



Stack over flow Developer Survey Data Analysis

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OUTLINE

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- Discussion
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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 pace 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 created 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 necessary for the firm to keep pace with changing technologies and remain 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 Stackoverflow dataset, Cognos Dashboard Embedded(CDE) was used to

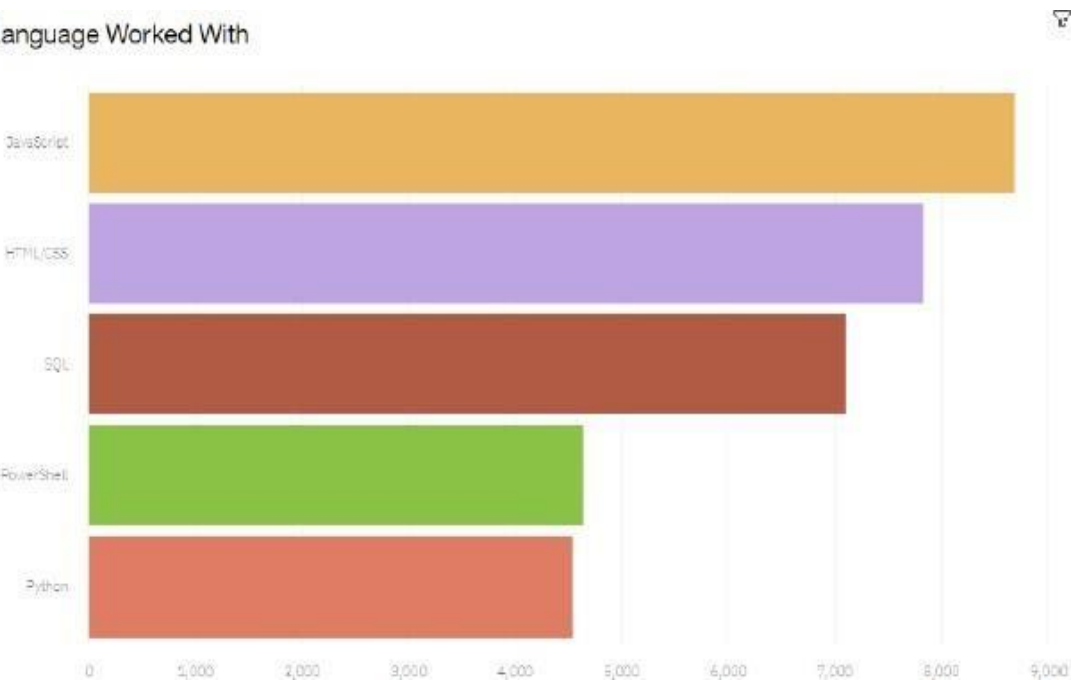
create three slides:

- Current Technology Usage
- Future Technology Trends
- Demographics

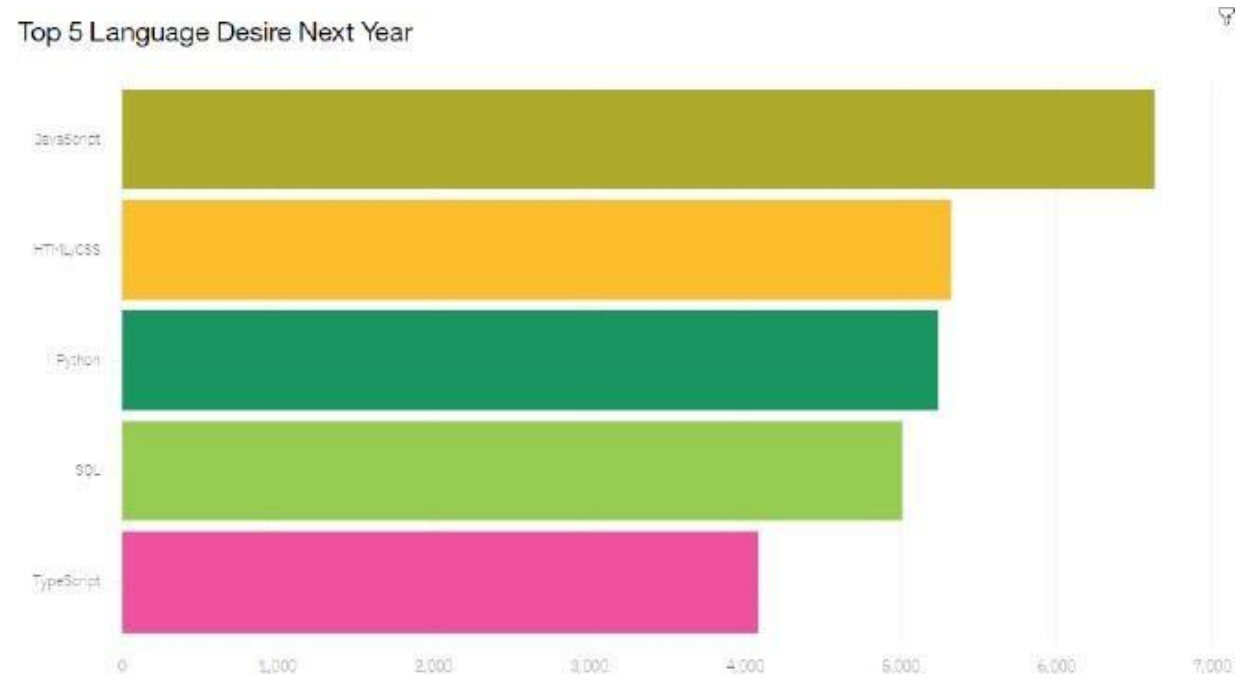
RESULTS

PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript and HTML/CSS • You can continue to employ a continue to be the top two most similar number of people skilled popular programming languages in JavaScript and HTML/CSS. for this year and next. • You can employ more people

- Python and TypeScript have skilled in Python and Typescript gained year.

more interest for next • You can employ less people skilled in SQL and

- Whereas interest in SQL and Bash/Shell/PowerShell.

Implications

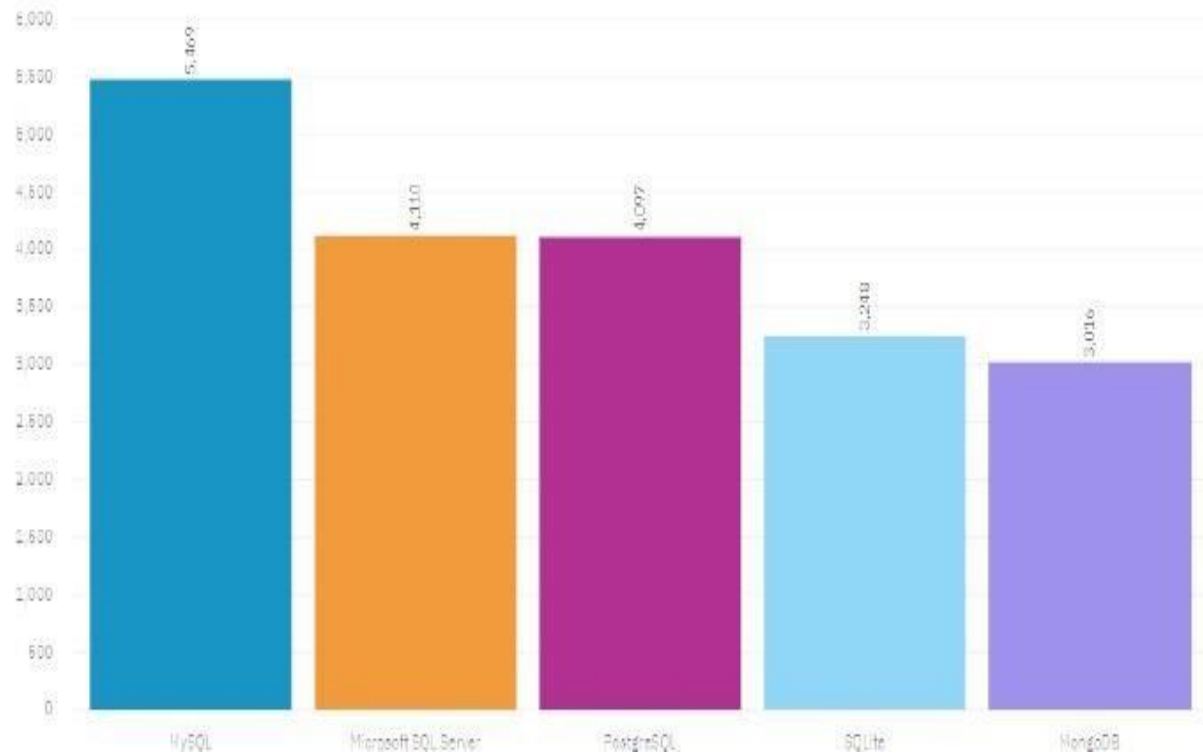
Bash/Shell/Powershell has decreased.

DATABASE TRENDS

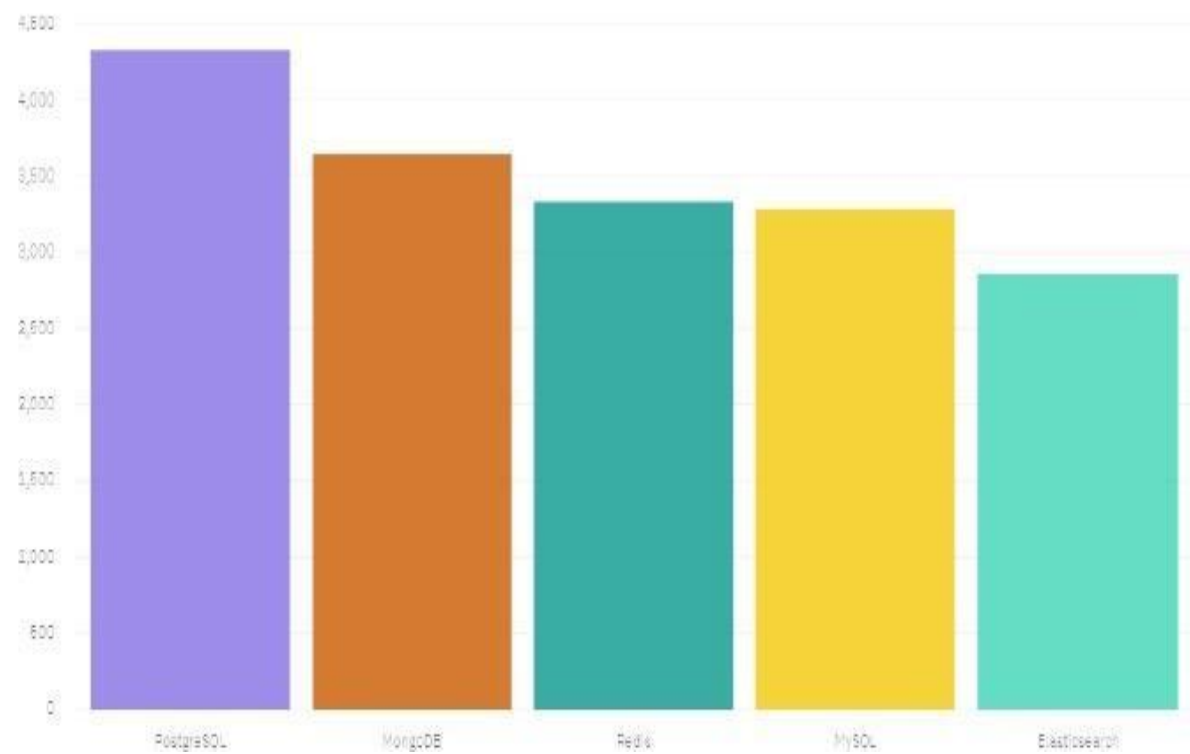
Current Year

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.

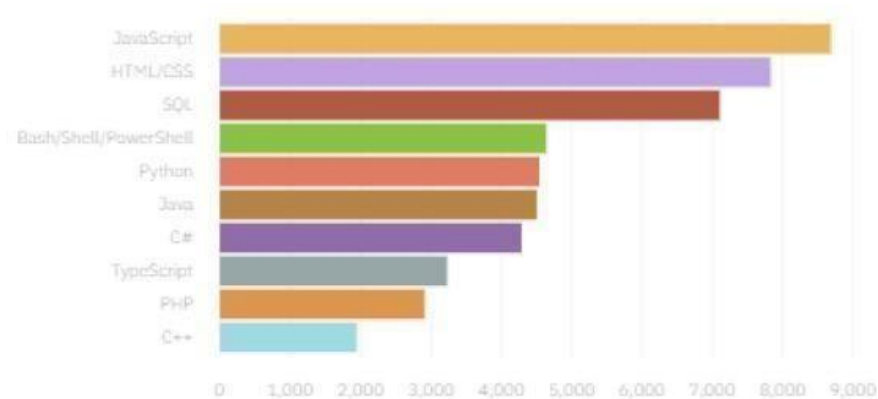
Implications

- There is gained interest in Redis and Elasticsearch for next year.
- You can employ less people skilled in MySQL, Microsoft SQL Server and SQLite.
- You can employ more people skilled in PostgreSQL and MongoDB.

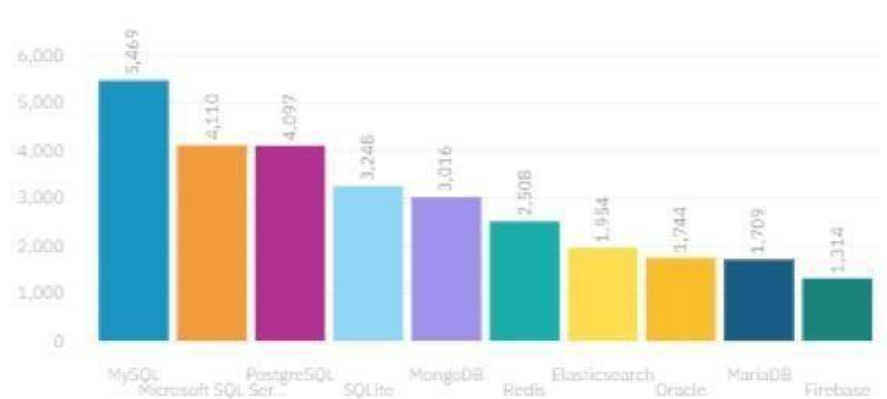
- You can employ more people skilled in Redis and Elasticsearch.

DASHBOARD TAB 1

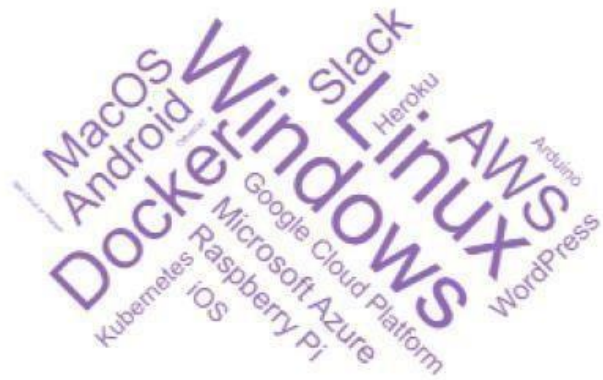
Top 10 Language Worked With



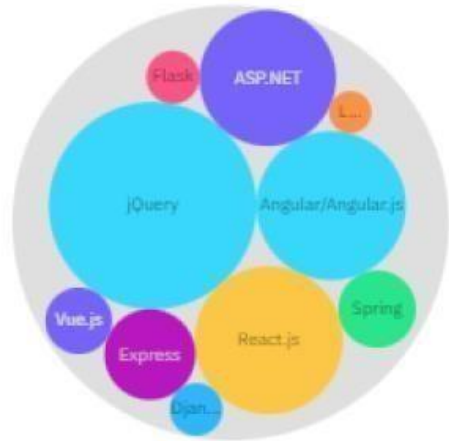
Top 10 Database Worked With



Platform Worked With

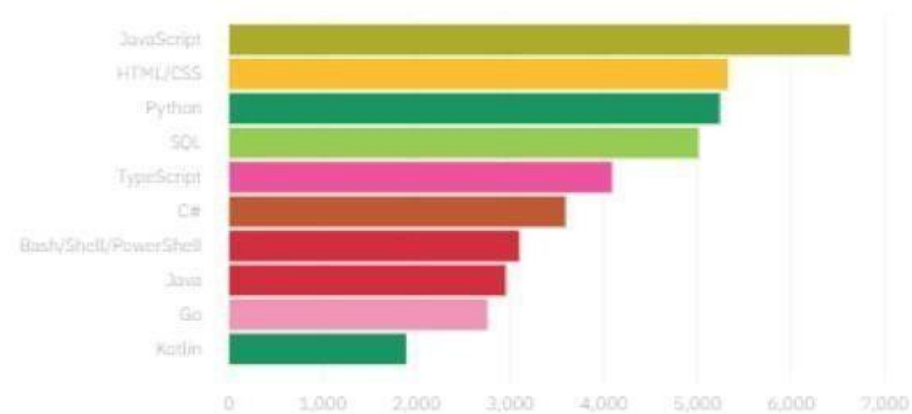


Top 10 Web Frame Worked With

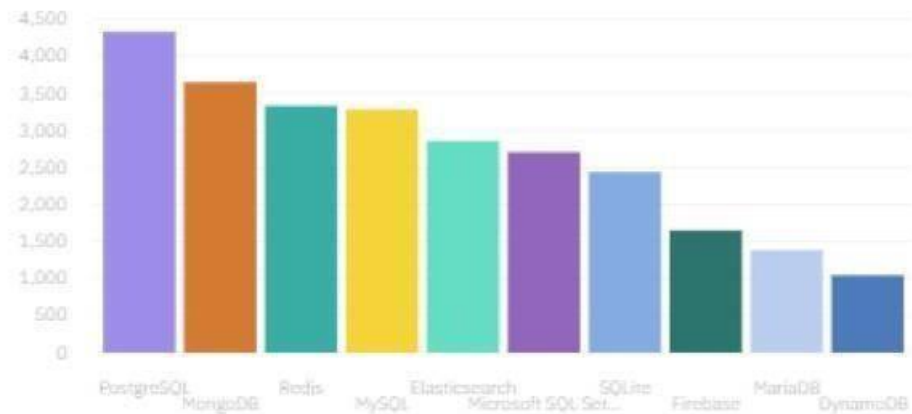


DASHBOARD TAB 2

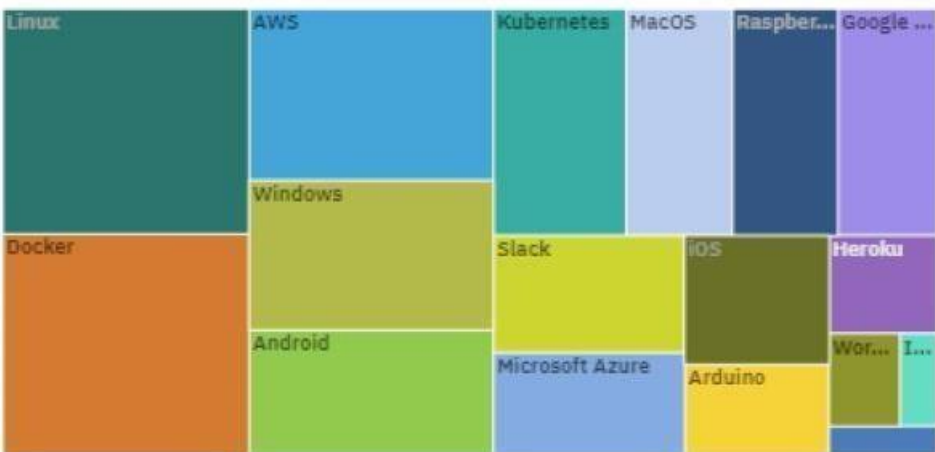
Top 10 Language Desire Next Year



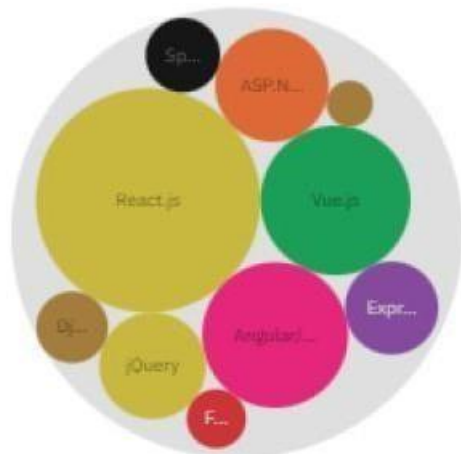
Top 10 Database Desire Next Year



Platform Desire Next Year



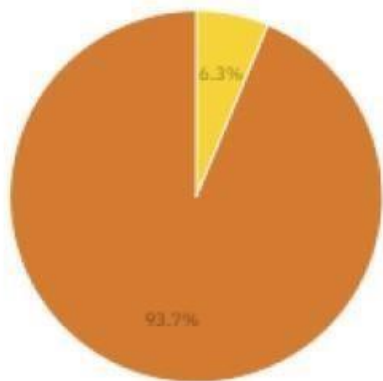
Top 10 Web Frame Desire Next Year



DASHBOARD TAB 3

Respondents by Gender

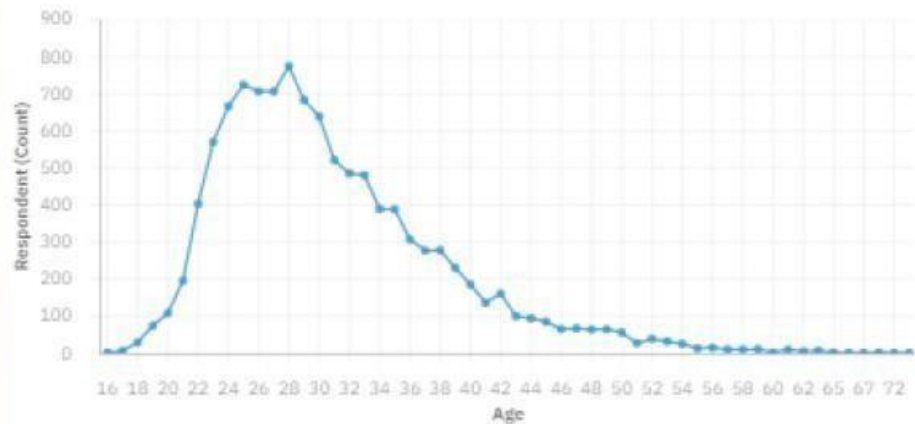
Gender
Woman Man



Respondents by Country



Respondents by Age



Respondent Count by Gender, classified by Formal Education Level

EdLevel
Associate degree Bachelor's degree (BA, BS, B.E...
I never completed any formal ... Master's degree (MA, MS, M.E...
Other doctoral degree (Ph.D. E... Primary/elementary school



DISCUSSION



& IMPLICATIONS

► Findings

- ◀ 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.

OVERALL FINDINGS

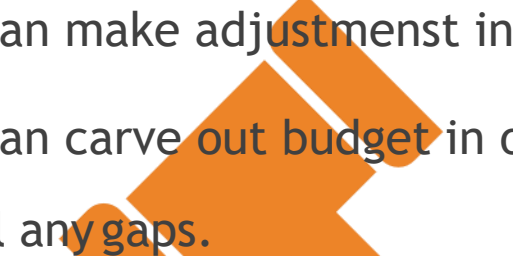
- ◀ More than 90 percent of those surveyed are men.
- ◀ Vue.js is gaining substantial interest and React.js continues to grow as well.

Implications

- ◀ The software space continues to be maledominated.
- ◀ 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 adjustments 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.
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- ← You can set aside budget or put a program in place to upskill those already employed.

APPENDIX



JOB POSTINGS



POPULAR LANGUAGES

