



# STACK OVERFLOW DEVELOPER SUURVERY 2019

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October 24/2024

# 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 Analysis and Visualization goal
- Methodology description
  - Data Gathering
  - Data Analysis
  - Data Visualization
- Key finding presentation with graphs and charts
- Discussion of overall finding and implications regarding the results
- Final conclusions of the carried out research

# INTRODUCTION

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- Stack Overflows annual Developer Survey is the largest and most comprehensive survey of people who code around the world.
- Survey don't represent everyone in the developer community evenly
- Nearly 90 thousand developers participated
- Trends to predict where the developers are going for next year
  - Learning new Programming language
  - Learning new Data base programming languages

# METHODOLOGY

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- Collect survey data & explore its content
- Data Wrangling
- Exploratory data analysis
  - Analyzing data distribution
  - Handling outliers.
  - Correlations.
- Data Visualizations
  - Highlight distribution of data, relationships, the composition and comparison of data.
  - Dashboards for user interaction with data

# RESULTS

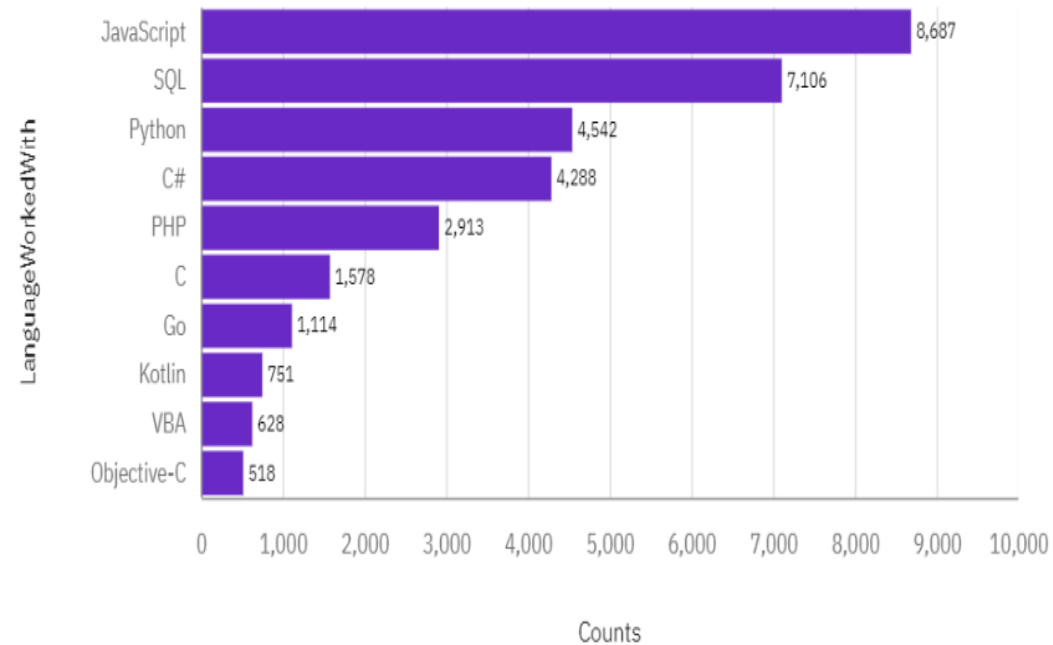
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# PROGRAMMING LANGUAGE TRENDS

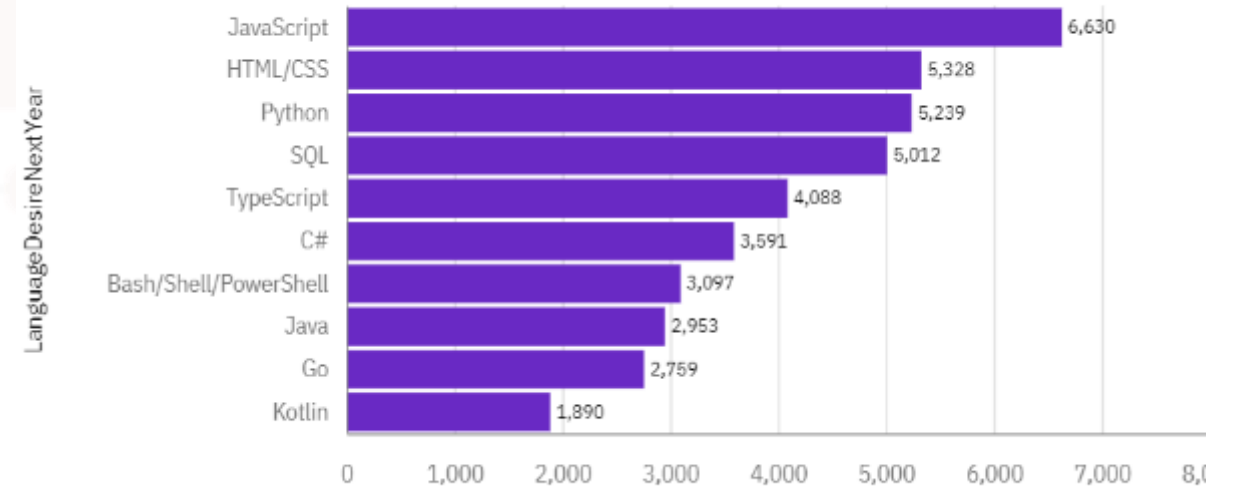
## Current Year

Top 10 LanguageWorkedWith



## Next Year

Top 10 Language Desired Next Year



# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- JavaScript seems to keep as leading language.
- Python fastest-growing.
- Increasing popularity of TypeScript.

## Implications

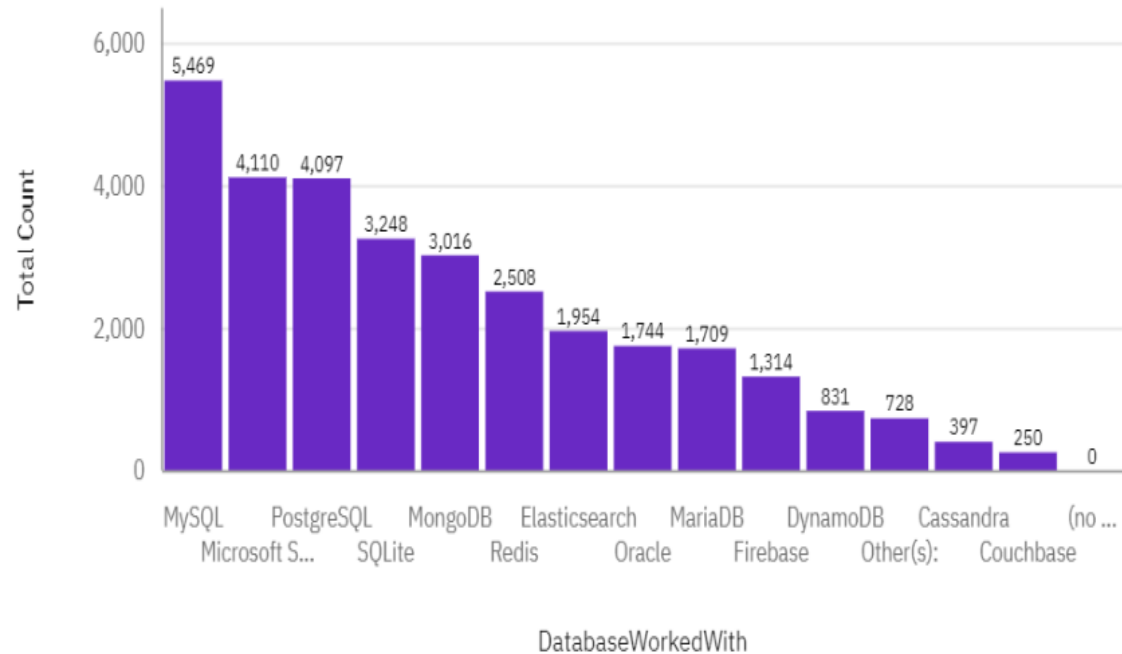
- Possible developer migration from JavaScript to TypeScript.



# DATABASE TRENDS

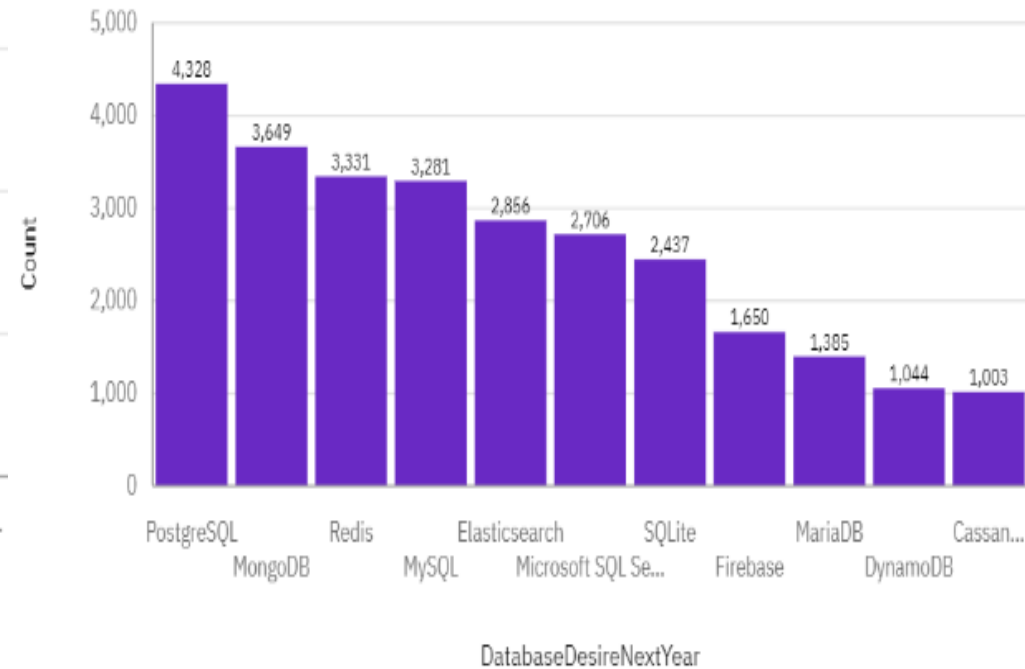
## Current Year

Top 10 Database Worked With



## Next Year

Top 10 Database Desired Next Year



# DATABASE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- MySQL as most used database.
- Lack of interest in Microsoft SQL Server and SQLite
- Increasing interest in PostgreSQL and MongoDB

## Implications

Microsoft SQL server and SQLite losing ground in the market.

PostgreSQL and MongoDB establishment in the market.

# DASHBOARD

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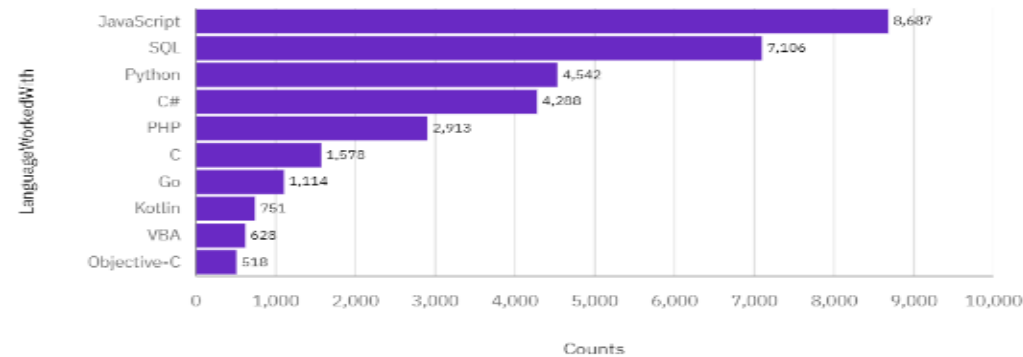
## IBM Cognos Dashboard Link

[https://ap2.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my\\_folders%2FCurrent%2BTechnology%2BUsage.&action=view&mode=dashboard&subView=model00000192b8de103d\\_00000000](https://ap2.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my_folders%2FCurrent%2BTechnology%2BUsage.&action=view&mode=dashboard&subView=model00000192b8de103d_00000000)

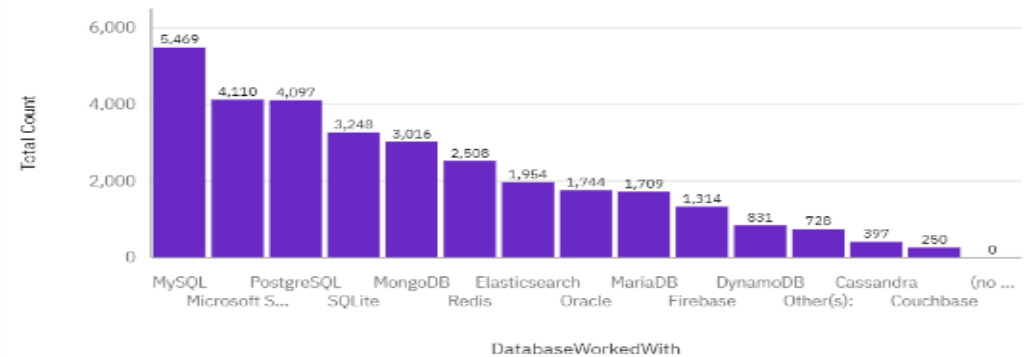
# CURRENT TECHNOLOGY USAGE

## CURRENT TECHNOLOGY USAGE

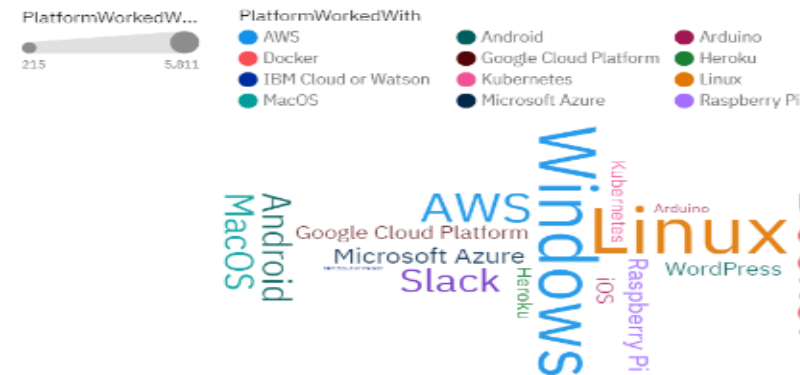
Top 10 LanguageWorkedWith



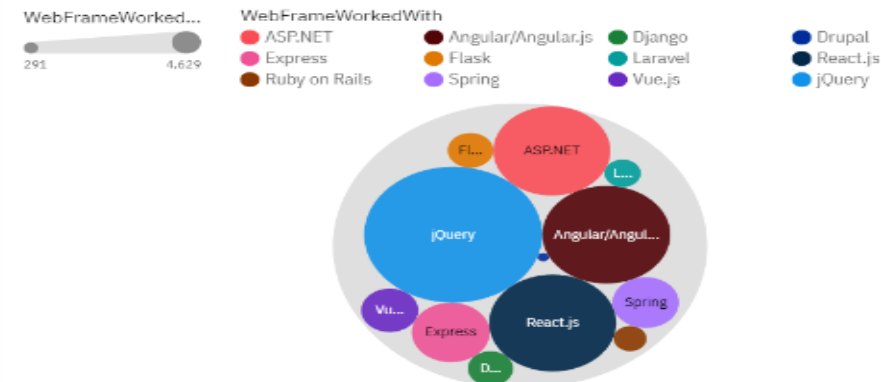
Top 10 DatabaseWorkedWith



Top 10 PlatformWorkedWith



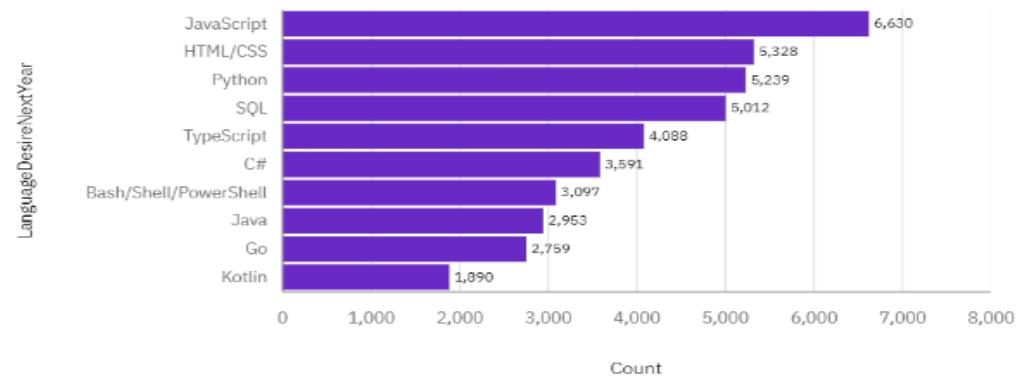
Top 10 WebFrameWorkedWith



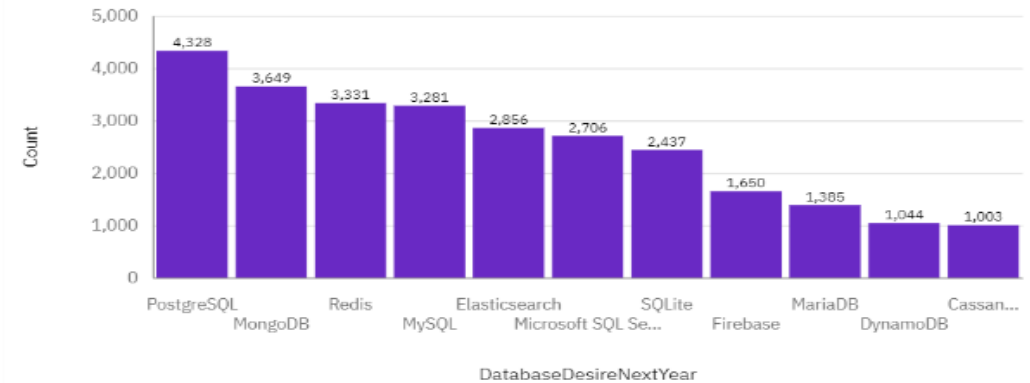
# FUTURE TECHNOLOGY TREND

Future Technology Trend

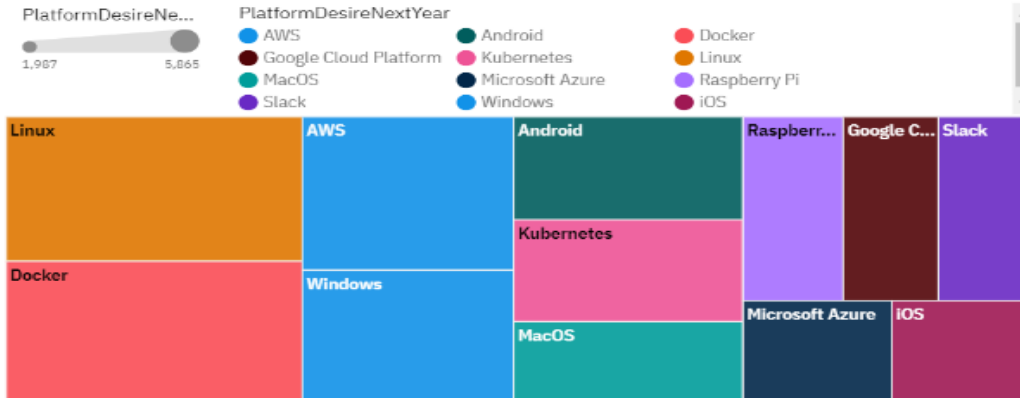
Top 10 Language Desired Next Year



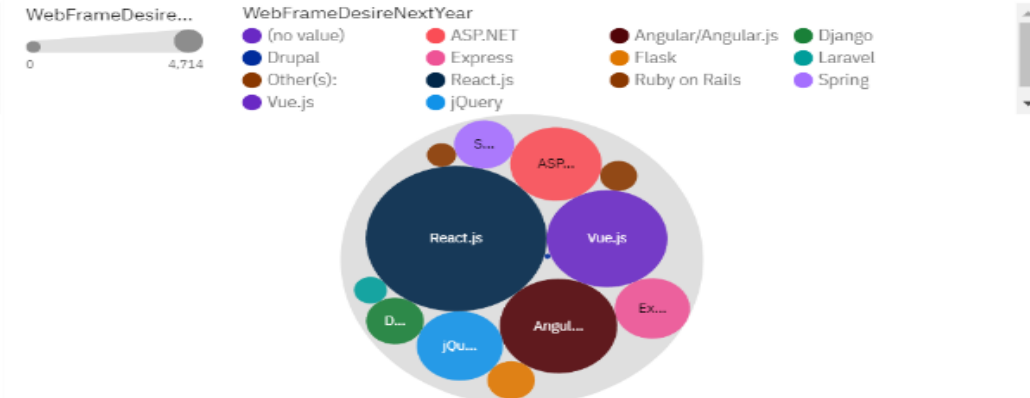
Top 10 Database Desired Next Year



Top 10 Platform Desired Next Year



Top 10 Web Framework Desired Next year

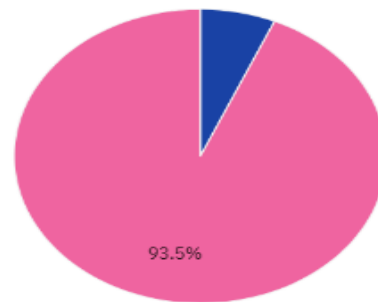


# DEMOGRAPHICS

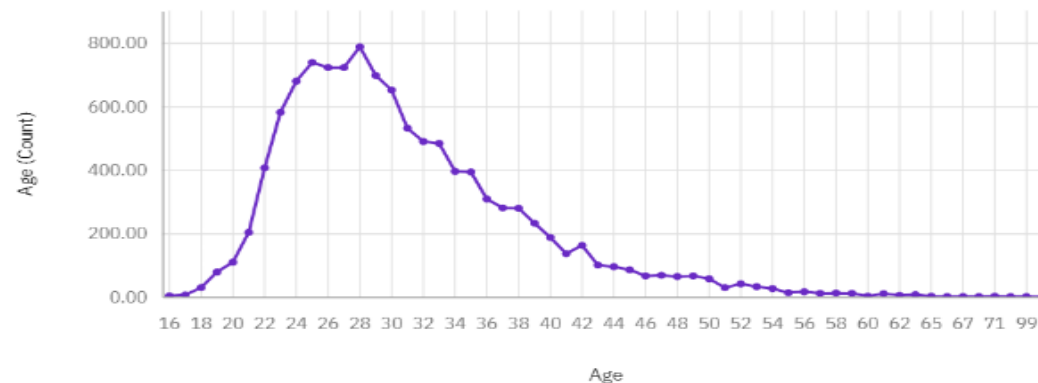
Demographics

Respondent classified by Gender

● Woman ● Man

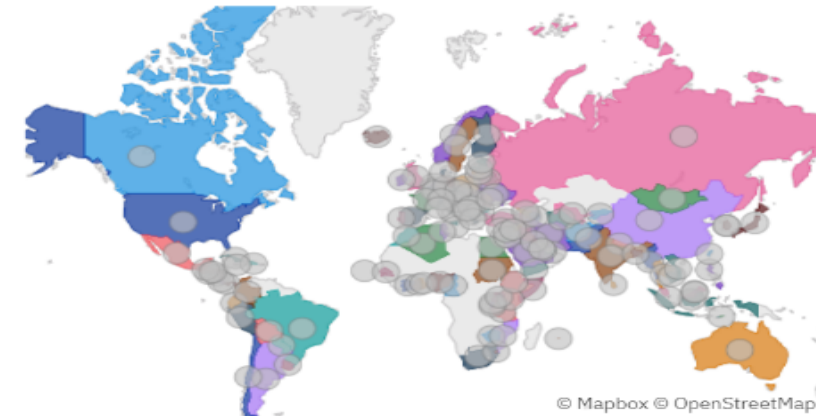


Respondent Count by Age



Respondent Count for Countries

Country  
● Australia  
● Israel  
● South Africa  
● Austria  
● Argentina  
● Iran  
● Hungary  
● United Arab Emirates  
● Nicaragua  
● Mexico  
● South Korea  
● Norway  
● Cape Verde  
● Indonesia  
● Belarus  
● Nepal  
● Panama



Respondent Count by Gender, classified by Formal Education Level

EduOther (Count ...  
7 344

Gender  
● Man ● Woman



# DISCUSSION

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# OVERALL FINDINGS & IMPLICATIONS

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## Findings

- JavaScript is widely used and TypeScript is getting popular.
- Over 90% are young male Developers.
- Developers mostly located in developed countries.

## Implications

- JavaScript and TypeScript web frames gaining followers.
- Global polarization of developers location and gender.
- Young developers without postgrad studies on its majority.



# CONCLUSION

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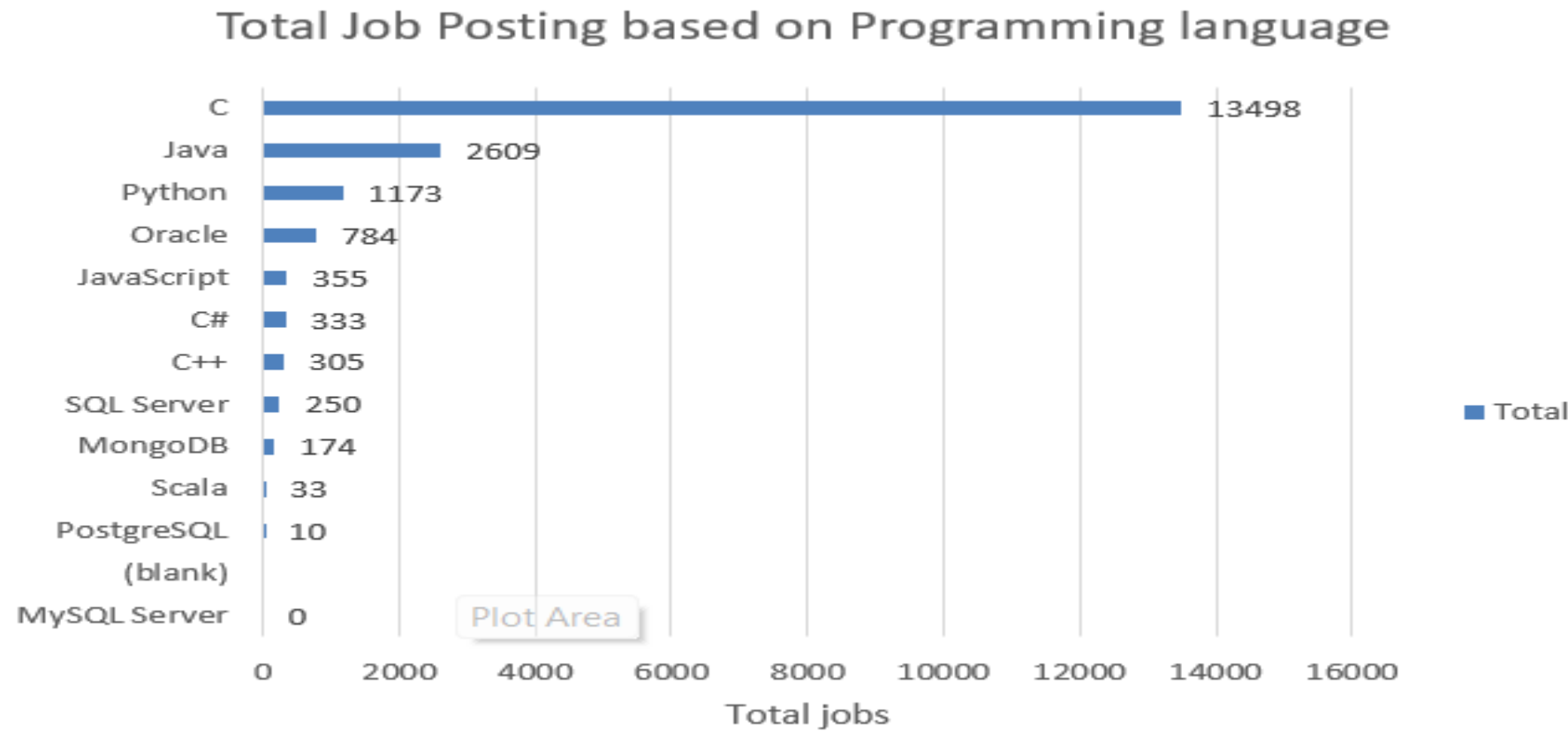
- A good idea of popularity trends of different tools, platforms and languages can be obtained.
- Developers are also from different background.
- We can obtain the future trends of Programming language and Database
- The tech job is spread across the world

# APPENDIX

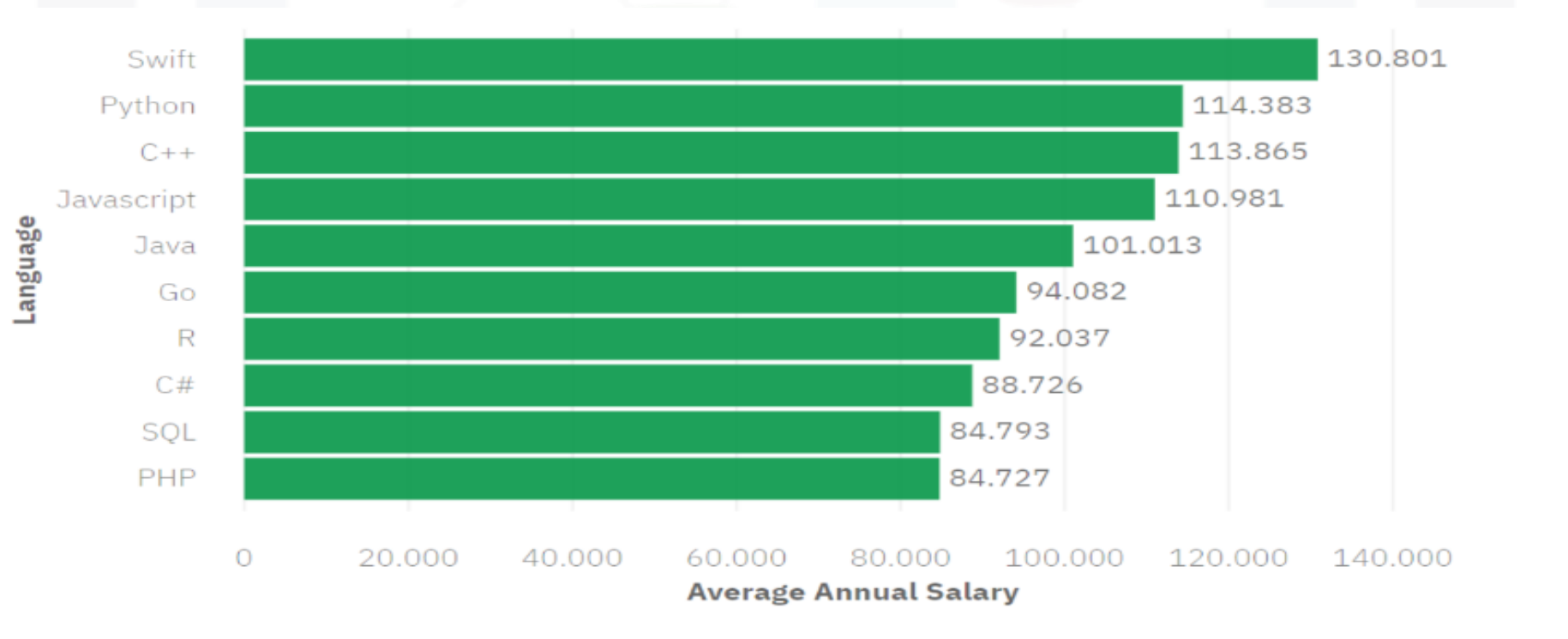
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# JOB POSTINGS



# POPULAR LANGUAGES



# Age Distribution Boxplot

