



STACK OVERFLOW DEVELOPER SKILL SURVEY 2019

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OUTLINE



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 - ▶ Visualization – Charts
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EXECUTIVE SUMMARY



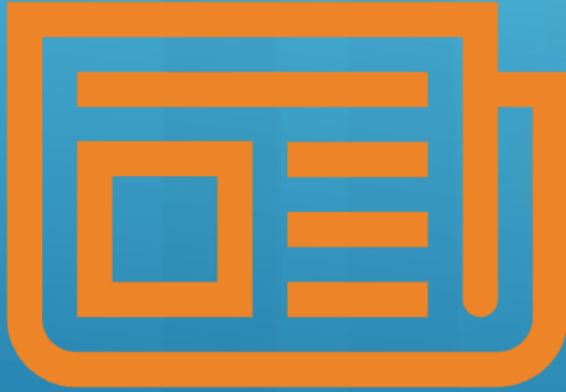
- ▶ The tech industry is a constantly evolving and dynamic field
- ▶ As a result, it is essential to identify the key skillsets and trends to keep up with the fast-paced changes.
- ▶ This study will cover both the present and future trends of programming languages, databases, and webframes
- ▶ The objective of this study is to identify future skill requirements and the help our firm make smarter hiring decisions.

INTRODUCTION



- This study has been conducted for all stakeholders within our global IT and business consulting organization
- This study will reveal future skill requirements in the tech sector which will allow our organization to remain competitive within the industry.
- This will be followed up by recommendations based on the study's results

METHODOLOGY

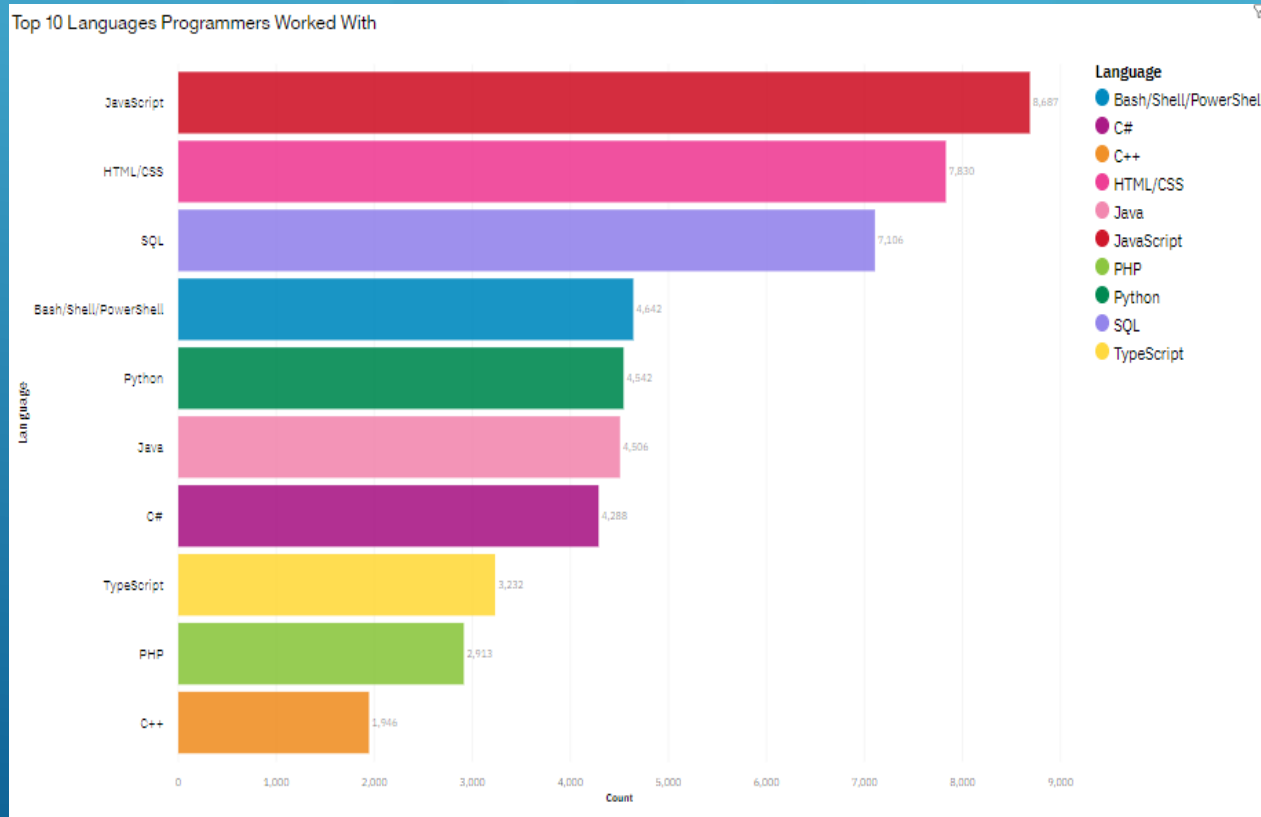


- ▶ A subset of a Stack Overflow Dataset was taken and wrangled in terms of duplicates removal, missing values imputation and data normalization
- ▶ Once wrangled, exploratory data analysis was conducted to outline the data's distribution, identify outliers and determine correlation between different variables in the dataset.
- ▶ Furthermore, SQL was used to extract additional data for visualization of the data's distribution, composition and relationships between two specific features.
- ▶ Lastly, two additional subsets of the Stack Overflow dataset were incorporated into Cognos Dashboard Embedded (CDE) to create Dashboards.
- ▶ Appendix
 - ▶ Web Scraping using Job API was used to extract Job Postings and Popular Languages from a website, which were then saved to csv files

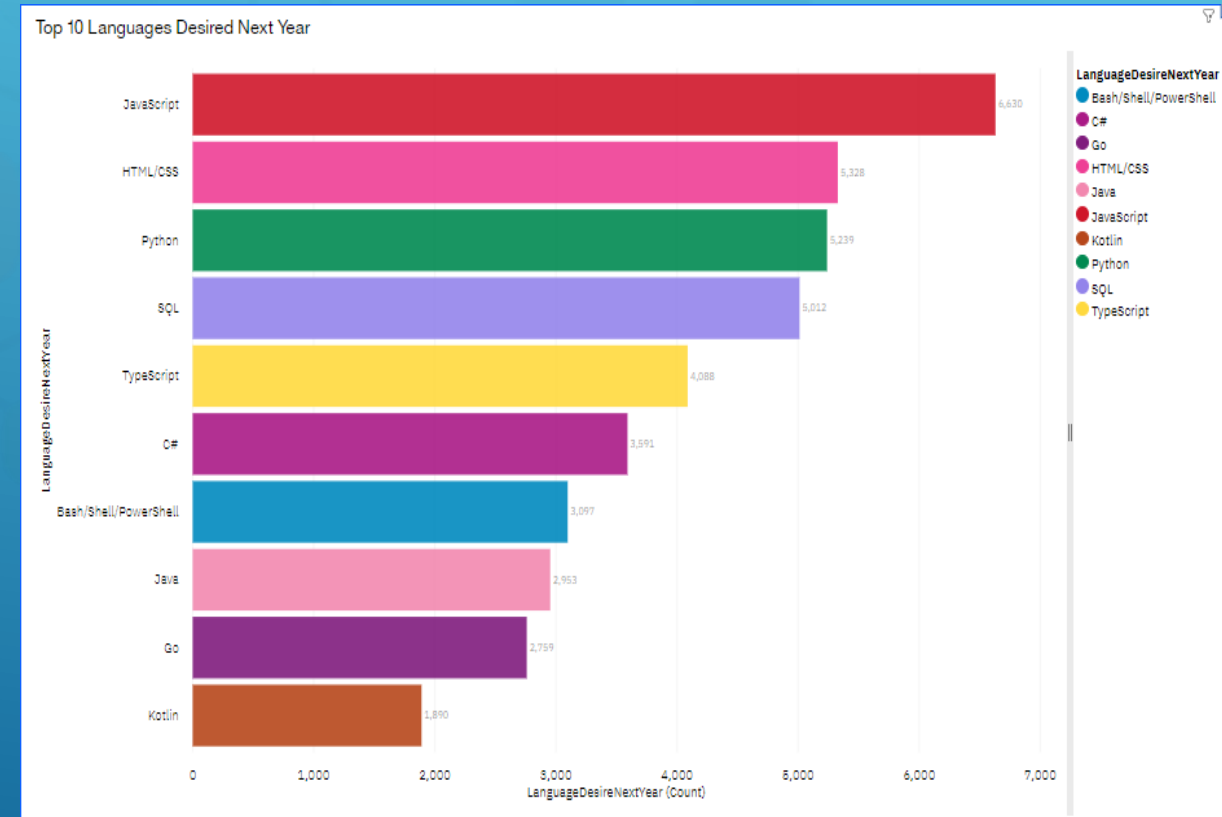
RESULTS

PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- Javascript and HTML/CSS remain the dominant languages for these 2 years
- Interest for Python and Typescript have increased from the previous year
- Interest in Bash/Shell/PowerShell and SQL has diminished
- There is now negligible interest in C++

Implications

1

- Continue employing similar amount of programmers skilled in JavaScript and HTML/CSS

2

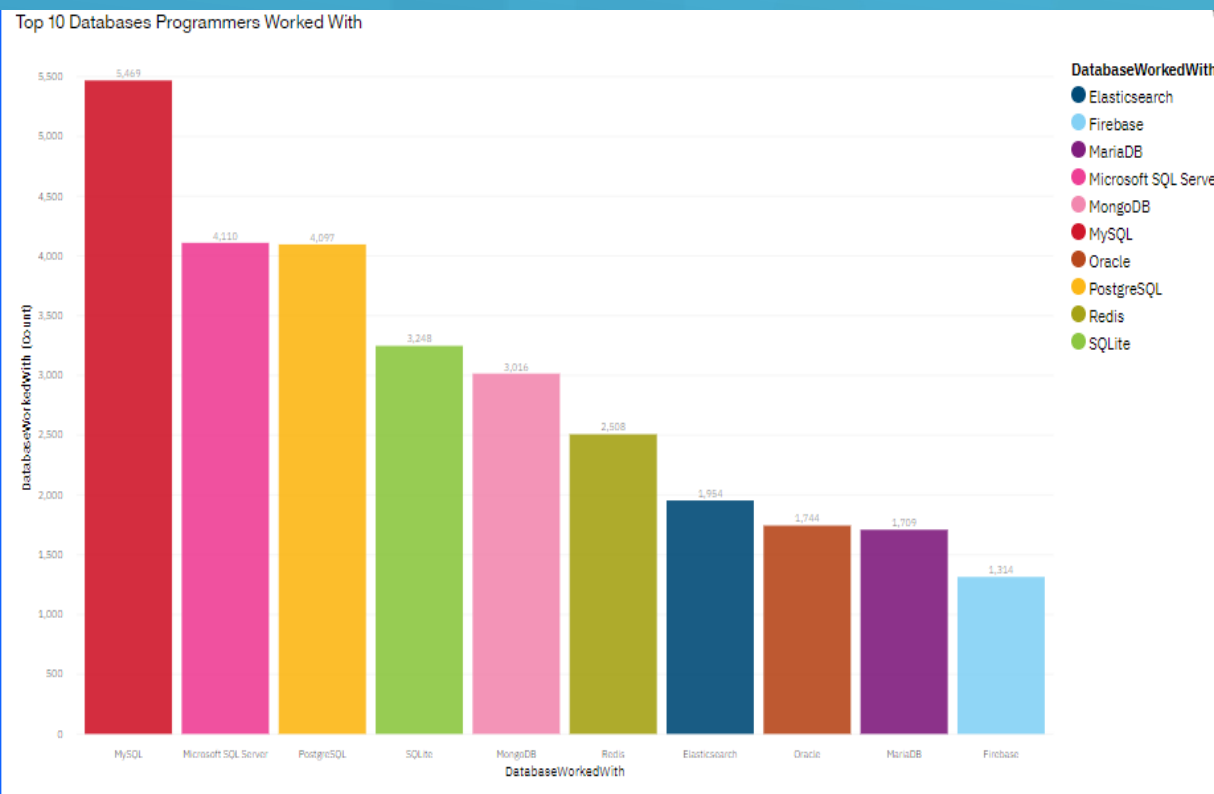
- Employ more programmers skilled in Python and TypeScript

3

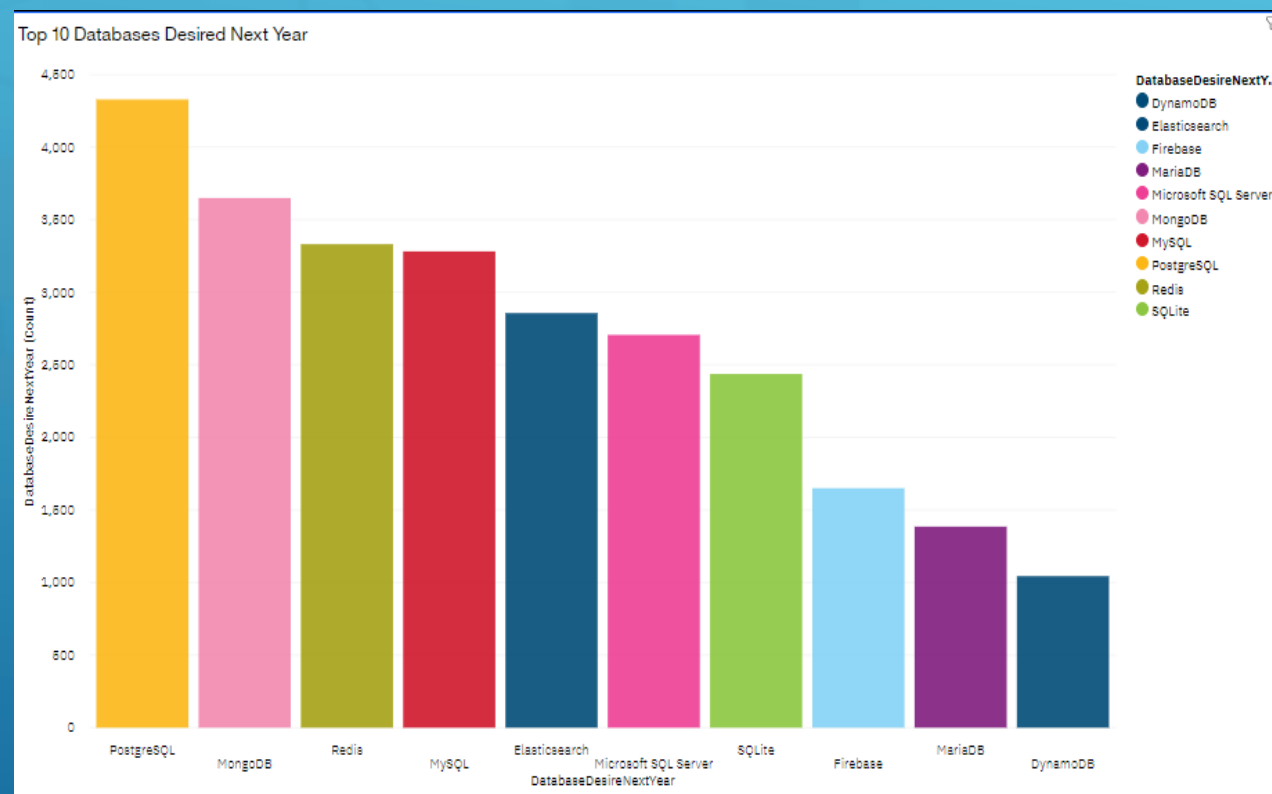
- Employ less programmers skilled in SQL and Bash/Shell/Powershell
- Stop all hiring for programmers skilled in C++

DATABASE TRENDS

Current Year



Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- There's increased interest in PostgreSQL and MongoDB
- Interest in MySQL, Microsoft SQL Server and SQLite has waned.
- Interest in Bash/Shell/PowerShell and SQL has diminished
- There is increased interest in Redis and Elasticsearch
- There is negligible interest in Oracle

Implications

1

- Employ more specialists skilled in MongoDB and PostgreSQL

2

- Employ less specialists skilled in MySQL, Microsoft SQL Server and SQLite
- Stop all hiring for programmers skilled in Oracle

3

- Employ more specialists skilled in Elasticsearch and Redis

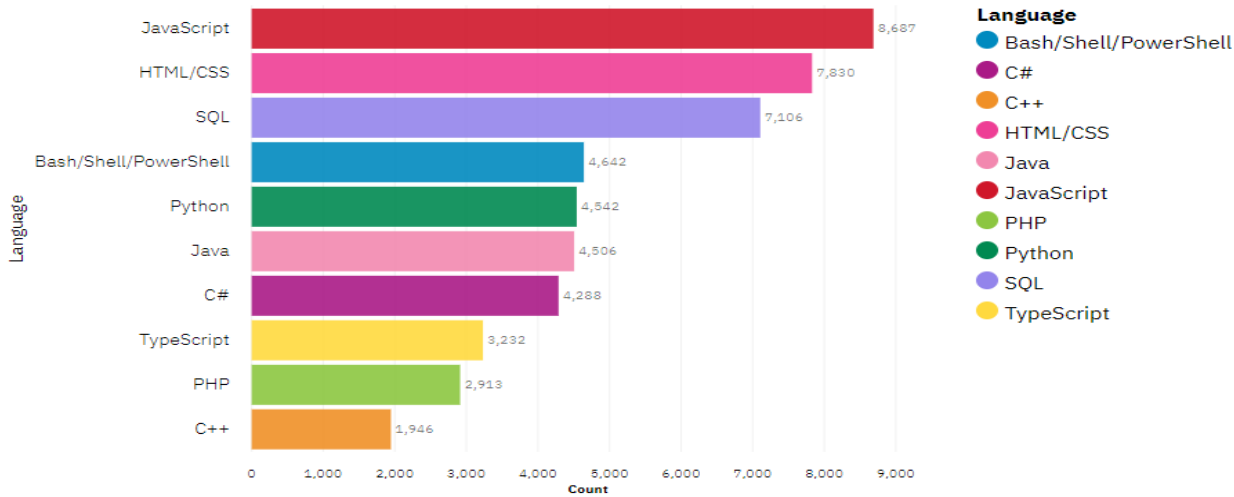
DASHBOARD



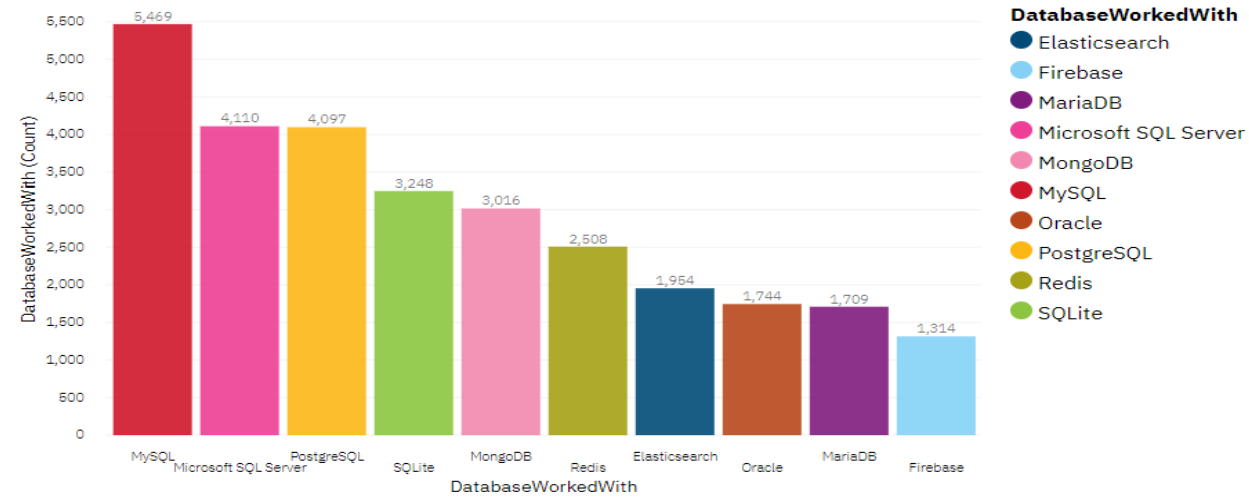
Click the following [link](#) to
access the Dashboard

DASHBOARD TAB 1

Top 10 Languages Programmers Worked With



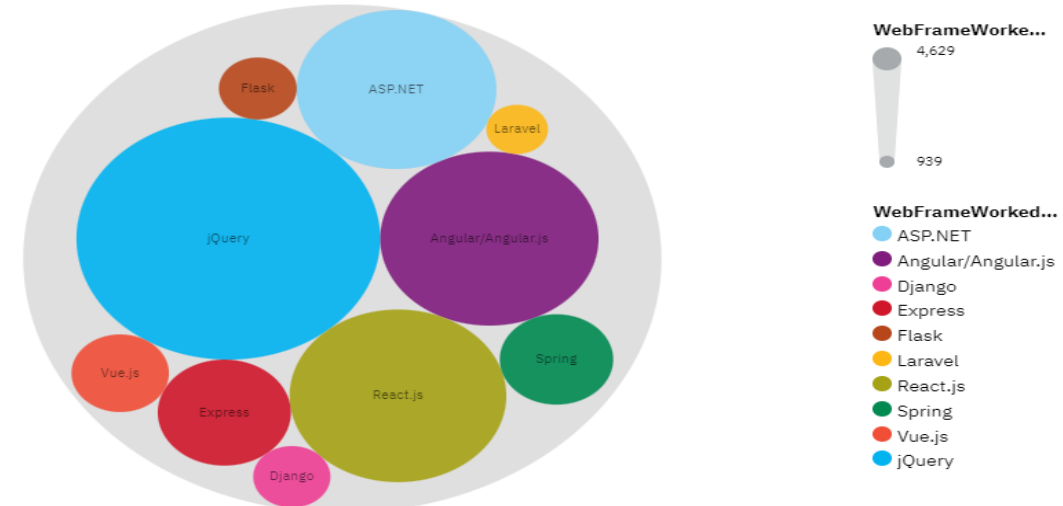
Top 10 Databases Programmers Worked With



Platforms Used by Programmers

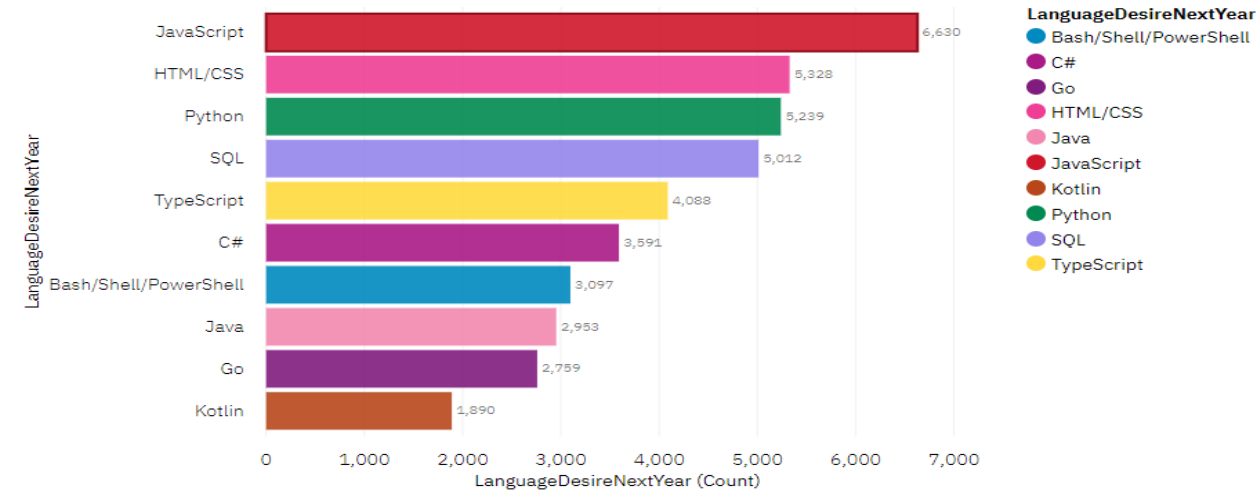


Top 10 WebFrames Programmers Worked With

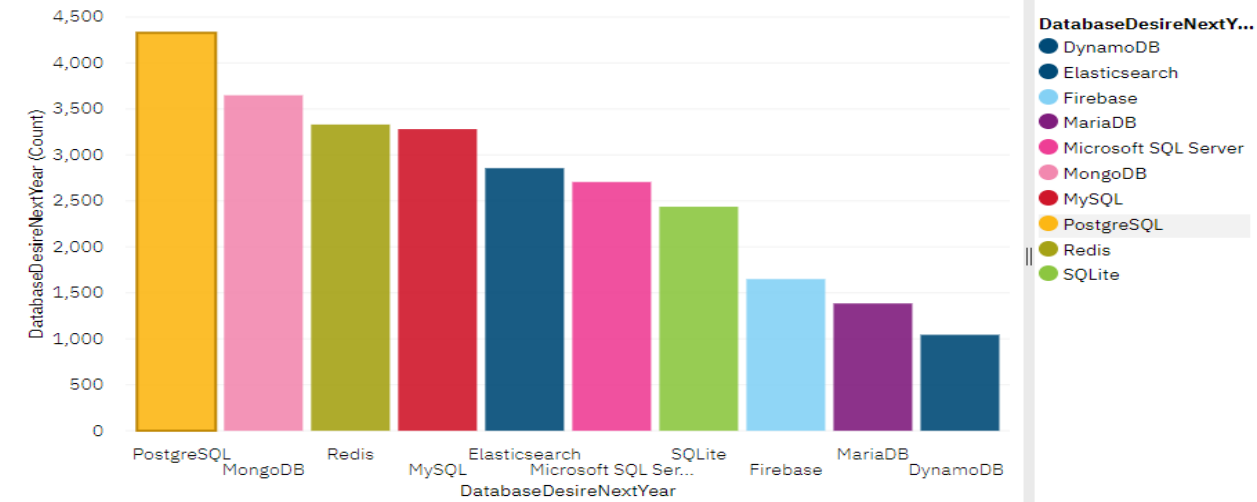


DASHBOARD TAB 2

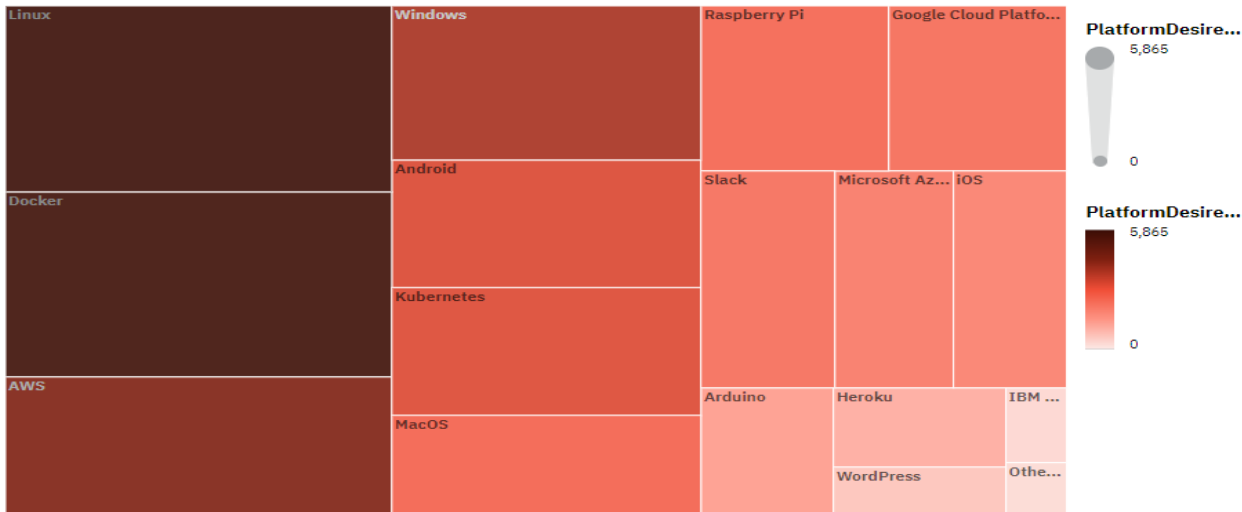
Top 10 Languages Desired Next Year



Top 10 Databases Desired Next Year



Platforms Desired Next Year

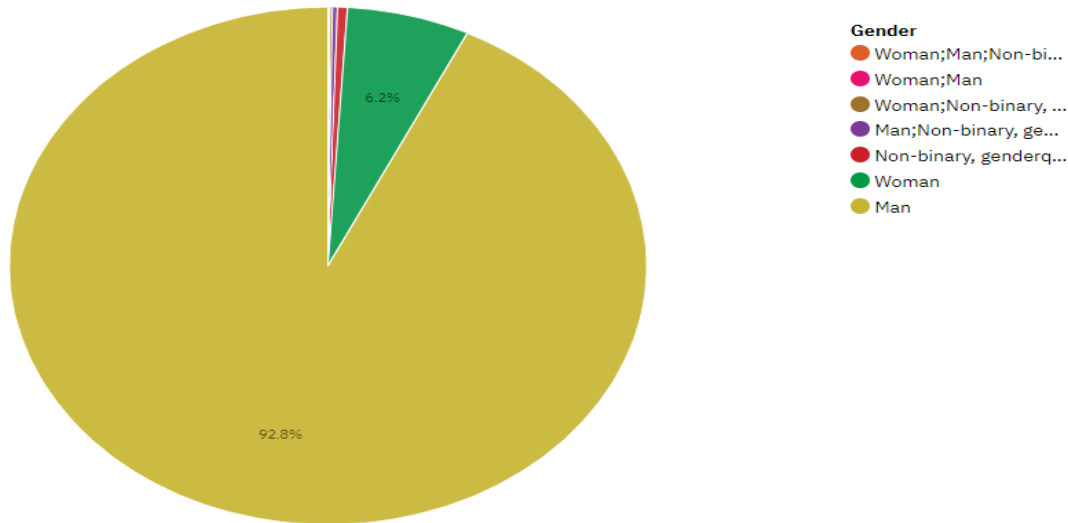


Top 10 WebFrames Desired Next Year

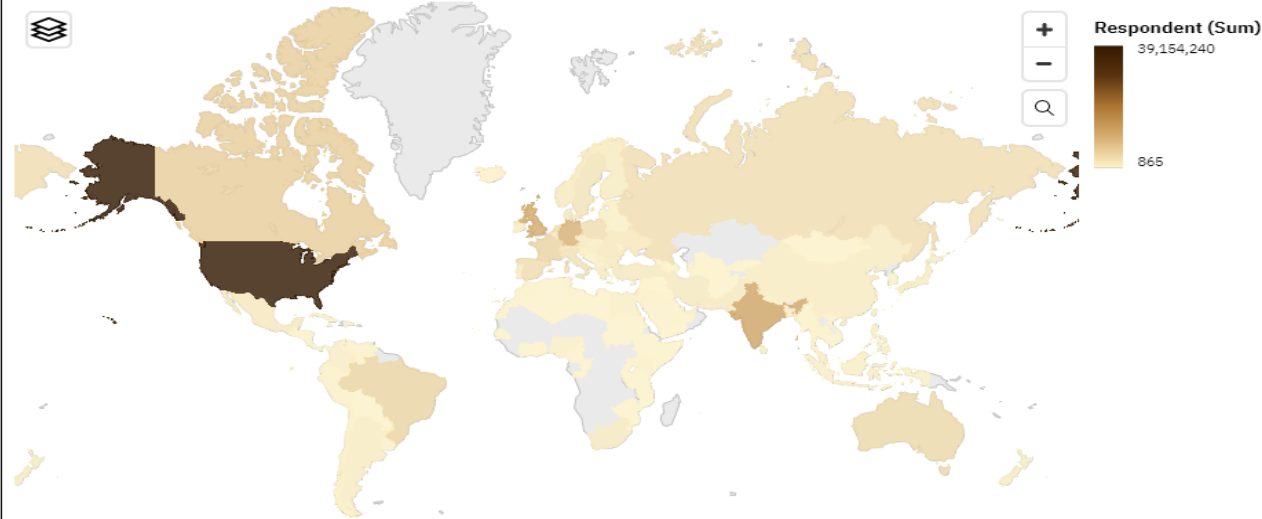


DASHBOARD TAB 3

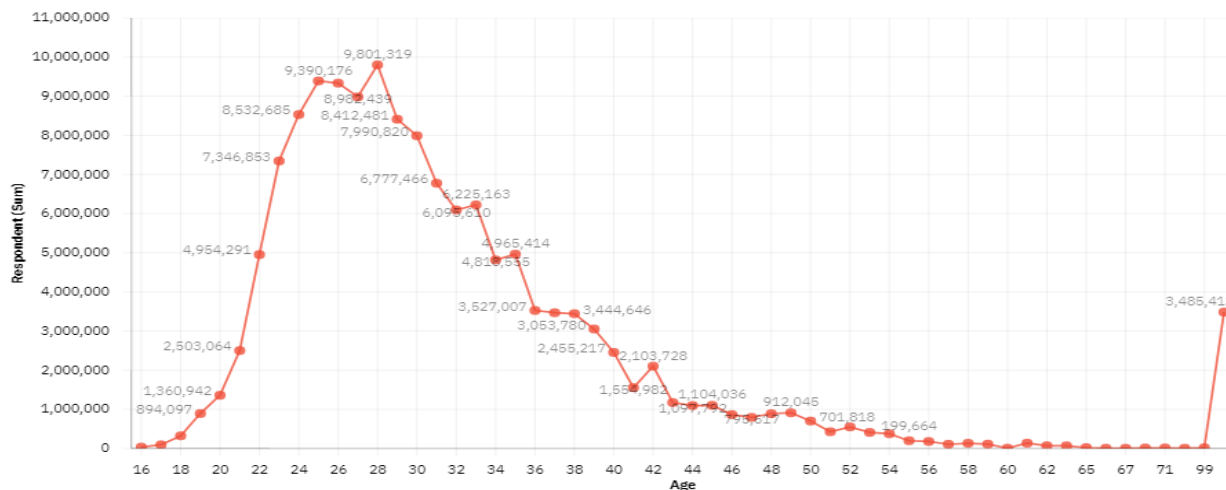
Survey Respondents Classified By Gender



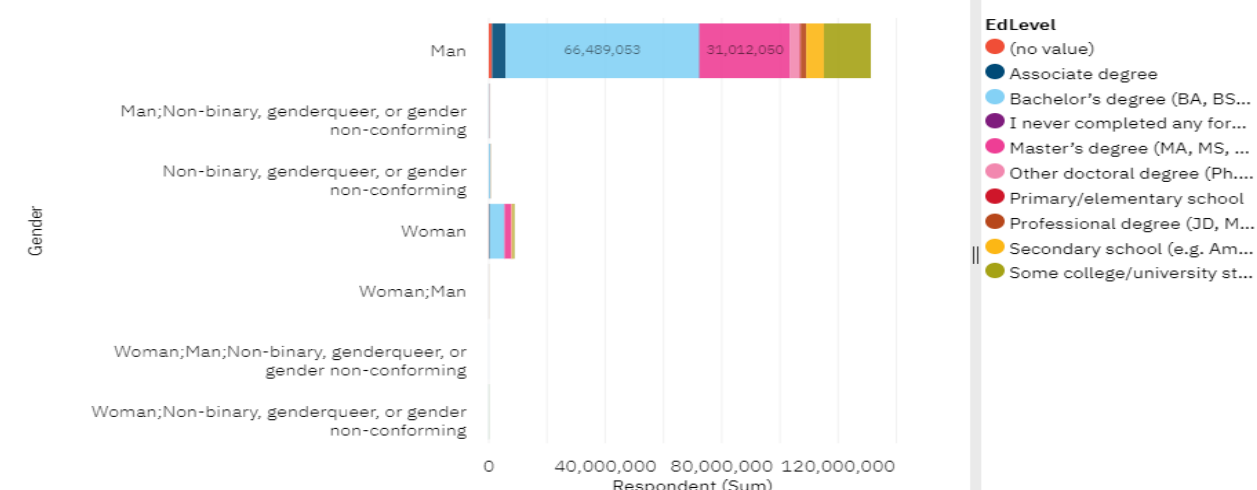
Survey Respondents By Country



Survey Respondents By Age



Survey Respondents by Gender Classified by Education Level



DISCUSSION



OVERALL FINDINGS & IMPLICATIONS

Findings

	<ul style="list-style-type: none">• <u>Programming Languages:</u><ul style="list-style-type: none">• Python and Typescript are garnering significant interest and growth• <u>Databases:</u><ul style="list-style-type: none">• PostgreSQL, MongoDB, Redis and Elasticsearch are all garnering additional interest• <u>Platforms:</u><ul style="list-style-type: none">• Linux, Docker and AWS are all growing in popularity• <u>WebFrames:</u><ul style="list-style-type: none">• React.js and Node.js are both garnering significant interest and growth• <u>Demographics:</u><ul style="list-style-type: none">• Majority of respondents (92%) identify as male, are in their 20s-30s, based in the United States and have an advanced degree (Bachelors/Masters)

Implications

1

- Continue staffing JavaScript and HTML/CSS specialists but need to recruit more Python and Typescript specialists.

2

- Employ more specialists skilled in PostgreSQL, MongoDB, Redis and Elasticsearch

3

- Continue staffing ASP.NET specialists but need to recruit more specialists in React.js and Node.js

4

- Continue staffing Windows specialists but need to recruit more Linux, Docker and AWS specialists

CONCLUSION



1

- Conduct budget allocation to hire additional staff to fill in any talent shortages

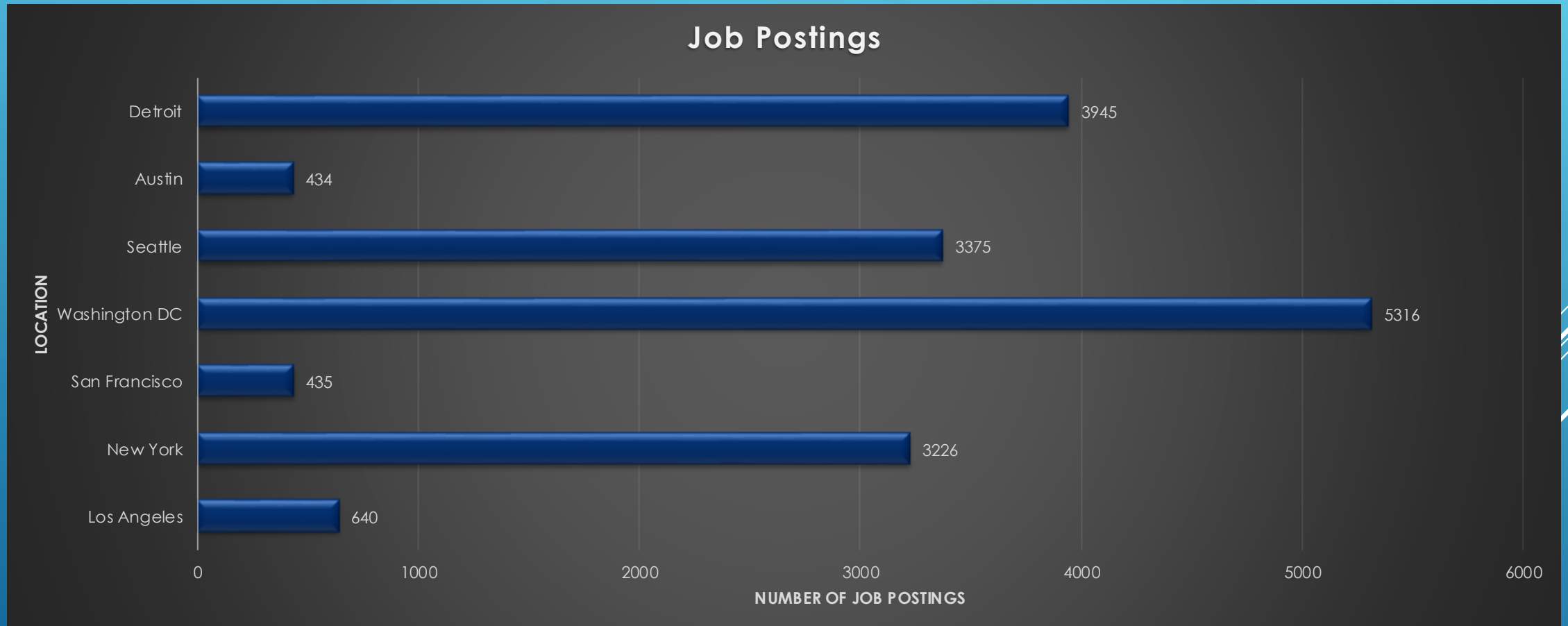
2

- Set aside resources and budget to upskill current employees and make adjustments for skills that are no longer in demand.



APPENDIX

JOB POSTINGS



POPULAR LANGUAGES

