



Technology Trends Analysis (Capstone Project)

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July, 2023

OUTLINE



- Executive Summary
- Introduction
- Methodology
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 - Dashboard
- Discussion
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EXECUTIVE SUMMARY



- Current Technology Usage and Future Technology Trend
- Demographics Survey
- Technological and Gender gap.
- Etc.

INTRODUCTION



- **About:**
 - Examine the latest developments in software and online design.
- **Purpose:**
 - Determine the skills needed for the future.
 - What are the widely used IDEs?
 - List the most in-demand programming languages, databases, platforms, and web frame expertise.
- **Audience:**
 - Educators.
 - Policymakers.
 - Human Resources experts.
 - IT industry leaders.
 - Programmers.
 - Etc.

METHODOLOGY



- Data Collection (Sources)
- Data Wrangling
- Data Exploration
- Data Cleaning
- Data Visualization
- Presentation

RESULTS

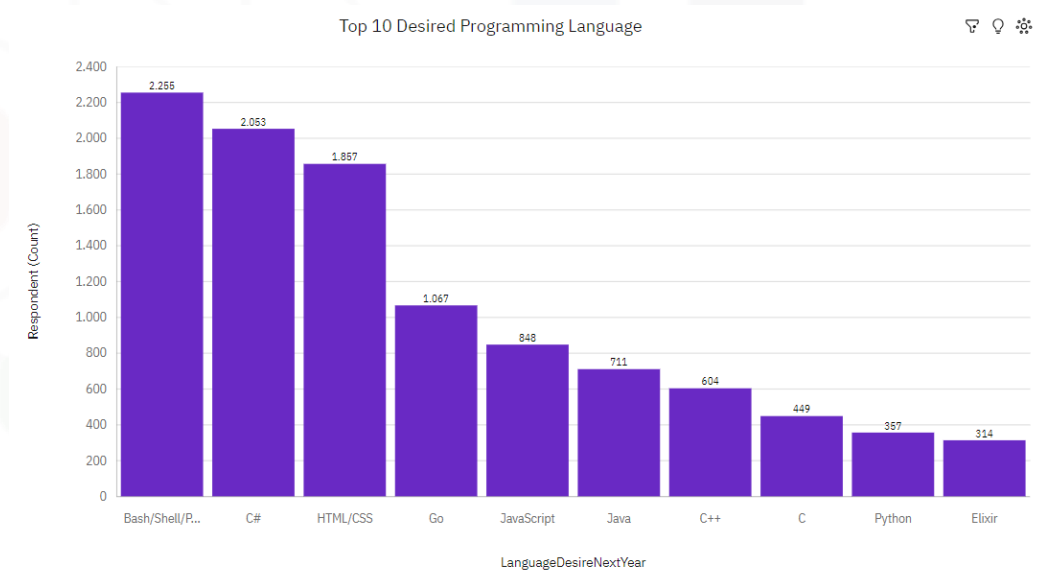
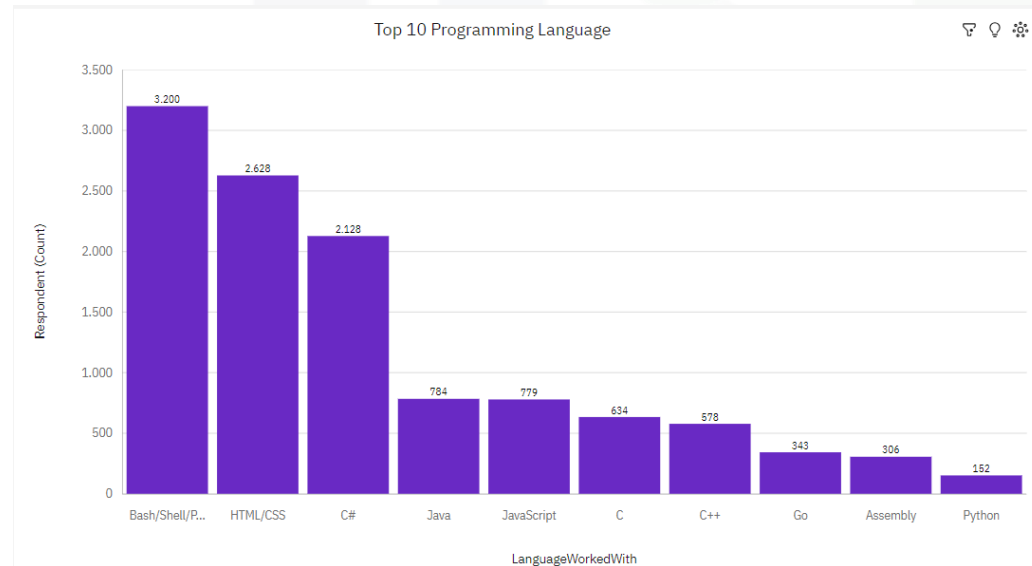
	Respondent	LanguageWorkedWith	LanguageDesireNextYear	DatabaseWorkedWith	DatabaseDesireNextYear	PlatformWorkedWith	PlatformDesireNextYear	WebFrameWorkedWith	WebFrameDesireNextYear
6	9.0	Bash/Shell/PowerShell	Bash/Shell/PowerShell	DynamoDB	PostgreSQL	AWS	AWS	Express	Express
17	13.0	Bash/Shell/PowerShell	Bash/Shell/PowerShell	Couchbase	Firebase	Android	Android	Angular/Angular.js	Express
18	13.0	HTML/CSS	HTML/CSS	DynamoDB	MySQL	AWS	AWS	ASP.NET	Vue.js
34	17.0	Bash/Shell/PowerShell	Bash/Shell/PowerShell	MongoDB	Elasticsearch	Arduino	Docker	Angular/Angular.js	Angular/Angular.js
40	19.0	C#	HTML/CSS	DynamoDB	DynamoDB	Android	AWS	Angular/Angular.js	Express
...
74542	25134.0	Bash/Shell/PowerShell	F#	Microsoft SQL Server	Couchbase	Android	AWS	ASP.NET	React.js
74543	25134.0	C++	Java	MySQL	Firebase	Heroku	Docker	jQuery	Vue.js
74551	25136.0	C#	C#	Microsoft SQL Server	Microsoft SQL Server	Kubernetes	AWS	ASP.NET	Vue.js
74572	25141.0	Bash/Shell/PowerShell	C++	Microsoft SQL Server	Elasticsearch	Android	Android	Angular/Angular.js	Angular/Angular.js
74573	25141.0	C++	C#	Redis	MongoDB	iOS	Arduino	ASP.NET	ASP.NET

11984 rows × 10 columns

PROGRAMMING LANGUAGE TRENDS

Current Year

Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- Bash/Shell/PowerShell are the number 1 languages this year and next.
- HTML/CSS and C# swapped places in the next year.
- Assembly edged out in next year and replace with Elixir.

Implications

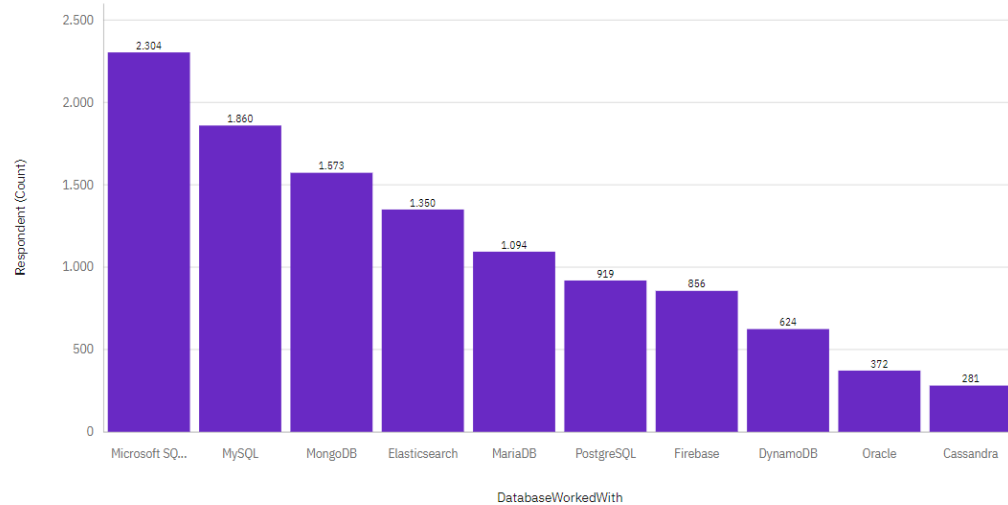
- There is still a great demand for web developments and web developers.
- Go is the newest popular language, particularly in the domains of AI.
- The results above are the results of the data that has been cleaned. So maybe there is a difference with the others.

DATABASE TRENDS

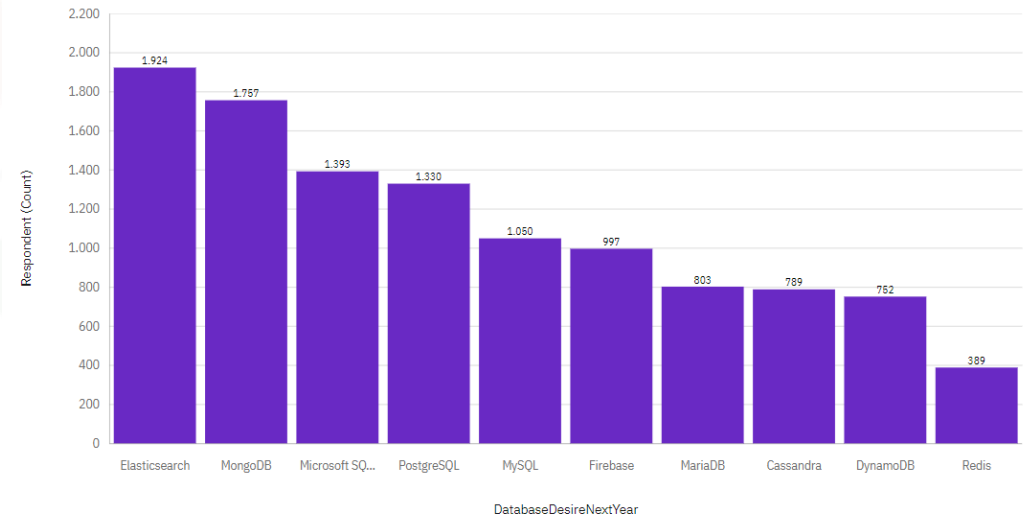
Current Year

Next Year

Top 10 Database



Top 10 Desired Database Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

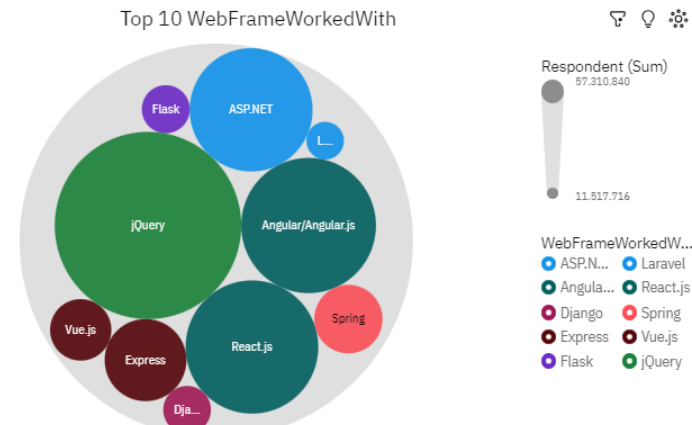
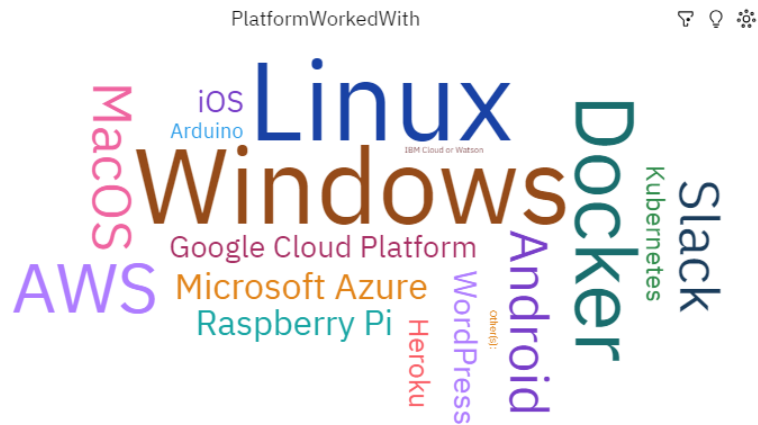
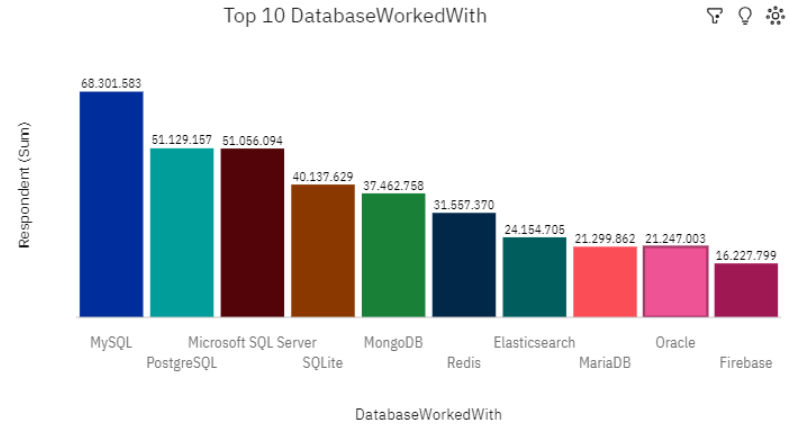
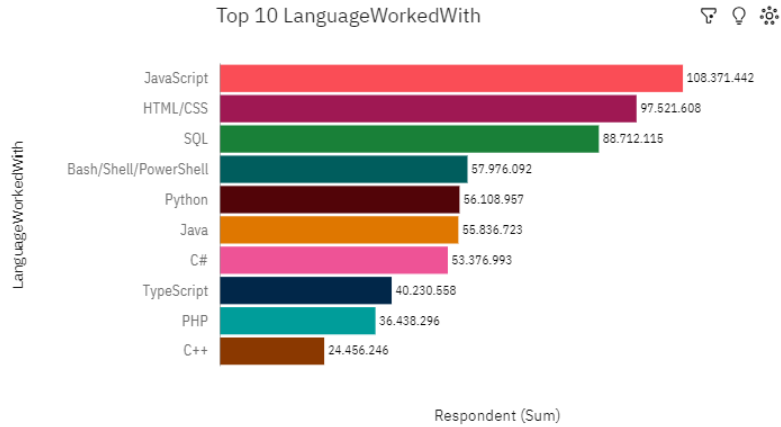
Findings

- Microsoft SQL and MySQL are most popular in this year.
- In the next year, Elasticsearch and MongoDB are a popular database.
- In the next year, Oracle will be replaced by Redis.

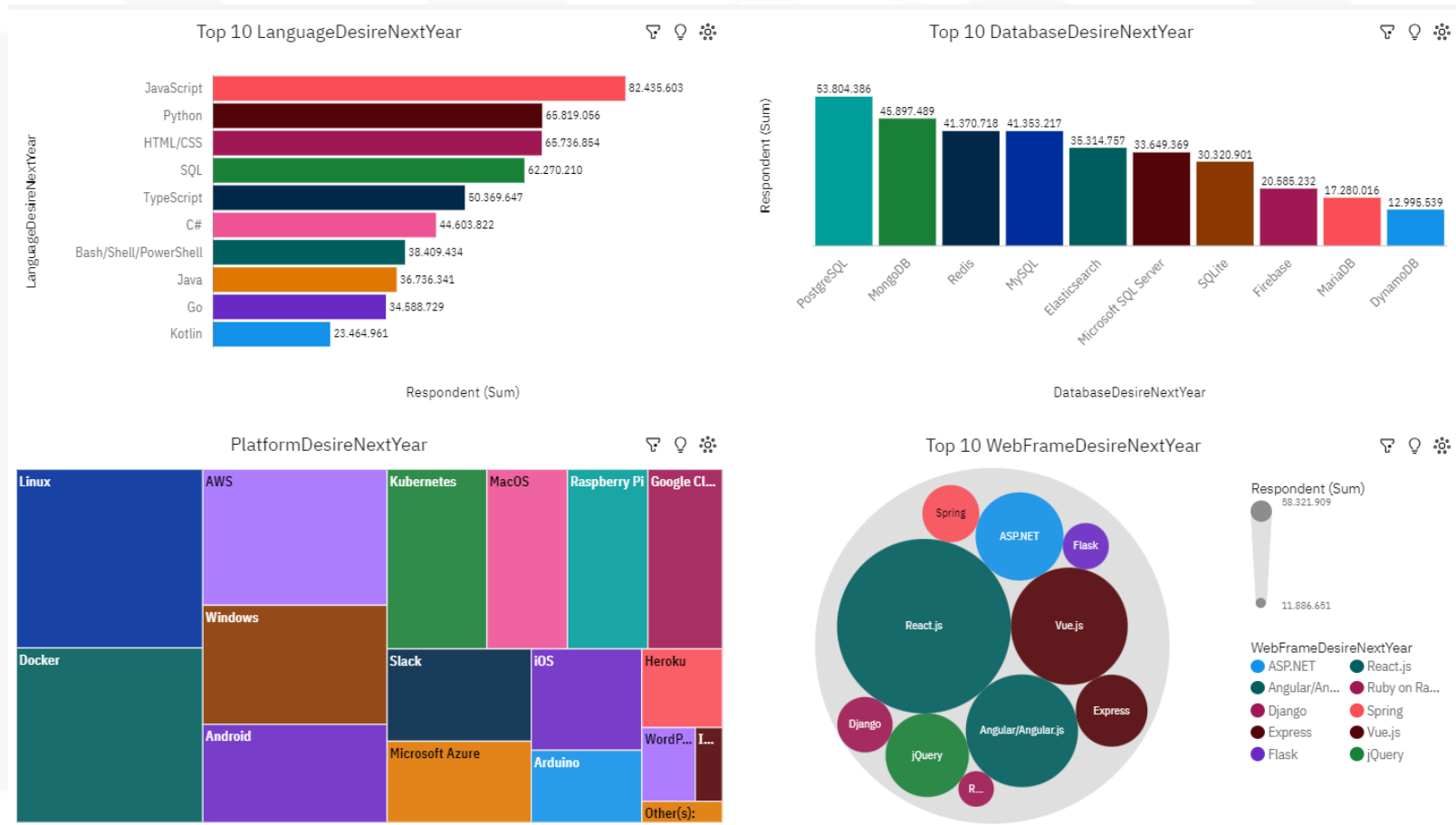
Implications

- Open source databases continue to be preferred in businesses.
- SQL is still necessary for software development and big data technology.
- The use of NoSQL databases to store non-relational data will have an influence.

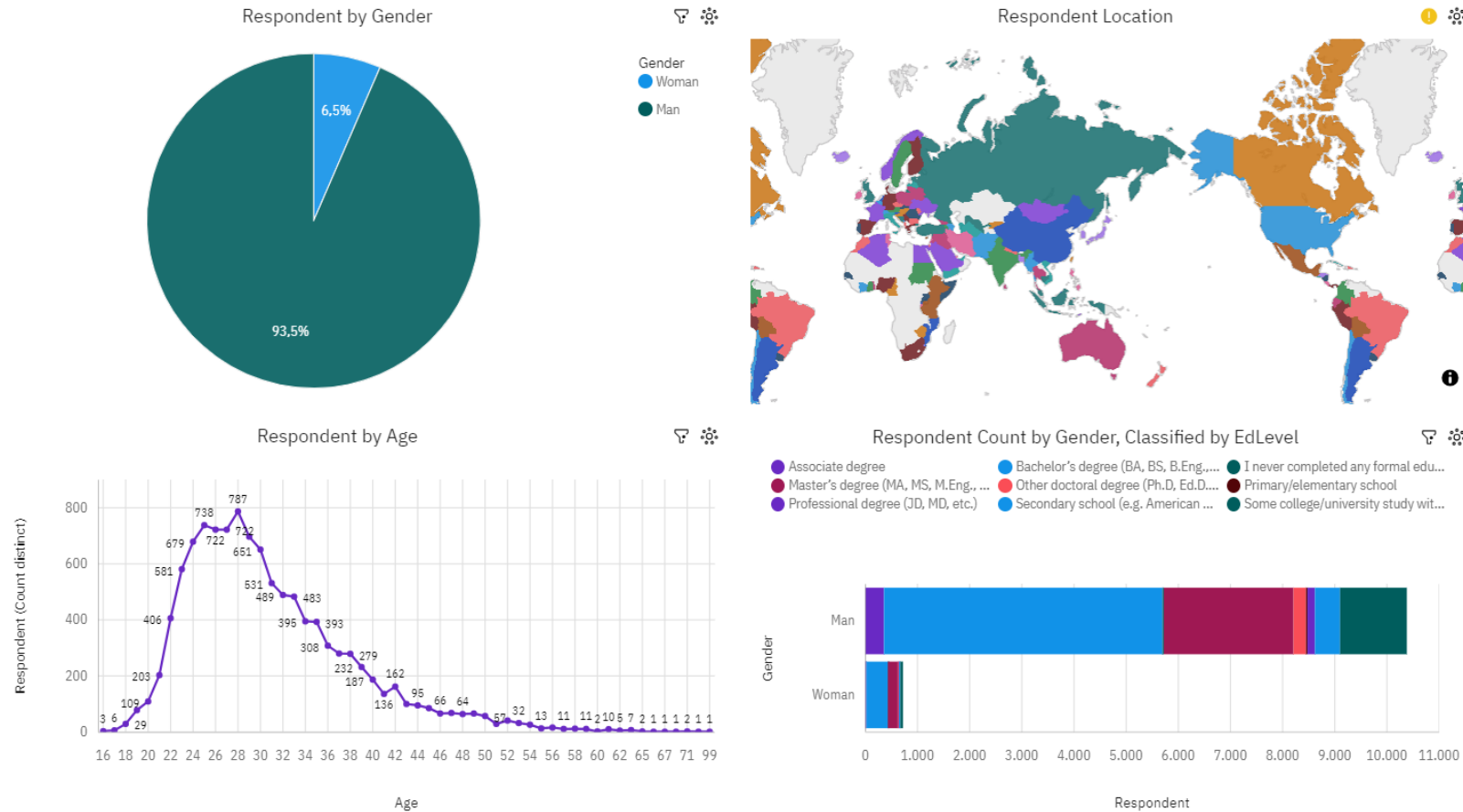
DASHBOARD TAB 1



DASHBOARD TAB 2



DASHBOARD TAB 3



DISCUSSION



- Presently and in the future, technology.
- Educating and retraining employees.
- Discrimination based on gender, age, and education in the IT industry.

OVERALL FINDINGS & IMPLICATIONS

Findings

- Bash/Shell/PowerShell, HTML/CSS and C# are the 3 most popular programming languages this year and next year.
- Microsoft SQL and MySQL are most popular in this year.
- There is a gender gap in tech jobs.

Implications

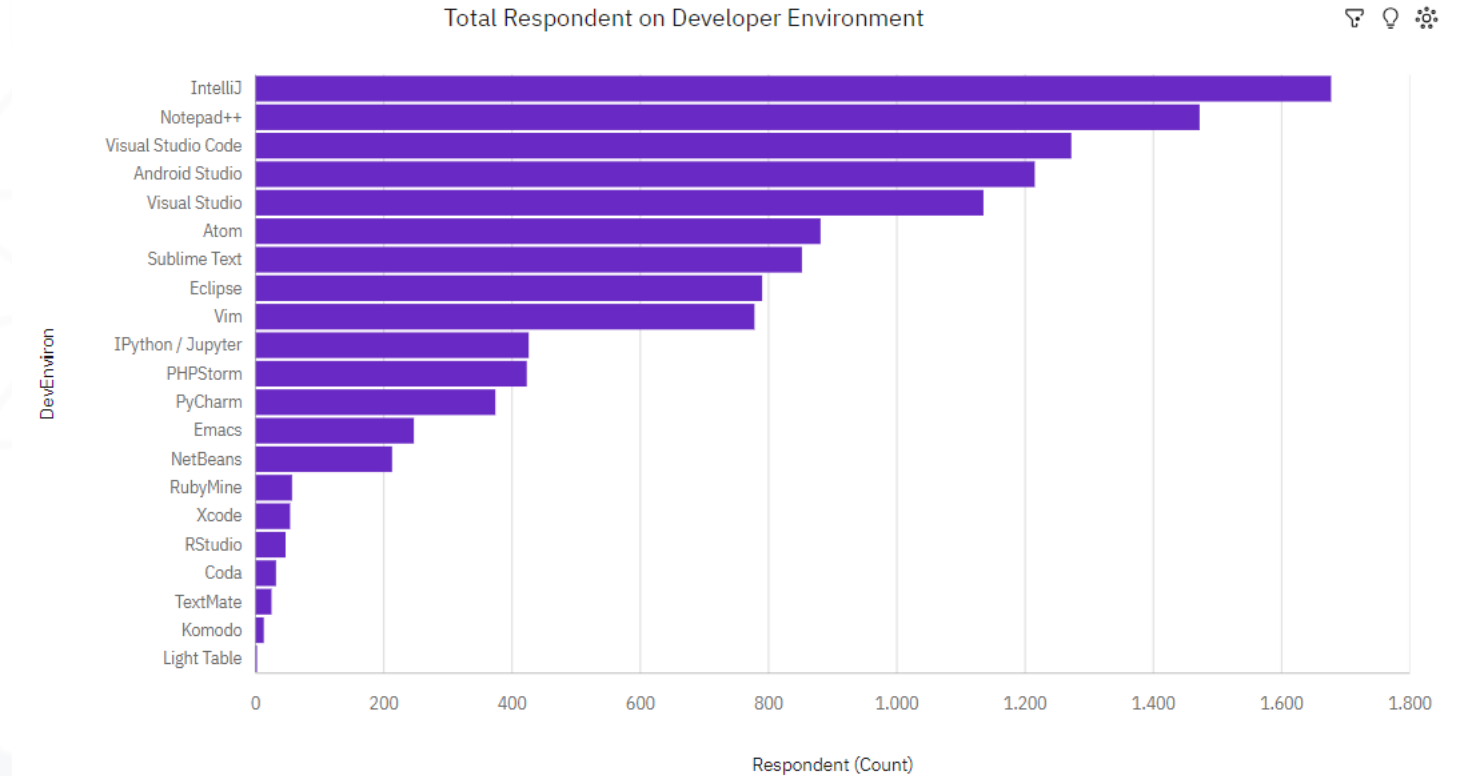
- There is still a great demand for web developments and web developers.
- Open source databases continue to be preferred in businesses.
- As technology develops, policy makers, schools and organizations should aim to reduce the gender representation gap.

CONCLUSION

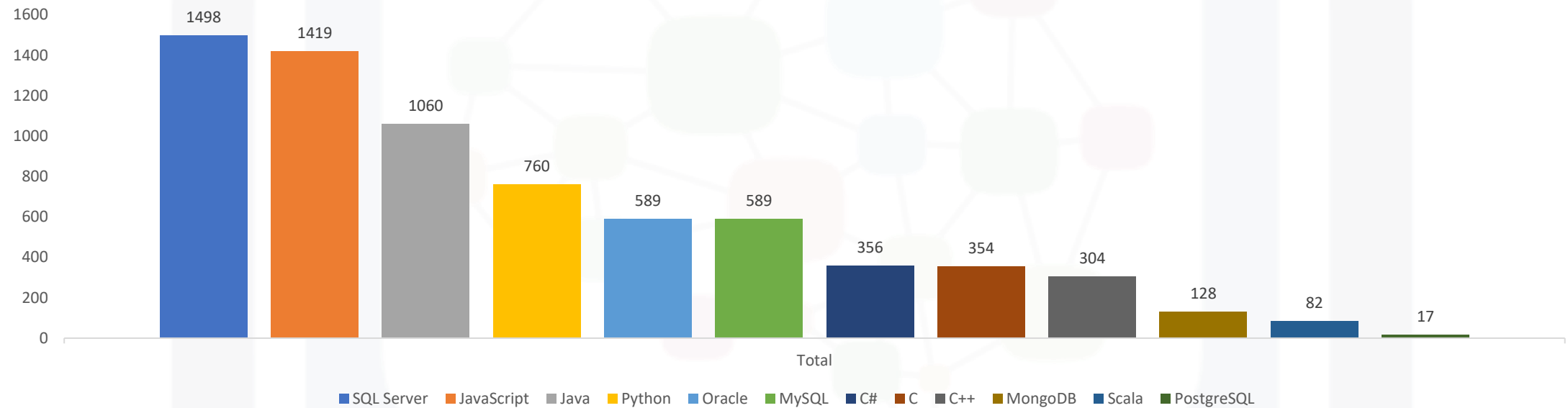


- Upcoming and current technology trends.
- Overview of Programming Languages, Databases, and Platforms.
- Overview of Demographic Trends.
- There is a significant difference in education level to gender in technology jobs.

APPENDIX



JOB POSTINGS



POPULAR LANGUAGES

