



# Developer Survey 2024

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# OUTLINE

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- Executive Summary
- Introduction
- Methodology
- Results
  - Visualization – Charts
  - Dashboard
- Discussion
  - Findings & Implications
- Conclusion
- Appendix

# EXECUTIVE SUMMARY

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- Introduction - Objective and Data Context Setting
- Data Analysis Methodology
  - Data Gathering
  - Data Wrangling
  - Data Exploration
  - Data Analysis
  - Data Visualization
- Results with Graphical and Trend Analysis Support
- Overall Findings - Discussion
- Conclusion

# INTRODUCTION

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- Objective:
  - Trends to understand the existing Development Stack and predict the future trends.
  - Developer characteristics across the globe.
- Data is based on a comprehensive survey of developers across the globe.
- Respondents in the range of 100,000.
- Results are representative considering the World Techie population.

# METHODOLOGY

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- Data Collection using web scraping, APIs
- Data Wrangling to clean and enrich the data with missing values
- Exploring & Analysing Data to understand data distribution, outliers & finding correlations
- Data Visualization using different type of Charts & Plots
- Build Dashboards to get a comprehensive view and ease of summarizing.

# RESULTS

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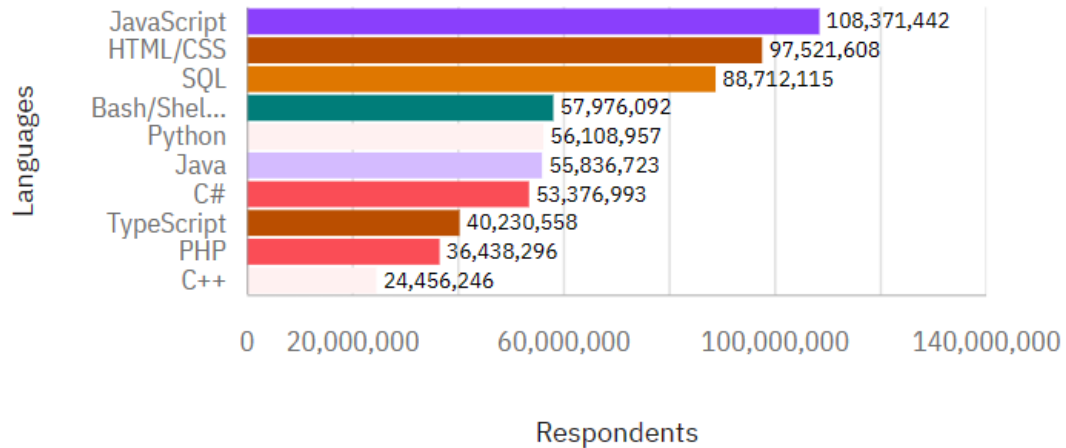


# PROGRAMMING LANGUAGE TRENDS

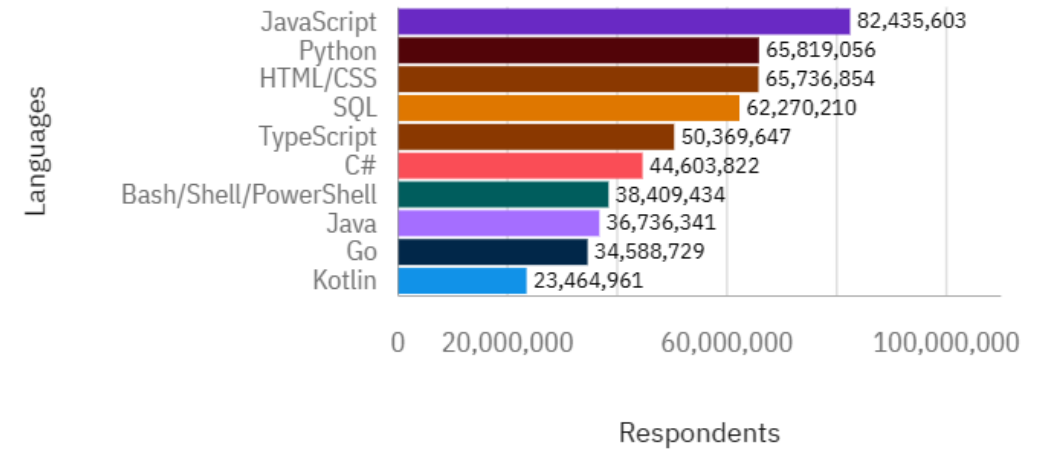
Current Year

Next Year

Top 10 Programming Language Experience



Top 10 Desired Languages



# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- JavaScript remains as the leading language.
- Python has been growing fast and over taking other languages.
- Bash/Shell/Powershell making its way to the top 10 trends in future.
- Typescript has been gaining momentum.
- Java has been losing its ranking.

## Implications

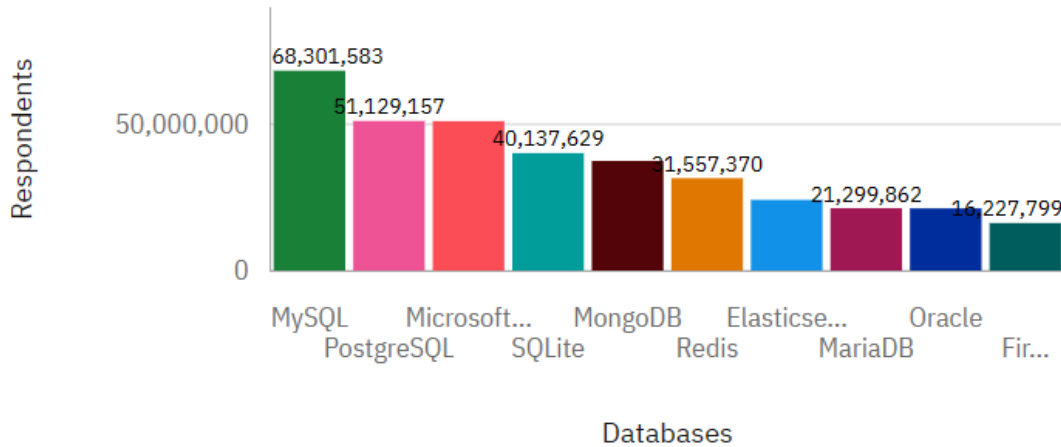
- Though Javascript still stays at the top, there has been reduced usage and possibly a migration from JavaScript to TypeScript.
- Go and Kotlin are likely to be emerging as the next gen languages in upcoming future.



# DATABASE TRENDS

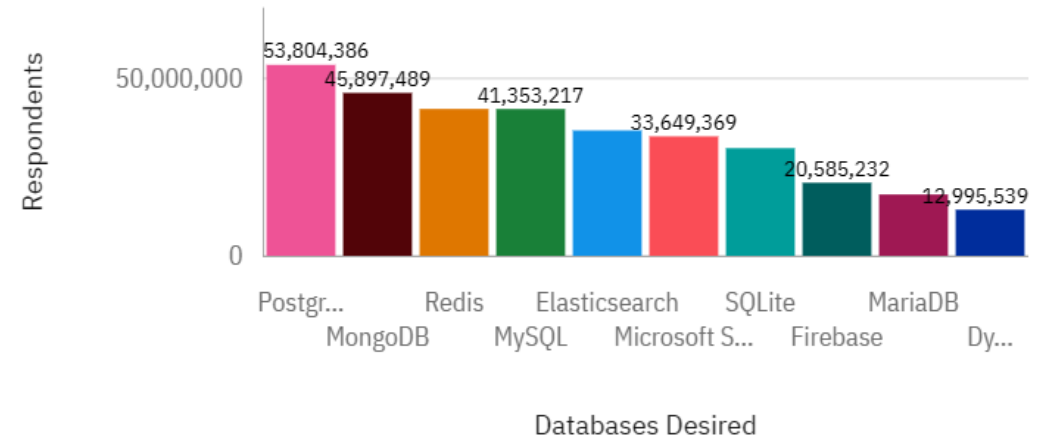
## Current Year

Top 10 Databases Worked with



## Next Year

Top 10 Databases to Learn



# DATABASE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- PostgreSQL has moved to the number one DB.
- MongoDB & Redis have moved up in the ladder.
- Microsoft SQL and SQLite have moved down in the rankings.

## Implications

- Microsoft SQL Server and SQLite are losing their dominance in the market.
- PostgreSQL and MongoDB are getting established in the market.

# DASHBOARD (Link to Github)

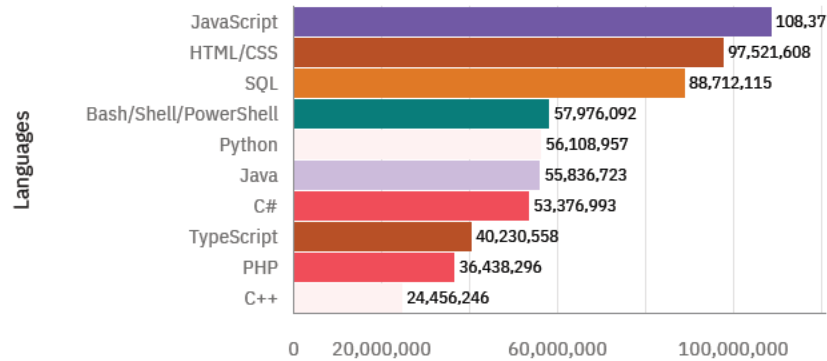
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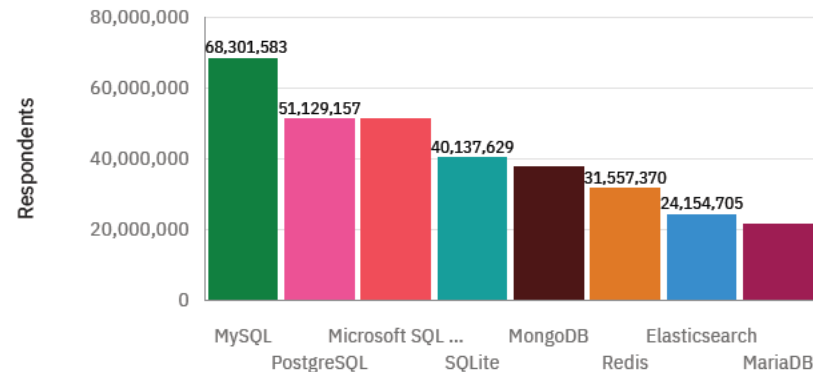
[IBM-Data-Analytics-Capstone-Project/Week 5 - IBM Cognos/Capstone Dashboard - IBM Cognos Analytics.pdf at main · dreamsamee/IBM-Data-Analytics-Capstone-Project \(github.com\)](https://github.com/dreamsamee/IBM-Data-Analytics-Capstone-Project)

# DASHBOARD TAB 1 – CURRENT YEAR

Top 10 Programming Language Experience



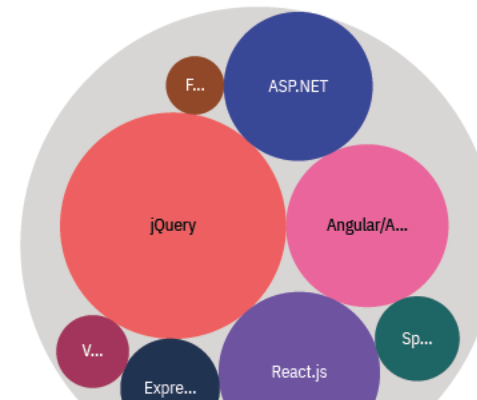
Top 10 Databases Worked with



Platforms Interacted With

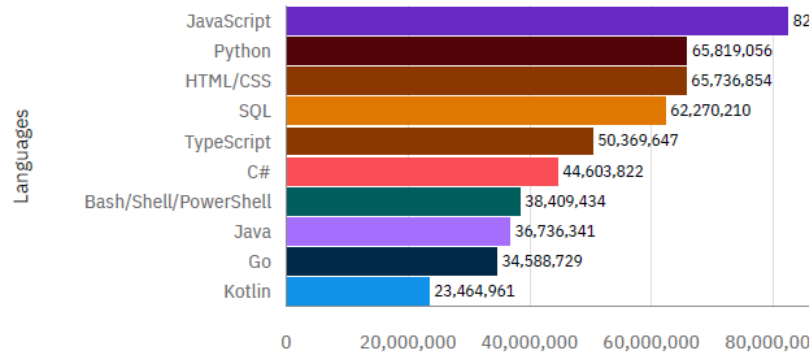


Top 10 WebFrames Used

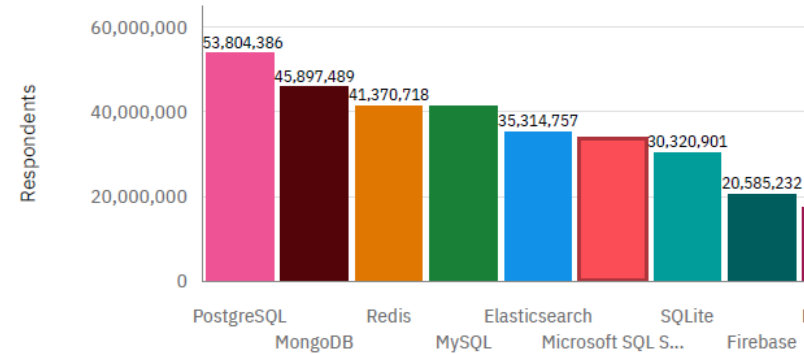


# DASHBOARD TAB 2 - FUTURE

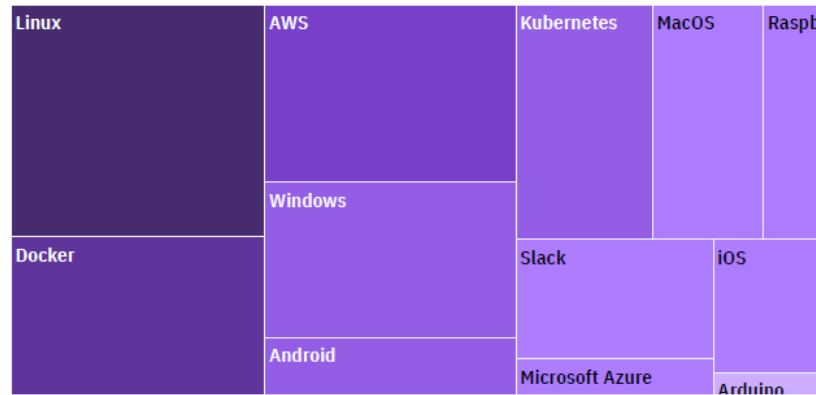
Top 10 Desired Languages



Top 10 Databases to Learn



Platform Desired

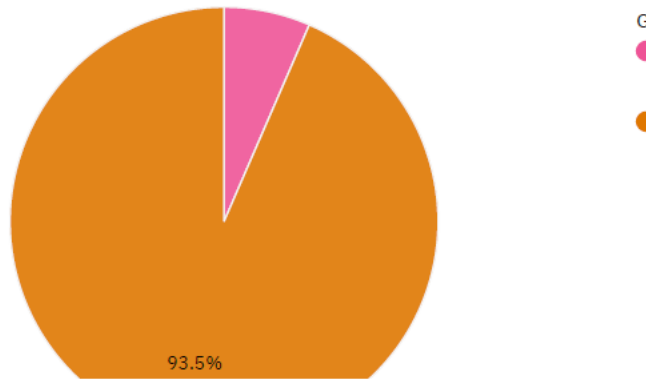


Top 10 WebFrames Desired

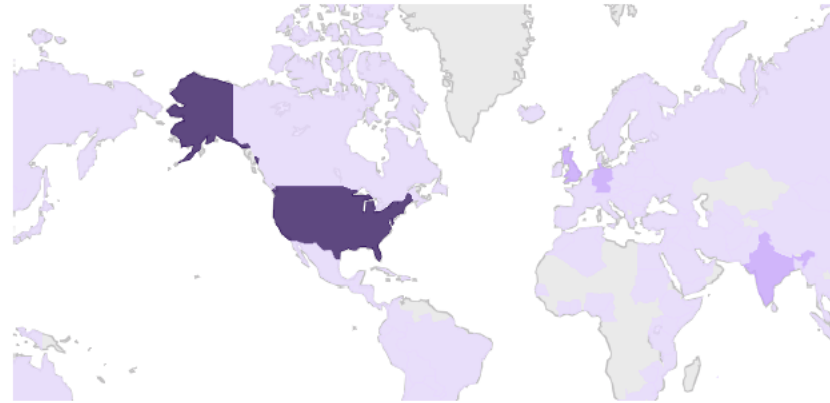


# DASHBOARD TAB 3 - DEMOGRAPHICS

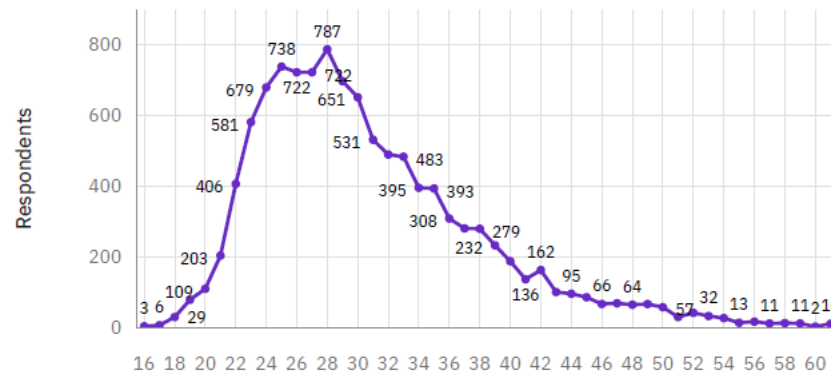
Respondents by Gender



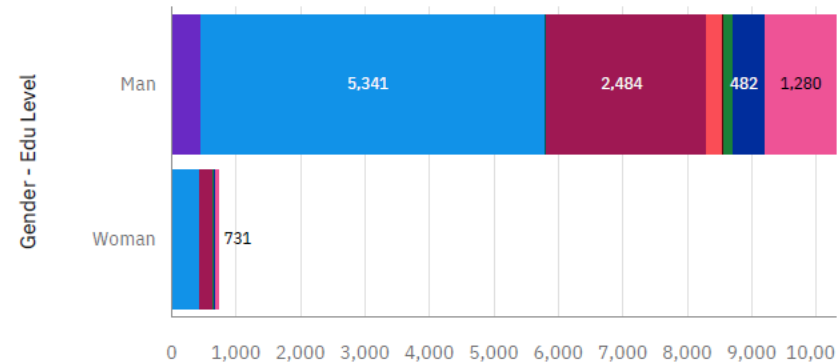
Respondents by Region



Respondents by Age



Respondents by Gender - Edu Level



# DISCUSSION

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# OVERALL FINDINGS & IMPLICATIONS

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## Findings

- JavaScript widely used and TypeScript getting popular. Python gaining popularity.
- PostgreSQL has moved to the number one DB.
- MongoDB & Redis have moved up in the ladder.
- Over 90% of the developers are male.
- Developers are mostly located in developed countries.

## Implications

- JavaScript, Python, TypeScript & JQuery Web frame gaining followers.
- Emerging technologies include Go and Kotlin.
- In Databases, PostgreSQL and MongoDB are getting established in the market, while Microsoft SQL Server and SQLite are losing their dominance in the market.
- Global polarization of Developers wrt location and gender.



# CONCLUSION

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- While we see established programming languages and databases losing market, we also see new technology trends emerging.
- A few programming languages and databases are gaining momentum & seem to top the charts in future.
- Marked polarity of developers wrt gender and location.

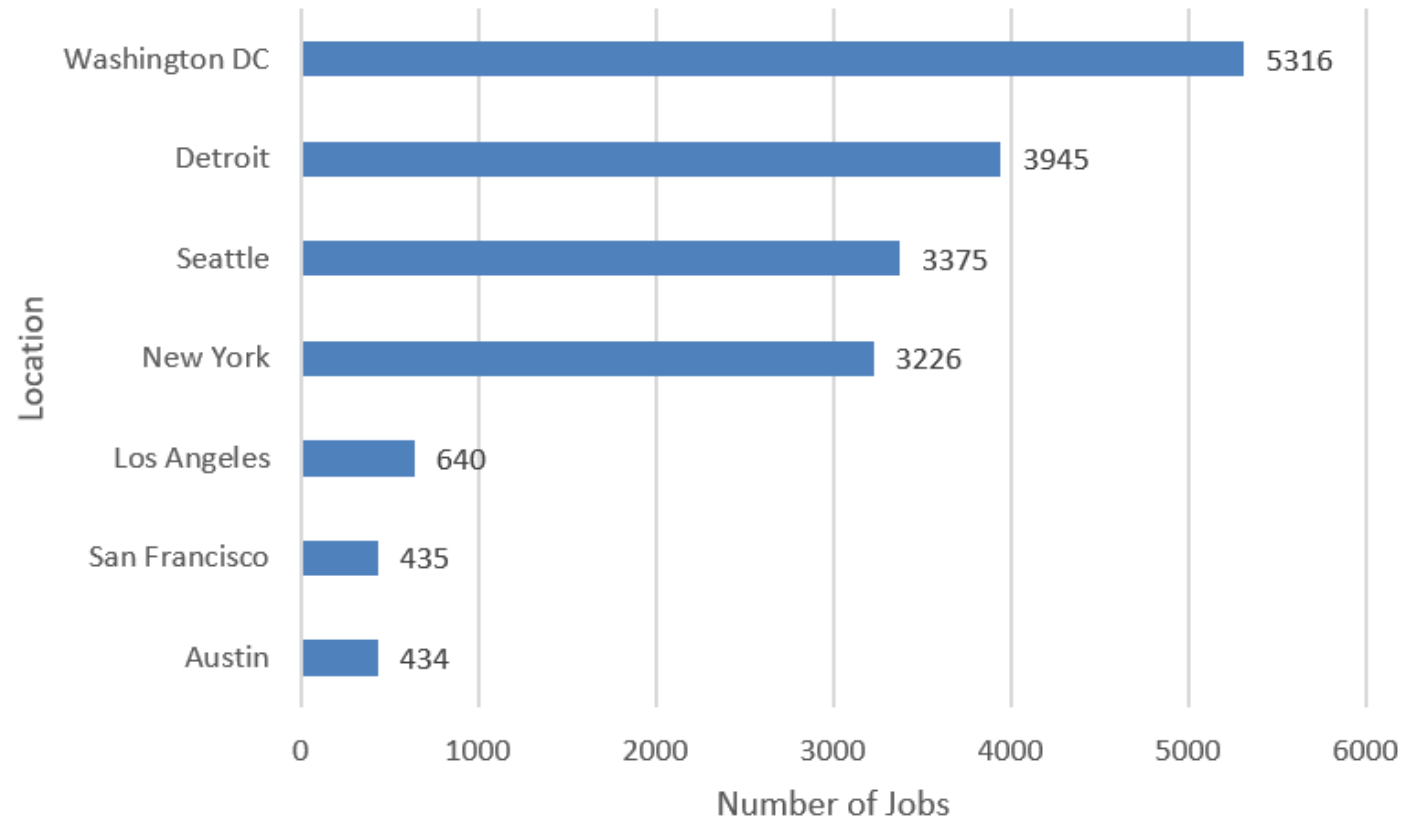
# APPENDIX

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# JOB POSTINGS

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# POPULAR LANGUAGES

