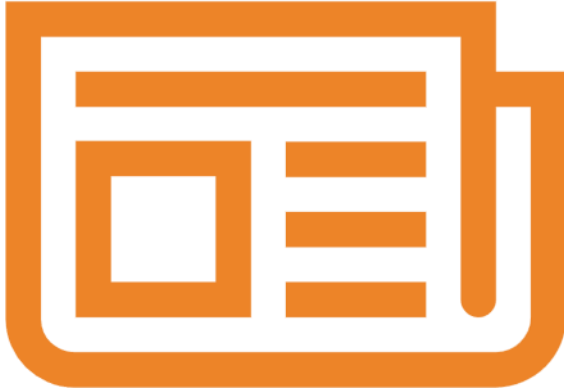
- Using a modified subset of the Stackoverflow dataset, the data was wrangled in order to remove duplicates, impute missing values and normalize data.
- Next, the data underwent exploratory analysis in order to find the distribution of data, presence of outliers and determine the correlation between different columns in the dataset.
- The data was then used to visualize the distribution, the relationship between two features and the composition and comparison of data.
- Finally after downloading two files, which are also a modified subset of the Stackowerflpw dataset, Cognos Dashboard Embedded(CDE) was used to create three slides:
  - Current Technology Usage
  - Future Technology Trends
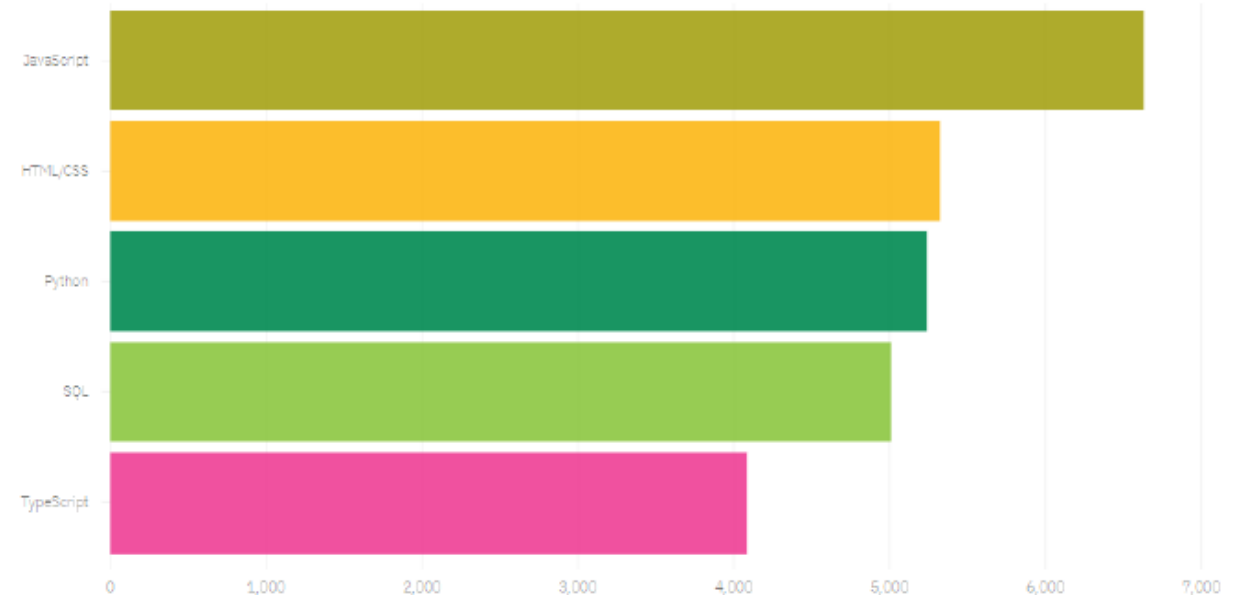 - Demographics

RESULTS

PROGRAMMING LANGUAGE TRENDS

Current Year

Next Year

PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript and HTML/CSS continue to be the top two most popular programming languages for this year and next.
- Python and TypeScript have gained more intereset for next year.
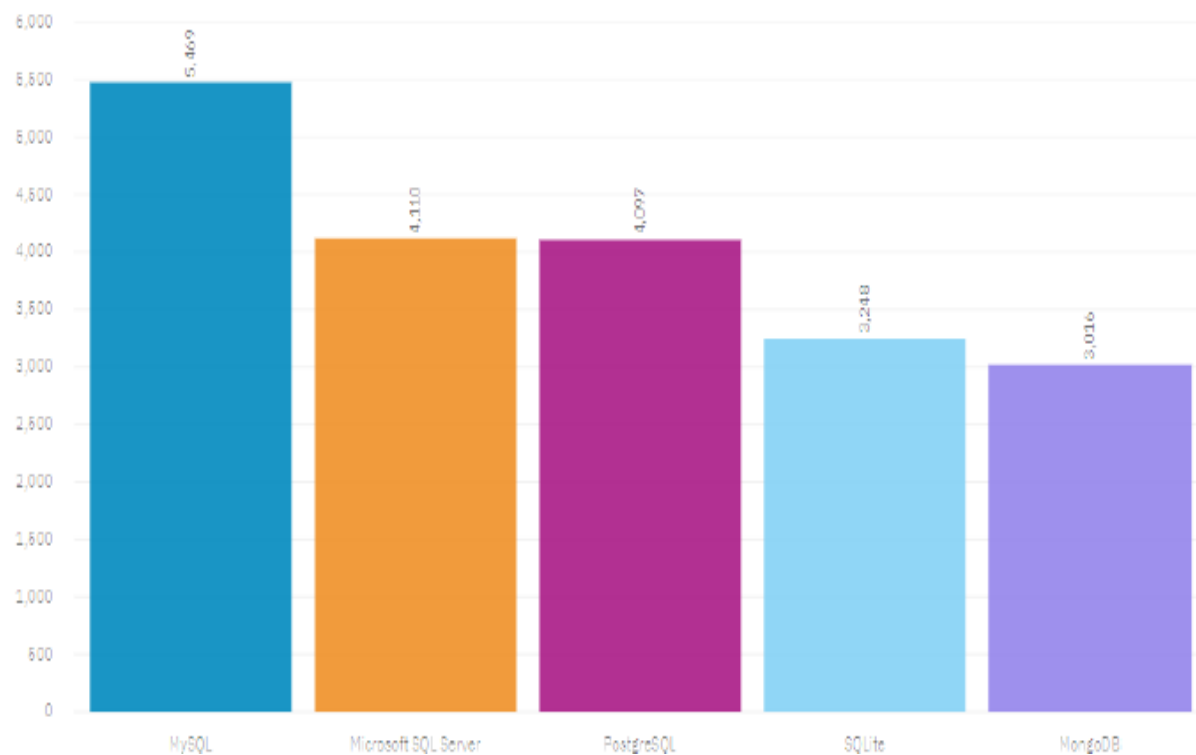- Whereas interest in SQL and Bash/Shell/Powershell has decreased.

Implications

- You can continue to employ a similar number of people skilled in JavaScript and HTML/CSS.
- You can employ more people skilled in Python and Typescript
- You can employ less people skilled in SQL and Bash/Shell/PowerShell.
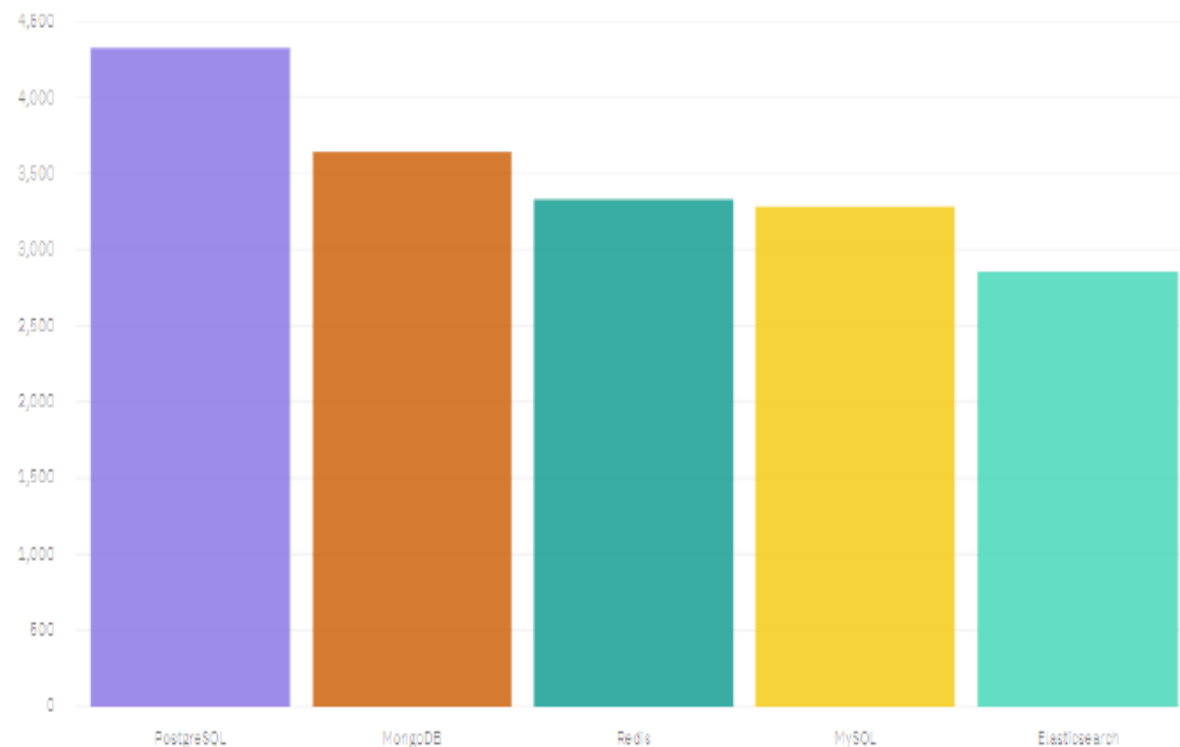
DATABASE TRENDS

Current Year

Next Year

Top 5 Database Worked With

Top 5 Database Desire Next Year

# DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- Interest in MySQL, Microsoft SQL Server and SQLite has decreased for next year.

- Interest in PostgreSQL and MongoDB have increased compared to the current year.

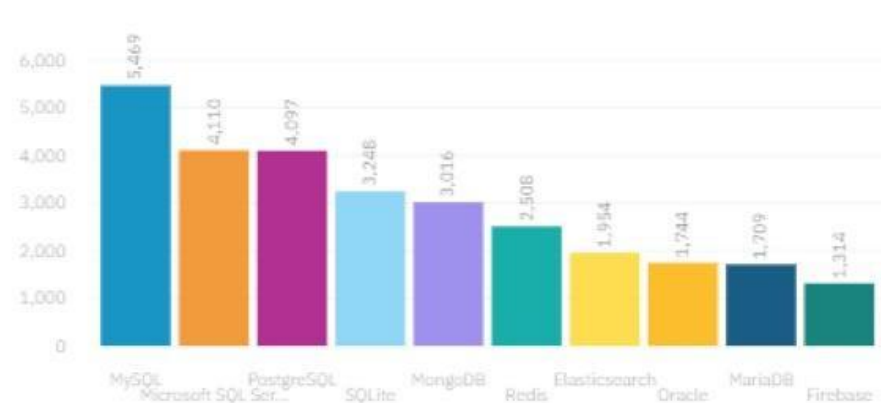- There is gained interest in Redis and Elasticsearch for next year.

Implications

- You can employ less people skilled in MySQL, Microsoft SQL Server and SQLite.

- You can employ more people skilled in PostgreSQL and MongoDB.

- You can employ more people skilled in Redis and Elasticsearch.
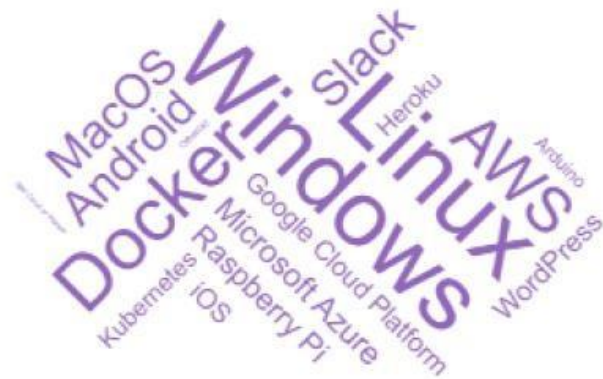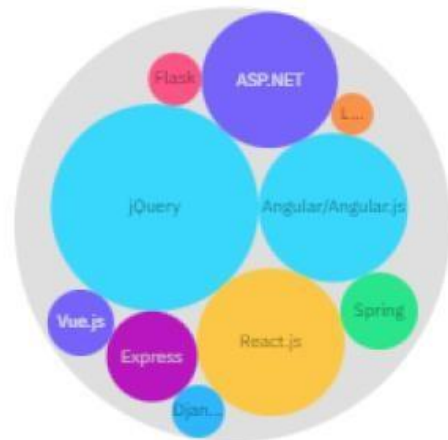
DASHBOARD TAB 1
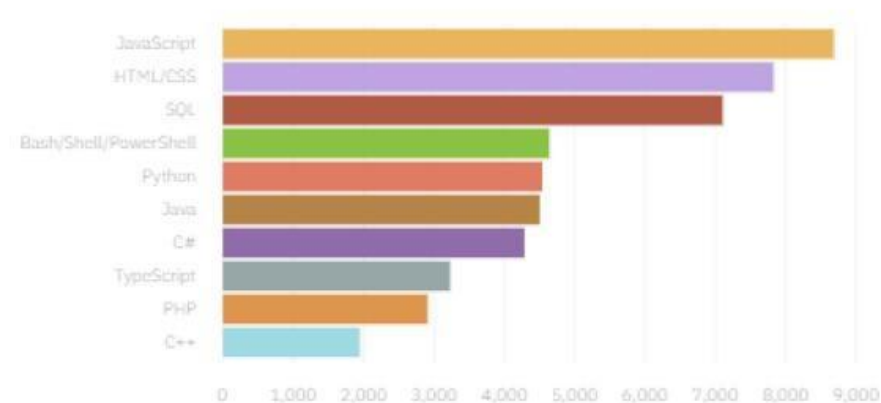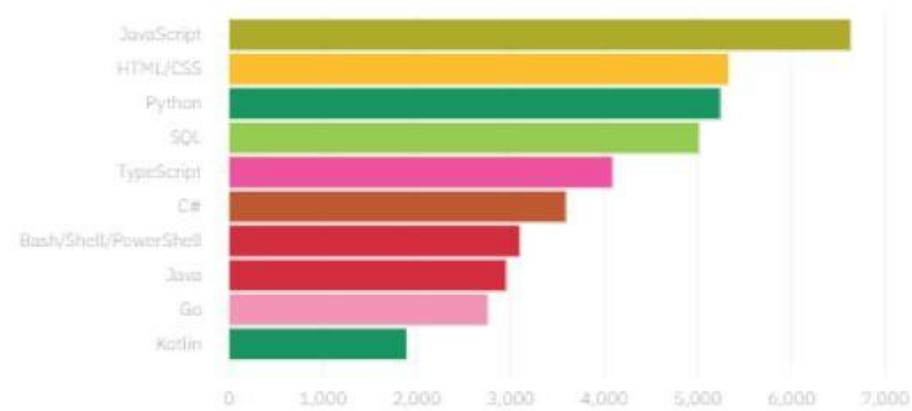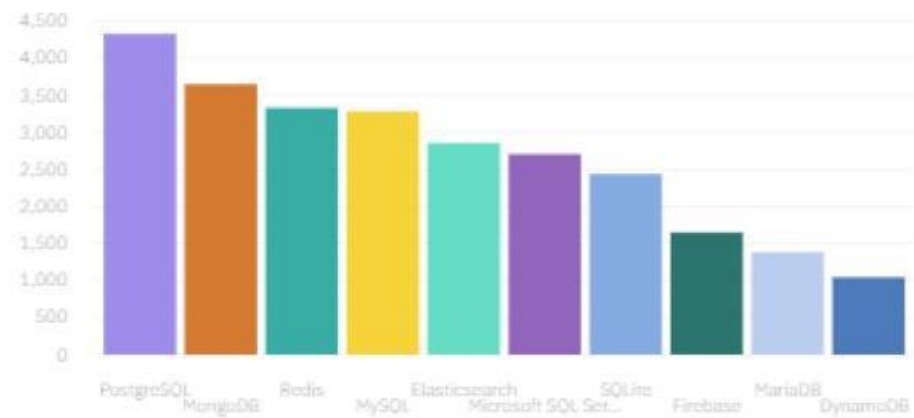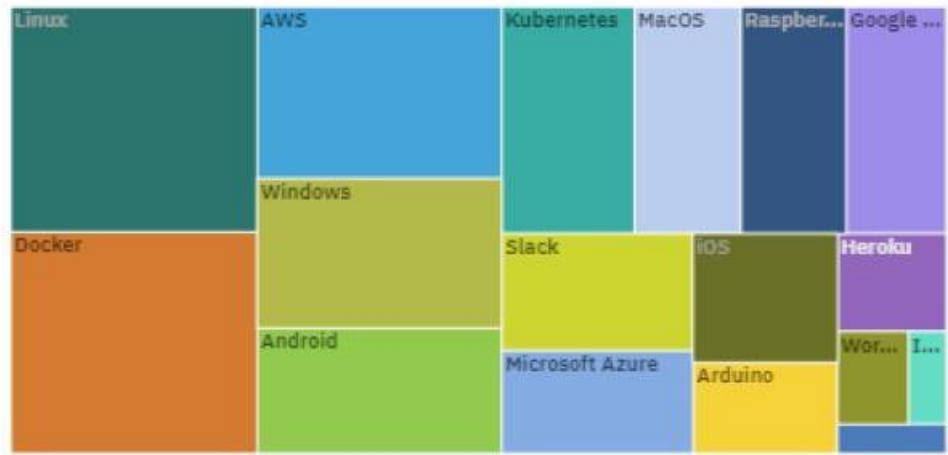
DASHBOARD TAB 2

Top 10 Language Desire Next Year

Top 10 Database Desire Next Year

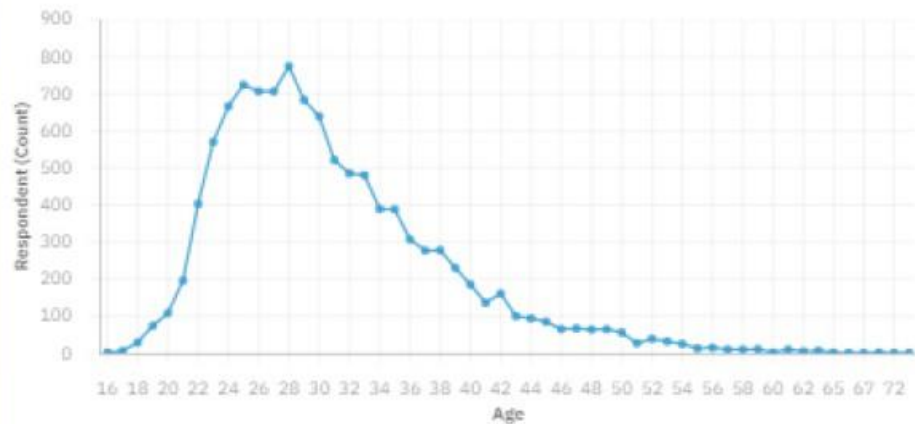### Platform Desire Next Year

Top 10 Web Frame Desire Next Year

DASHBOARD TAB 3
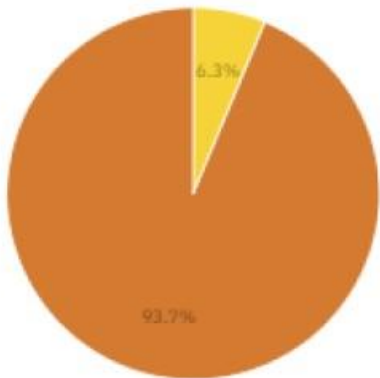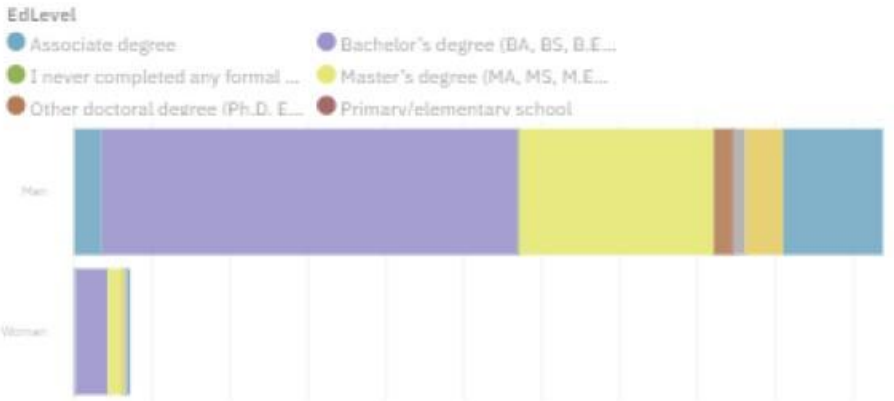
DISCUSSION

OVERALL FINDINGS & IMPLICATIONS

Findings

- More than 90 percent of those surveyed are men.
- The average age of the respondents is 30.
- Typescript is gaining significant interest and
- Python continues to grow as well.
- Redis, Elasticsearch, PostgreSQL and MongoDB are gaining more interest.
- Interest Slack and Windows is dropping significantly.
- Vue.js is gaining substantial interest and React.js continues to grow as well.

Implications

- The software space continues to be male-dominated.
- It still seems difficult to find highly experienced
- personnel in the field of development.
- You can continue to staff enough Javascript and HTML/CSS but employ more people skilled in Python and Typescript.
- You can employ more people skilled in PostgreSQL, MongoDB, Elasticsearch, and Redis.
- You can continue to staff enough ASP.NET but employ more people skilled in Vue.js and React.js.
- You can continue to staff enough Linux, employ more people skilled in Docker, AWS and Android, but make reductions to Slack and Windows.
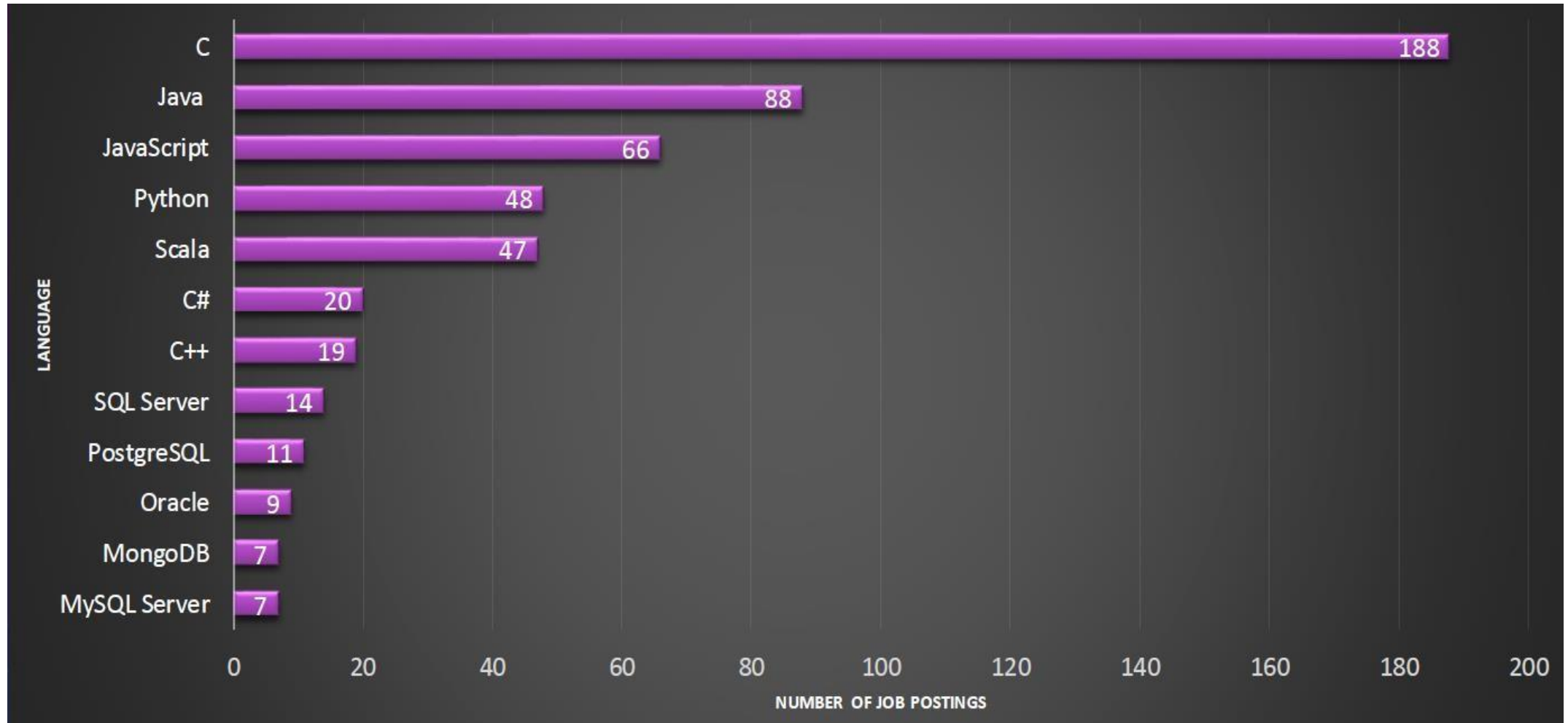
CONCLUSION

- You can make adjustmenst in staff for those skills no longer in demand.

- You can carve out budget in order to hire additional staff with skills needed to fill any gaps.

- You can set aside budget or put a program in place to upskill those already employed.

APPENDIX

JOB POSTINGS

POPULAR LANGUAGES

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