



# TRENDING TECHNOLOGIES

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# 01

## Executive Summary

# EXECUTIVE SUMMARY

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Top programming languages in demand:

- JavaScript, HTML/CSS, SQL, Bash/Shell/PowerShell, Python

- Top database skills in demand:

- My SQL, Microsoft SQL Server, Postgre SQL, SQLite, MongoDB

- Popular platforms:

- Windows, Linux, Docker, AWS, Slack

- Popular Web Frames:

- jQuery, Angular/Angular.js, React.js, ASP.NET, Express

- Future Technology Trend:

Python takes the third row, followed by SQL and TypeScript

Redis and Elasticsearch also place in Top 5

Android is in the Top 5 demanded platforms, the rest remains

React.js takes the first row and Vue.js is the latest addition as the last



# 02

## METHODOLOGY

# METHODOLOGY

## Y

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- Data is based on the survey conducted by **Stack Overflow** from January 23 to February 14 and involved **88,883 software developers** from **179 countries**.
- Familiarization with this dataset was achieved through completing **IBM** labs on **Coursera**, which encompassed topics such as Web Scraping, Dataset Exploration, Data Wrangling, Exploratory Data Analysis, and Data Visualization.
- Data analysis and visualization was conducted via **IBM Cognos Analytics**.





# 03

## RESULT & DISCUSSION

# RESULT

- **Python** overtakes **Java**, becoming the 5th most preferred language with significant growth. It stands as the fastest- growing major programming language.
- **JavaScript** remains the most used programming language.
- **jQuery** is the most widely used among web frameworks, with **React.js** surpassing **Angular** in developer usage this year.
- Globally, *men* represent approximately **90%** of respondents, with higher *female* representation among students than professional developers in regions like the US, India, and the UK.
- Around 3/4 of professional developers globally hold at least a **bachelor's degree**, aligning with past findings.
- 3/4 of survey respondents in professional developer roles are **under 35 years old**.

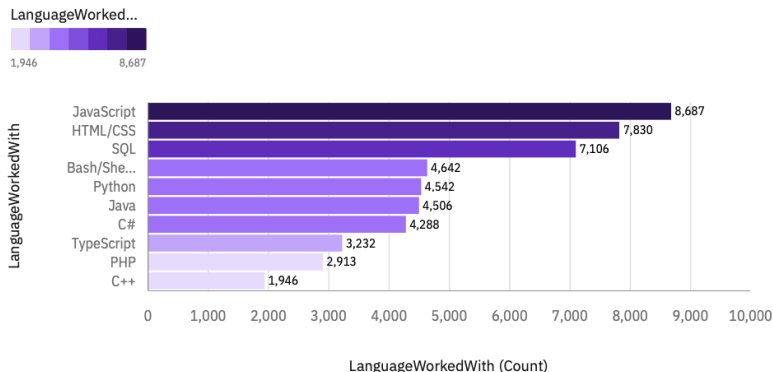




# PROGRAMMING LANGUAGE TRENDS

## Current Technology Usage

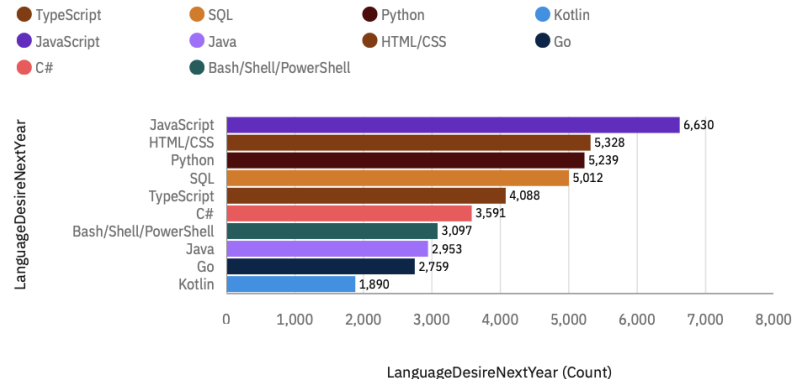
### Top 10 Language Worked With



2019

## Future Technology Trend

### Top 10 Language Desire Next Year



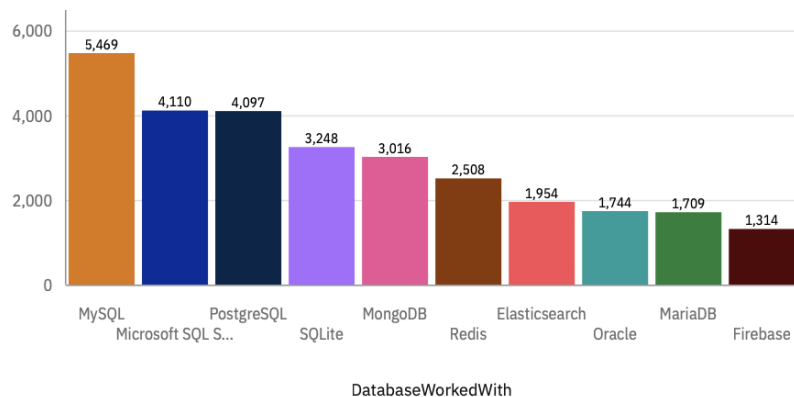
Following Year

# PROGRAMMING LANGUAGE TRENDS

FINDINGS	IMPLICATIONS
<ul style="list-style-type: none"><li>• <b>JavaScript</b> and <b>HTML/CSS</b> emerge as the most used programming languages among all respondents</li><li>• SQL also maintains a significant presence.</li><li>• Python just edged out Java in overall ranking.</li></ul>	<ul style="list-style-type: none"><li>• The dominance of JavaScript and HTML/CSS underscores their indispensability in modern web development, highlighting the importance of mastering them for developers.</li><li>• The high usage of SQL emphasizes the critical role of data management and querying in modern software applications, across both web and non-web environments.</li><li>• The rise of Python might also reflect its versatility and ease of use, attracting developers across various domains from data science to software development.</li></ul>

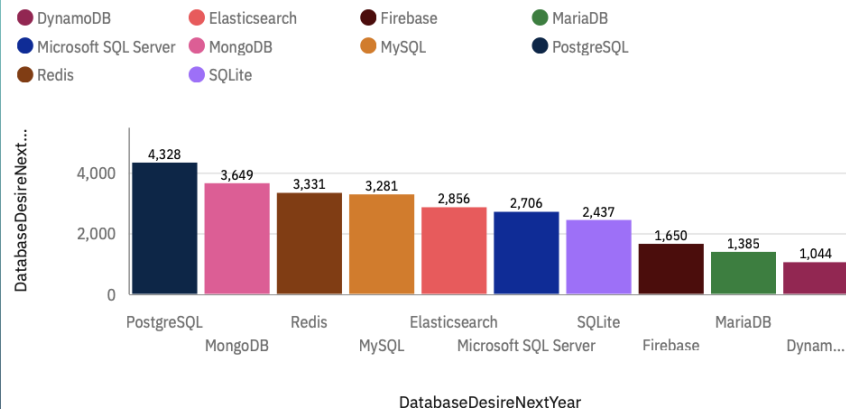
# DATABASE TRENDS

## Top 10 Database Worked With



2019

## Top 10 Database Desire Next Year



Following Year

# DATABASE TRENDS



FINDINGS	IMPLICATIONS
<ul style="list-style-type: none"><li>MySQL leads as the most used DBMS among all respondents.</li><li>PostgreSQL and Microsoft SQL Server follow closely behind MySQL.</li><li>MongoDB ranks as the top NoSQL database.</li></ul>	<ul style="list-style-type: none"><li>The popularity of MySQL, PostgreSQL, and Microsoft SQL Server underscores the importance of relational databases in various applications.</li><li>The high usage of MongoDB reflects the growing trend towards NoSQL databases, driven by the need for flexible data models and scalability, particularly in modern web and mobile applications.</li><li>The diverse range of database systems utilized by developers indicates the importance of selecting the right tool for the job, considering factors such as data structure, scalability, and performance requirements.</li></ul>

# DASHBOARD

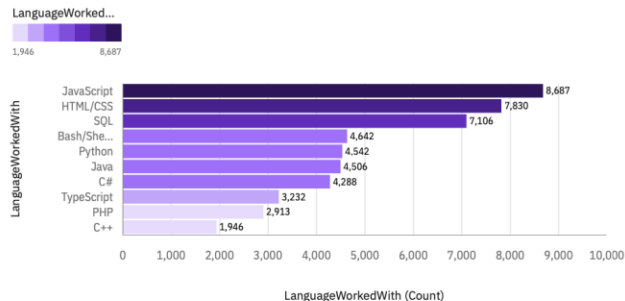
<https://github.com/Yennhi1502/IBM-Data-Analyst-Capstone>



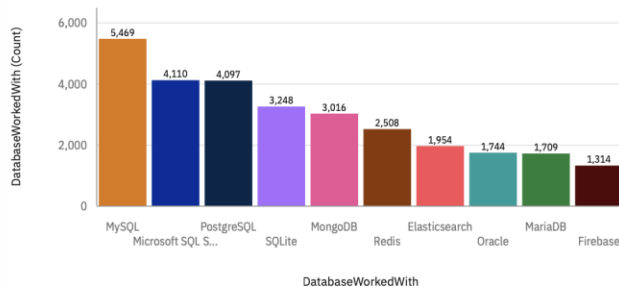
# CURRENT TECHNOLOGY USAGE

## Current Technology Usage

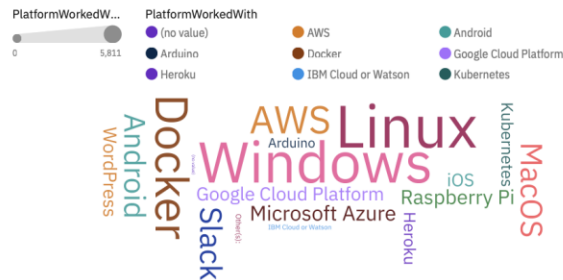
### Top 10 Language Worked With



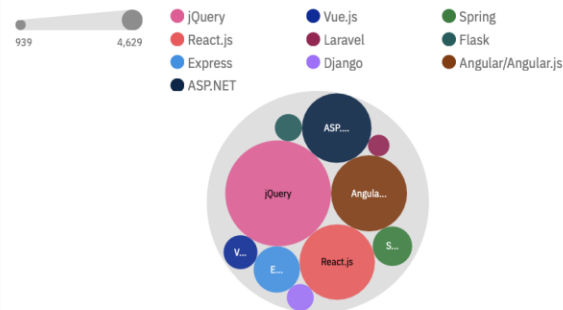
### Top 10 Database Worked With



### Platform Worked With



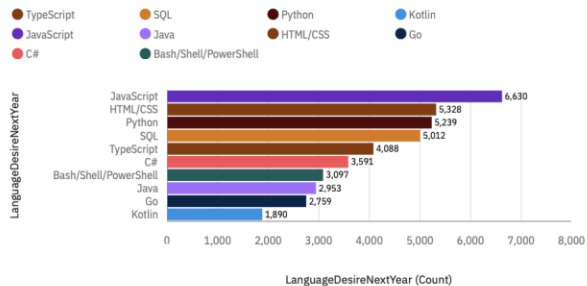
### Top 10 Web Frame Worked With



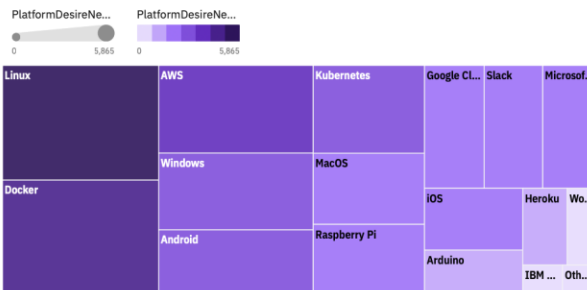
# FUTURE TECHNOLOGY TREND

## Future Technology Trend

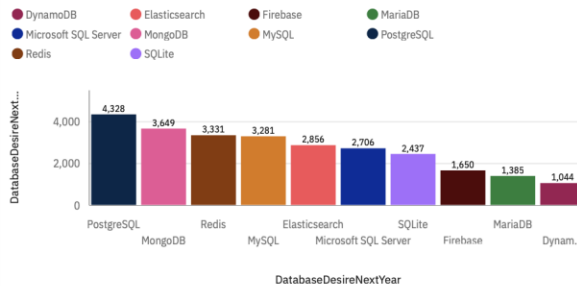
### Top 10 Language Desire Next Year



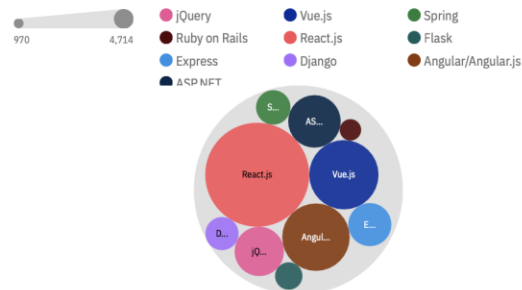
### Platform Desire Next Year



### Top 10 Database Desire Next Year



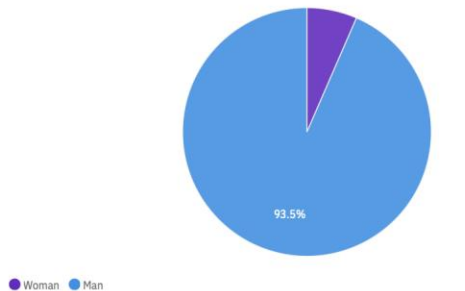
### Top 10 Web Frame Desire Next Year



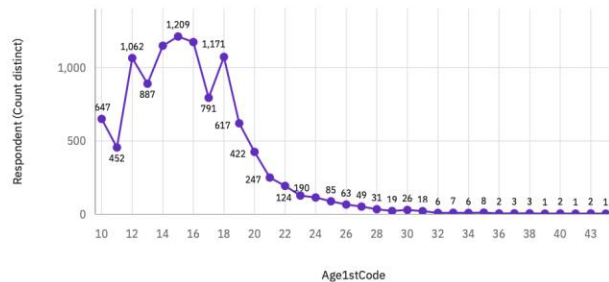
# DEMOGRAPHICS

## Demographics

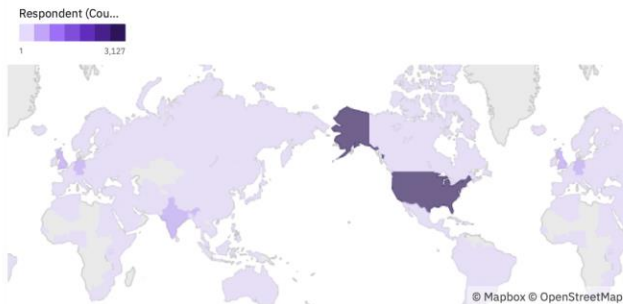
**Respondent classified by Gender**



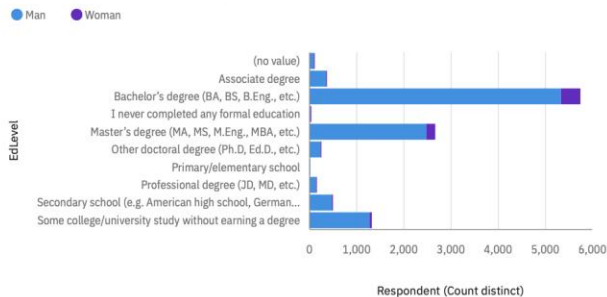
**Respondent Count by Age**



**Respondent Count for Countries**



**Respondent Count by Gender and Formal Education Level**





# DISCUSSION

- The dominance of **JavaScript** and **HTML/CSS** and the adoption of **MySQL** as the leading database management system
- Highlights the central role of **web development** in the programming landscape
- Opens up discussions on the significance of **client-side scripting and styling**, trends in web development frameworks, and the evolving nature of **web technologies**



# CONCLUDING REMARKS



FINDINGS	IMPLICATIONS
<ul style="list-style-type: none"><li>• <b>Technology Trends:</b> The dominance of JavaScript and HTML/CSS underscores the importance of staying updated with technology trends in web development.</li><li>• <b>Data Management:</b> The prevalence of MySQL, PostgreSQL, and Microsoft SQL Server highlights the critical role of effective data management in software development.</li><li>• <b>Diversity of Tools:</b> The diverse range of programming languages and database systems utilized by developers underscores the importance of understanding the strengths and weaknesses of different tools.</li></ul>	<ul style="list-style-type: none"><li>• <b>Web Dominance:</b> The widespread usage of JavaScript and HTML/CSS indicates the dominance of web development in the programming ecosystem, reflecting the growing importance of online platforms and digital experiences.</li><li>• <b>Database Diversity:</b> The variety of database management systems used highlights the importance of flexibility and adaptability in data storage solutions. Organizations must consider factors such as data structure, scalability, and performance when selecting a database system.</li><li>• <b>Industry Standardization:</b> The popularity of certain technologies like JavaScript and MySQL suggests a degree of industry standardization, where certain tools become widely adopted due to their proven reliability and effectiveness. This can simplify collaboration and interoperability within the developer community.</li></ul>

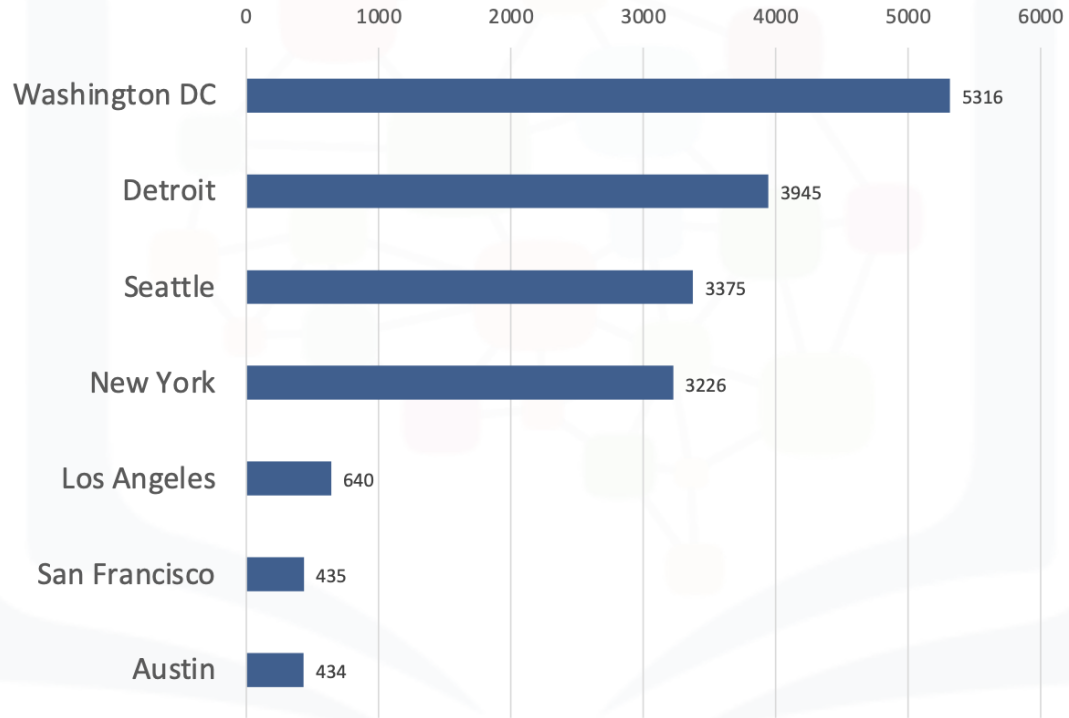


# APPENDIX

A- Job Postings Chart

B- Popular Languages  
Chart

# A- JOB POSTINGS CHART



# B- POPULAR LANGUAGES CHART





**THANK YOU!**