



# Programming Trends Analysis

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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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- Data Contextualization and analysis is the goal.
- The current trend and future trend of the programming languages are cleaned, analyzed and visualized.
- The results are presented with the help of graph and charts.

# INTRODUCTION

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## About:

Analyzing the trends in software development

## Purpose:

- Identify skill requirements for future
- What are the top 10 programming languages in demand
- What are the top 10 databases skills in demand
- What are the popular IDE's

## Audience:

Human Resource department, job seekers and other IT related people

# METHODOLOGY

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- **Collect survey data & explore its content using**
  - Web scrapping
  - APIs.
  - Request library
- **Data wrangling**
- **Exploratory data Analysis**
  - Analyzing data distribution
  - Handling outliers
  - Correlations
- **Data Visualization**
  - Highlights distribution of data, relationships and comparison of data.
- **Dashboards**

# RESULTS

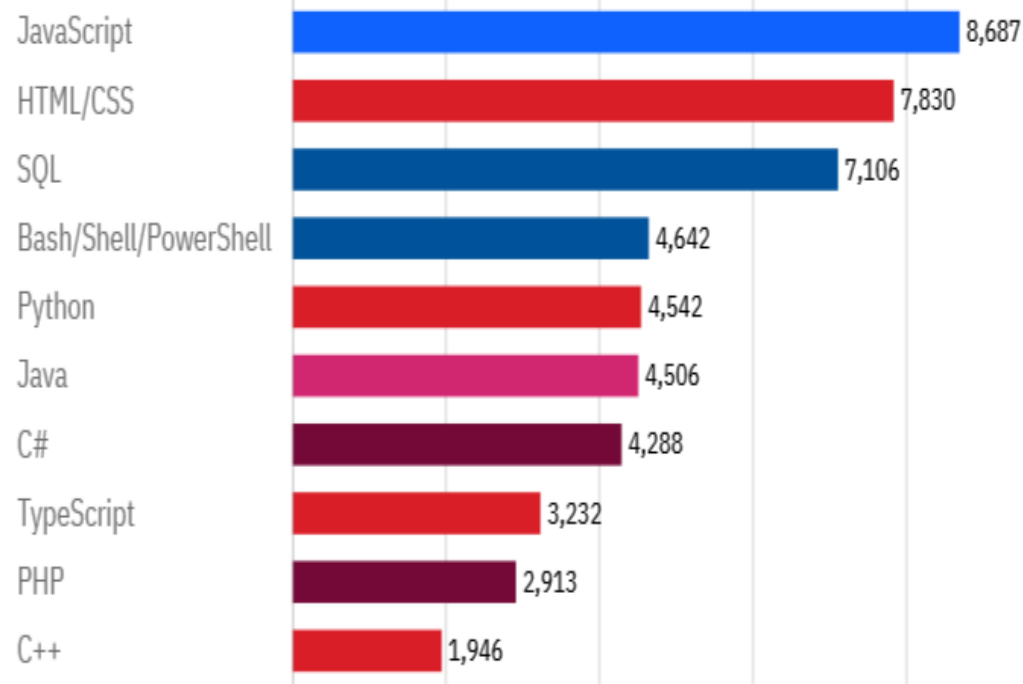
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# PROGRAMMING LANGUAGE TRENDS

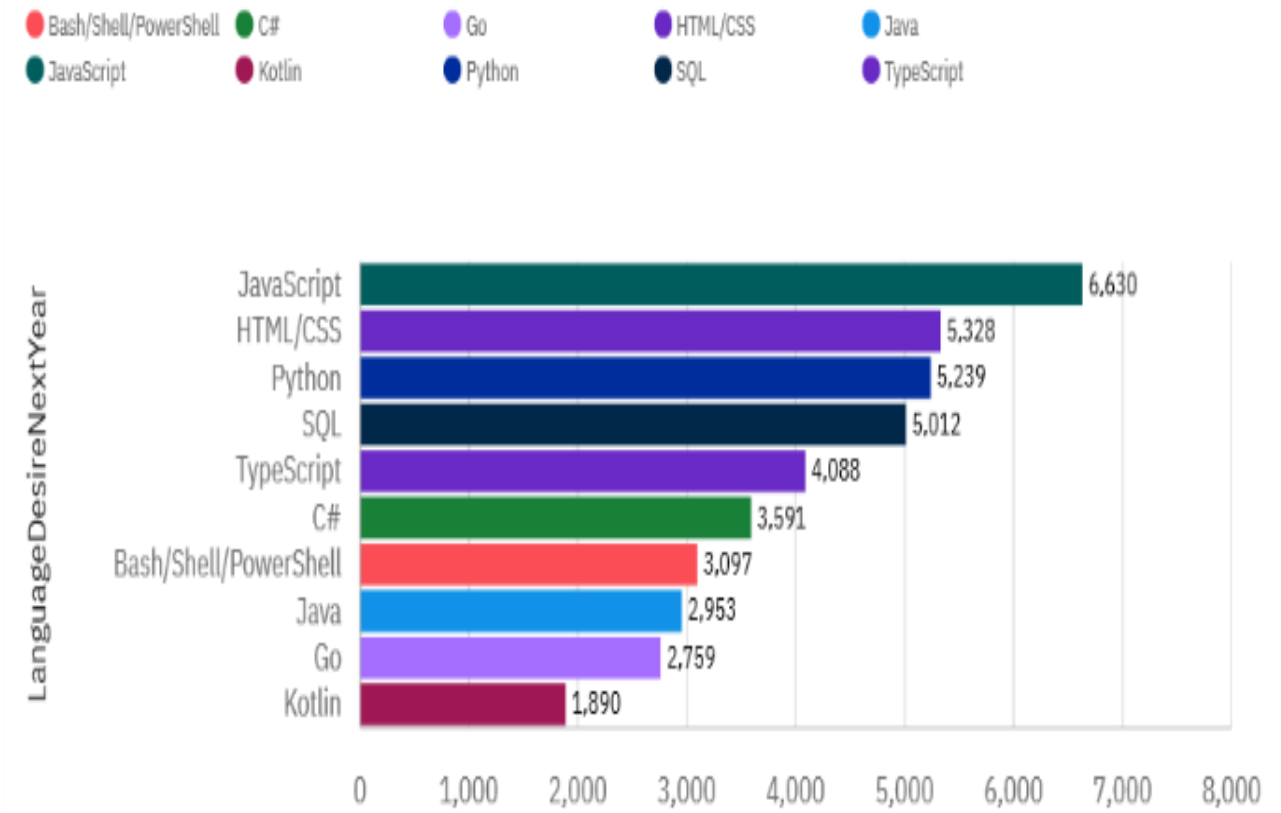
## Current year

Top 10 Languages responders worked with



## Next Year

Top 10 Language desired next year



# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

## Implications

- JS and HTML/CSS are in demand this year and next year.
- Python is getting popular with the demand in AI and ML.
- Java and C++ is losing its popularity as people are moving with other in demand languages.

## Findings

JavaScript is the most popular language this year and next year

HTML/CSS retains the same spot in current year and next year. It's the second most popular language from the analysis

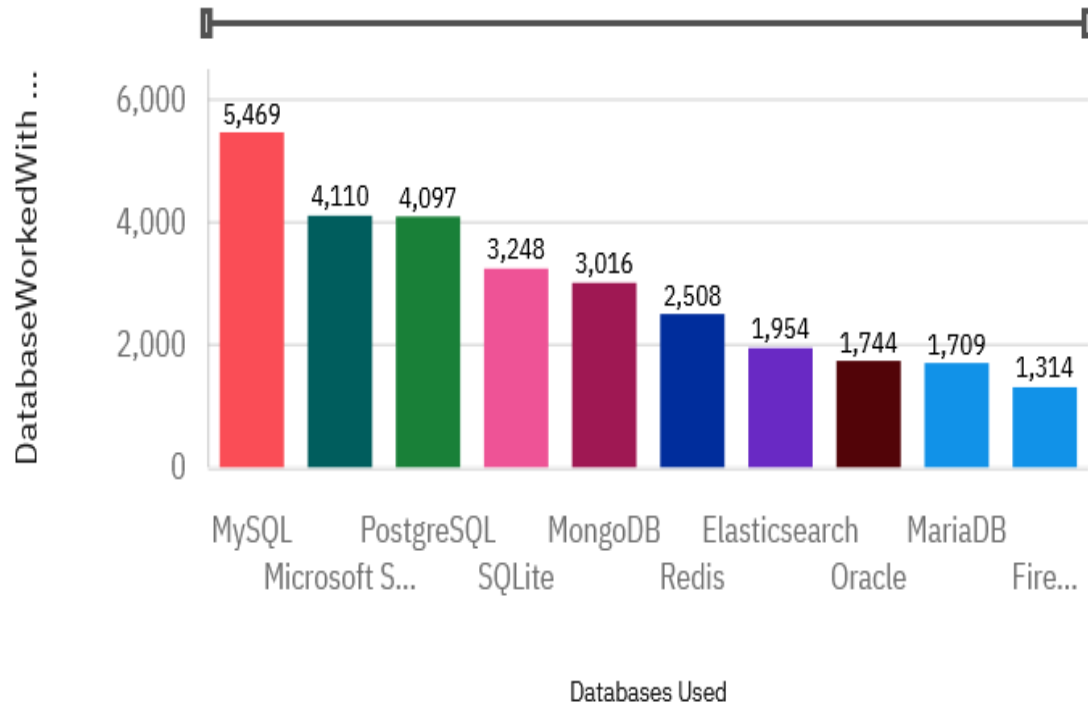
Python and Typecast getting popular the next year



# DATABASE TRENDS

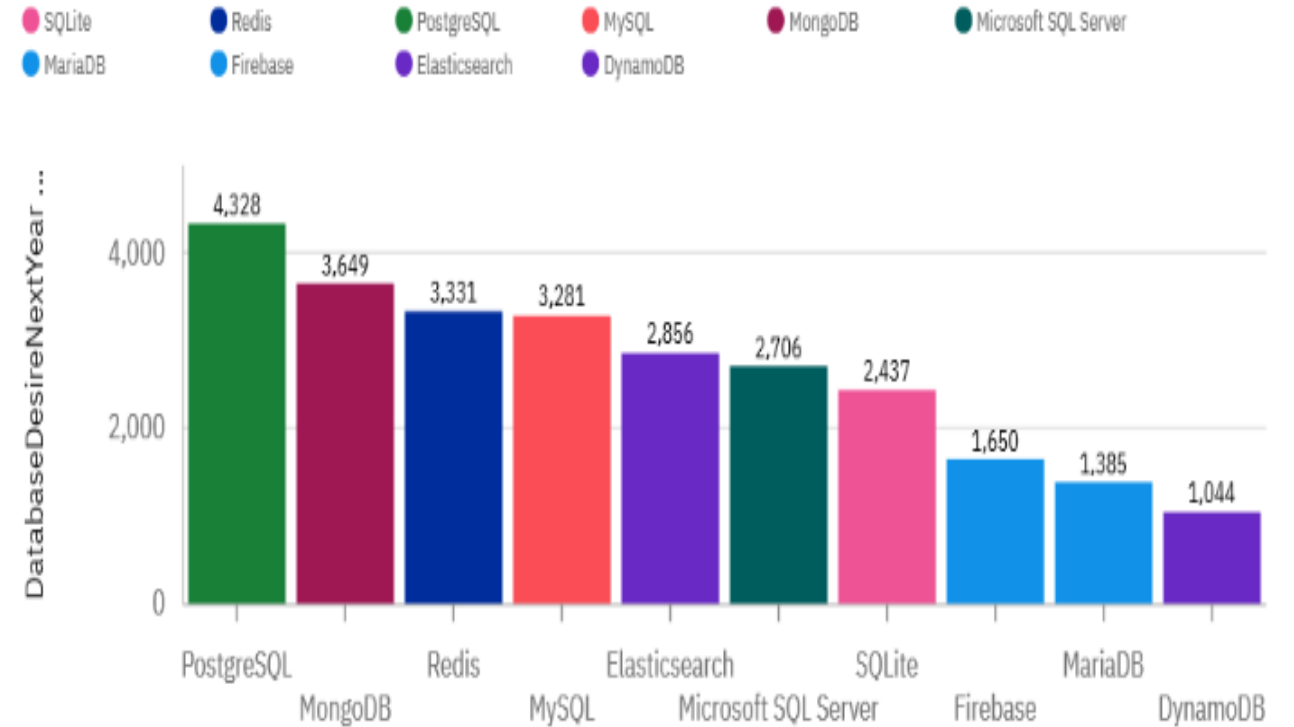
## Current Year

Top 10 Databases responders worked with



## Next Year

Top 10 Database desired next year



# DATABASE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- MySQL is the most popular language used.
- MongoDB and PostgreSQL are the upcoming languages
- Redis is gaining popularity, compared to current year

## Implications

- MySQL retains its spot among the top 5 next year. But people are moving to other languages.
- Less interest in Microsoft SQL and SQLite
- New RDBMS Softwares' are the future.

# DASHBOARD

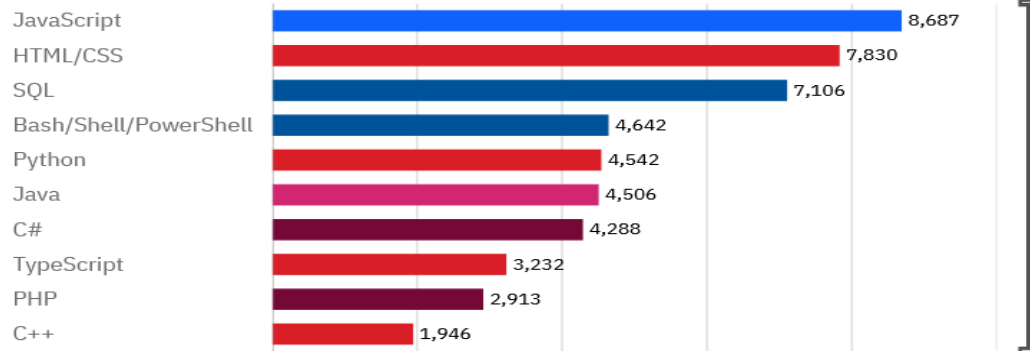
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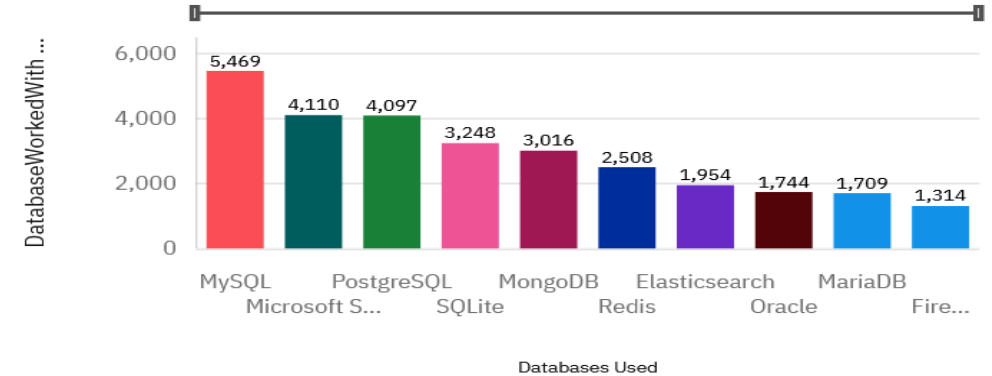
[https://github.com/Nivy3/Capstone\\_Project/blob/f24c979fde95e8ad9b5bfc3738e96f468e3150b7/CDE\\_IBM\\_Dashboards.pdf](https://github.com/Nivy3/Capstone_Project/blob/f24c979fde95e8ad9b5bfc3738e96f468e3150b7/CDE_IBM_Dashboards.pdf)

# DASHBOARD TAB 1: CURRENT TECHNOLOGY TREND

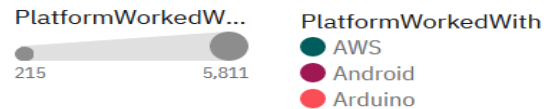
Top 10 Languages responders worked with



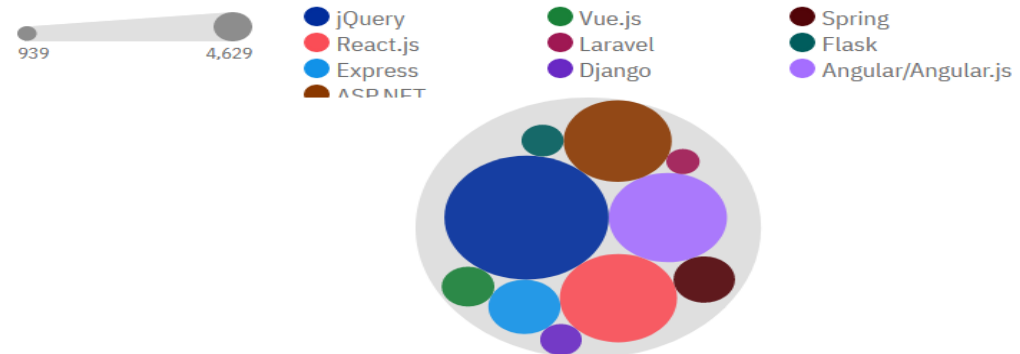
Top 10 Databases responders worked with



Platforms used



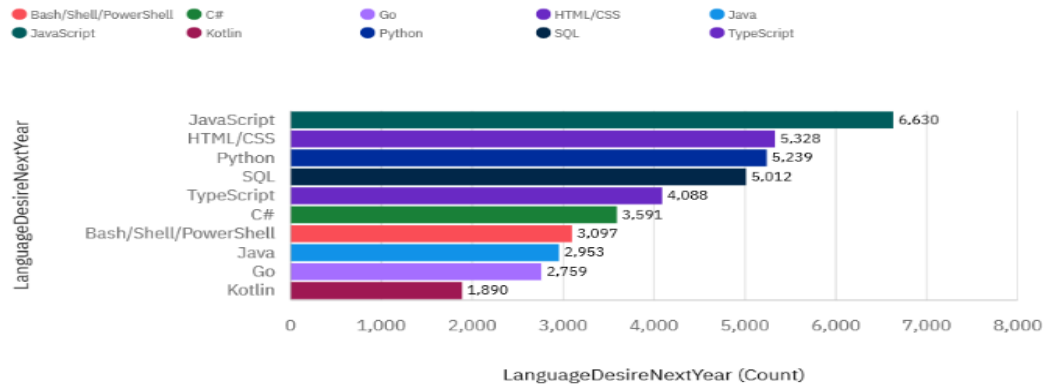
Top 10 WebFrame Used



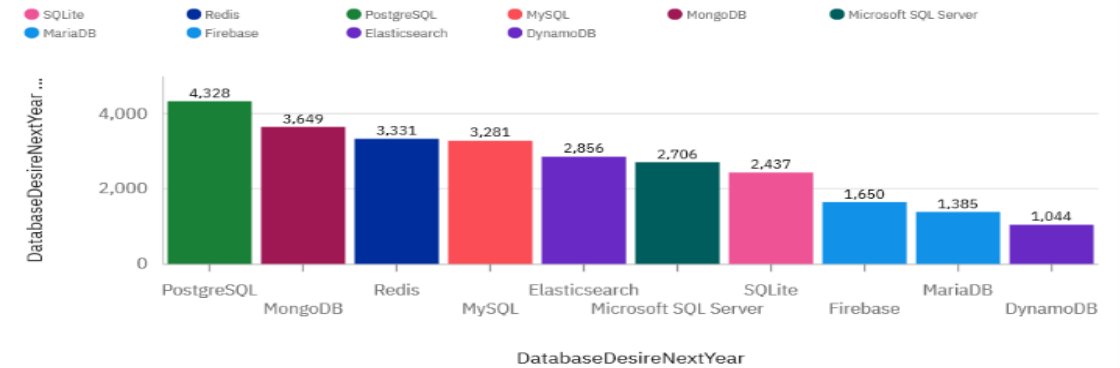
# DASHBOARD TAB 2 : NEXT YEAR TECHNOLOGY TREND

## Future Technology Trend

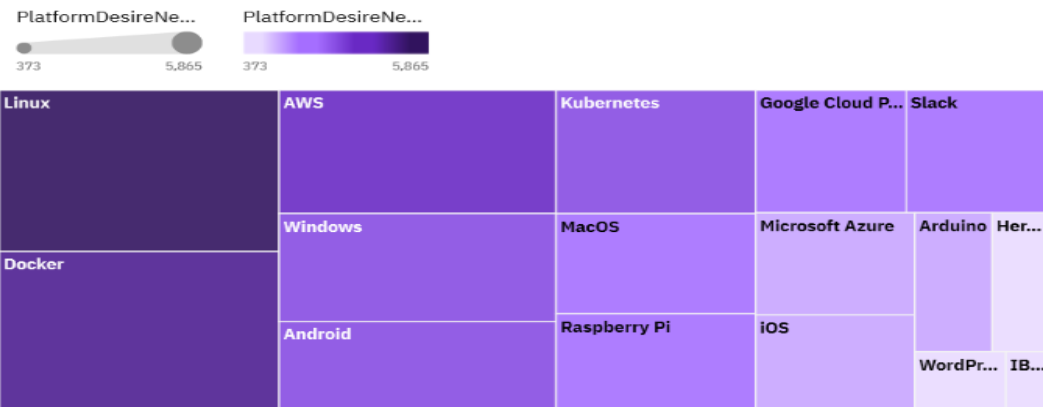
### Top 10 Language desired next year



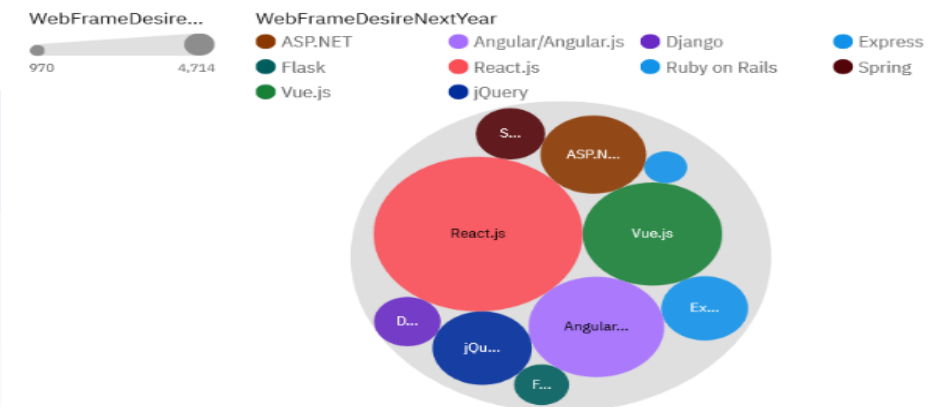
### Top 10 Database desired next year



### Platform desired next year



### Top 10 WebFrame desired next year

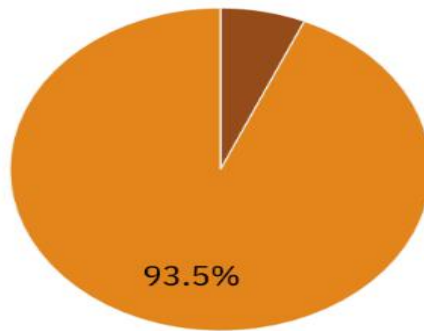


# DASHBOARD TAB 3: DEMOGRAPHICS

## Demographics

Respondent classified by Gender

Gender  
● Woman ● Man

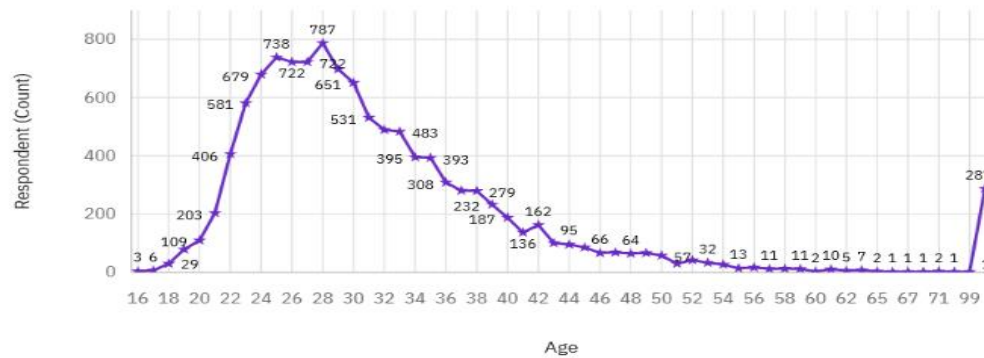


Respondent for Country regions

Respondent (Count)

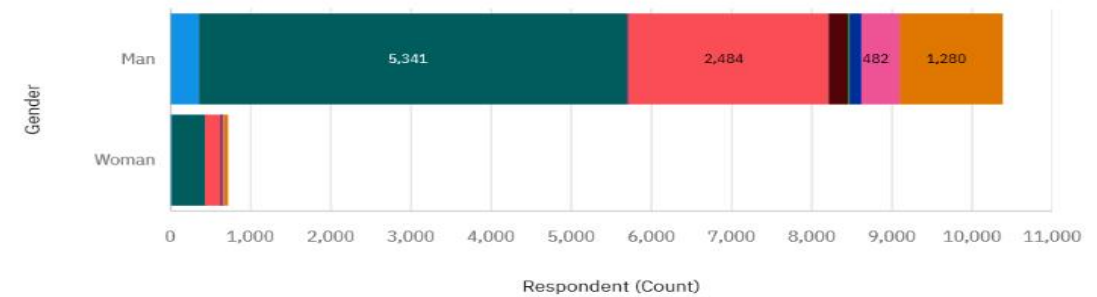


Respondent by Age



Respondent Count by Gender classified by EdLevel

Associate degree Bachelor's degree (BA, BS, B.Eng., etc.) I never completed any formal education Master's degree (MA, MS, M.Eng., etc.)  
Other doctoral degree (Ph.D., Ed.D., etc.) Primary/elementary school Professional degree (JD, MD, etc.) Secondary school (e.g., American high school)  
Some college/university study without degree



# DISCUSSION

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- Technology Trends in the current year and Future.
- Trends to predict where the developers are going.

# OVERALL FINDINGS & IMPLICATIONS

## Implications

JavaScript and Typescript web frames gaining followers.

Developers are mostly with an Under-grad degree

Updating oneself to the above new programming languages will help one explore new opportunities like AI and ML

## Findings

- JavaScript widely used and Typescript getting popular.
- Over 90% young male developers.
- Developers mostly located in developed countries.



# CONCLUSION

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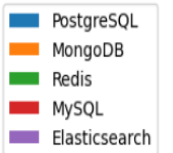
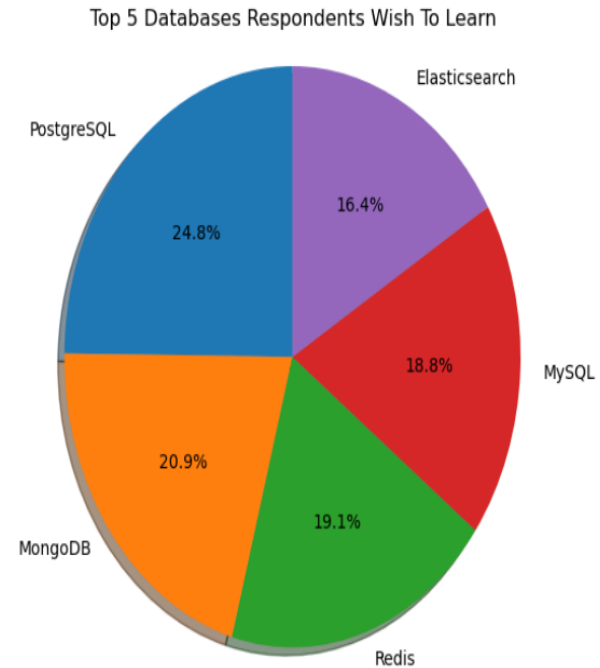
- Technology Trend for current and new year
- Programming languages, Database and Platform overview.
- Demographics overview
- In future, incorporate Machine Learning to Predict trends and salaries.

# APPENDIX



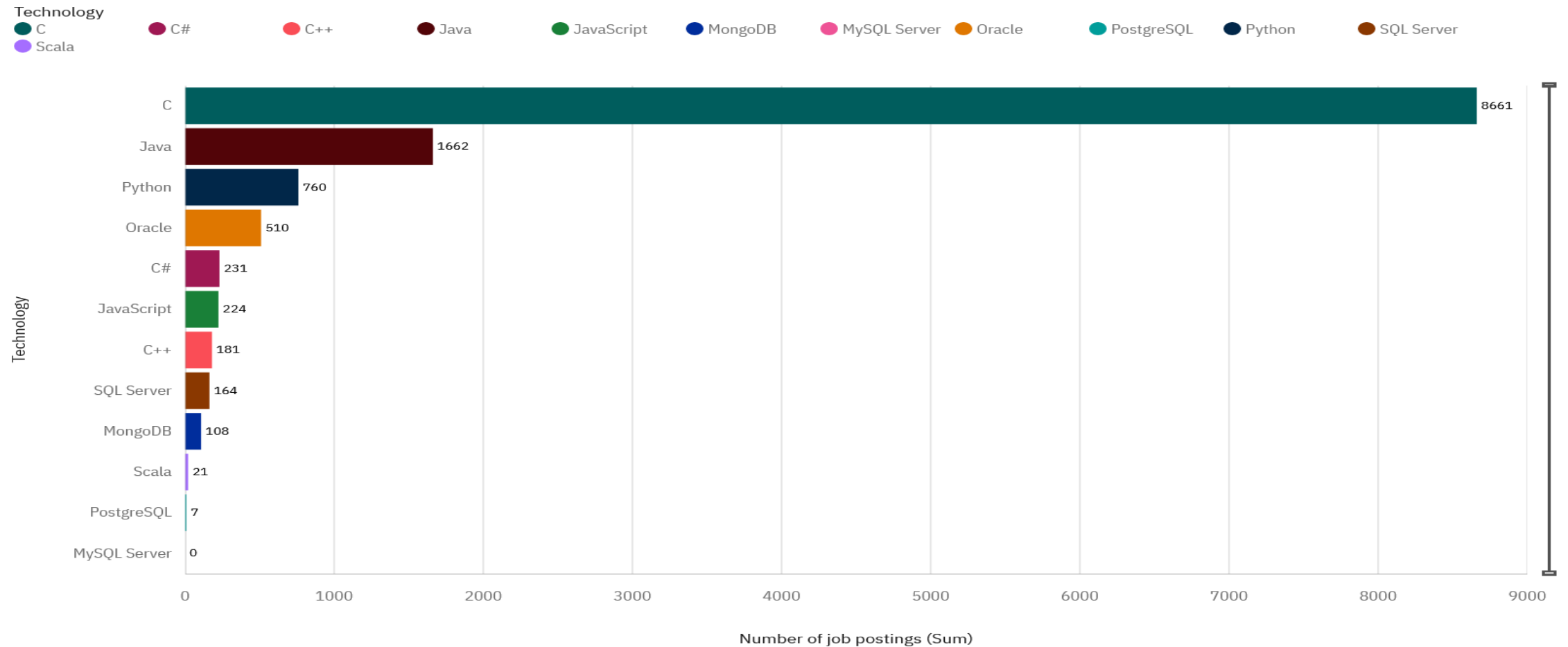
	count
DatabaseDesireNextYear	
PostgreSQL	4328
MongoDB	3649
Redis	3331
MySQL	3281
Elasticsearch	2856

count

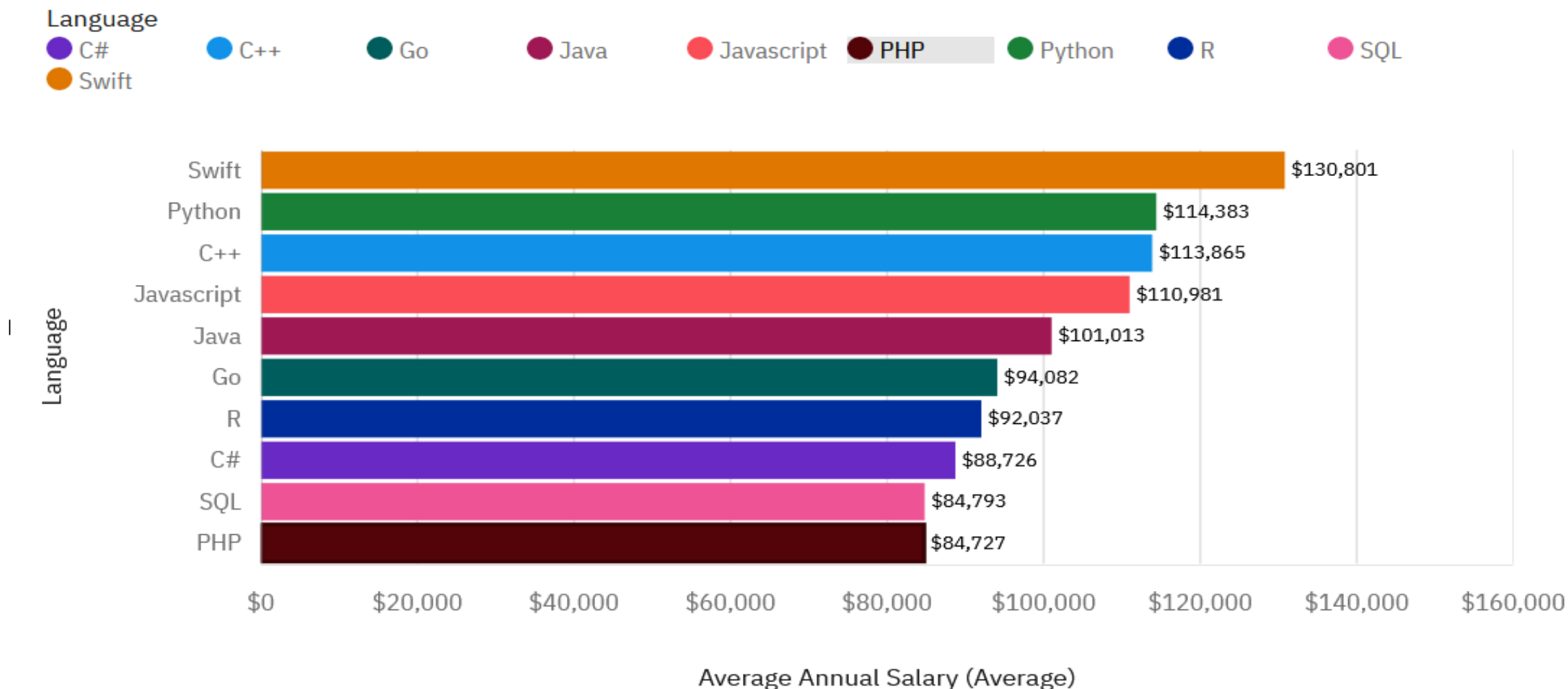


# JOB POSTINGS

Number of Job Postings in Technology



# POPULAR LANGUAGES



# OPEN FOR QUESTIONS

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