



# Analysis of Stack Overflow Users

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# OUTLINE



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

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# EXECUTIVE SUMMARY



- Go and Elixir is on the rise
- Elasticsearch is massively on the rise
- Platforms are fairly stagnant. The top is still desirable to learn.
- Angular is popular and is still desirable
  - React is on the rise, and JQuery's popularity is waning
- Most respondents were young Males with either a Bachelor's or Master's Degree

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# INTRODUCTION



- Stack Overflow is home to the most popular programming forum on the internet
- Plenty of developers use it as a source
- Analyzing their position and desires can help you figure out the direction of programming.

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# METHODOLOGY



- Data is derived from two csv files from Stack Overflow's survey
  - 1 is demographic data
  - 2 is normalized technical data
- Cognos Analytics was used to probe and visualize the data.

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# RESULTS

Many desired and current technologies lined up but there were a few outliers.

Most Stack Overflow users were young male college graduates.

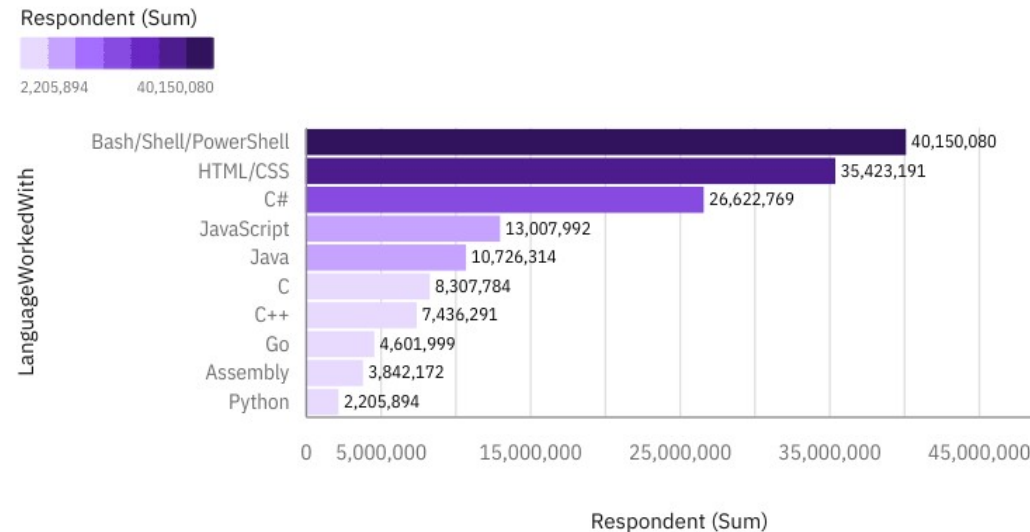
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# PROGRAMMING LANGUAGE TRENDS

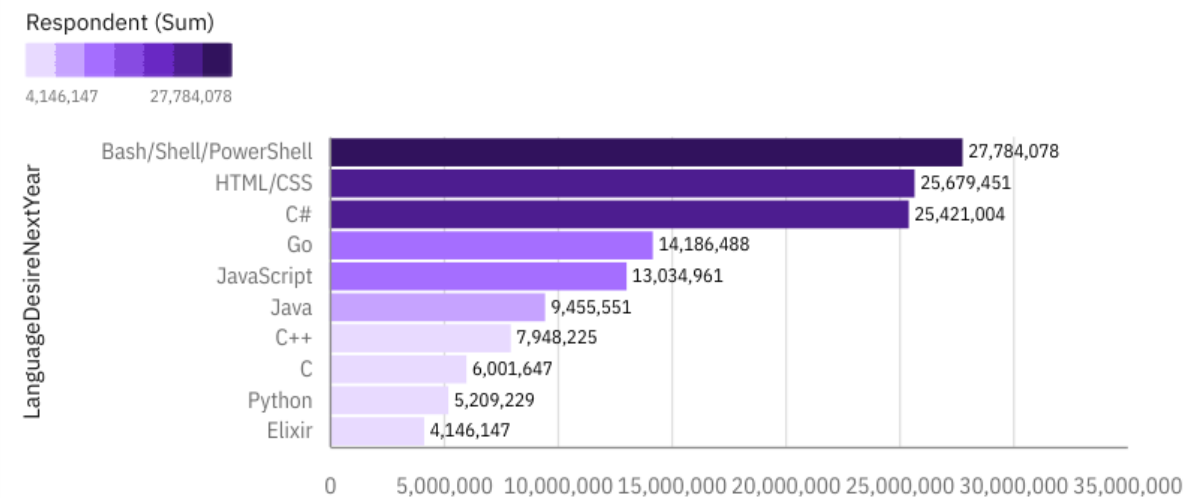
Current  
Year

Next  
Year

Top 10 Most Worked with Languages



Top 10 Most Desired Languages to Use



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# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

## Findings

- Bash/Shell have a smaller desired than current number
- Go, Elixir, Python on the rise

## Implications

- Bash/Shell interest and work may be declining
- Go, Elixir, and Python may be a fad or big

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# DATABASE TRENDS

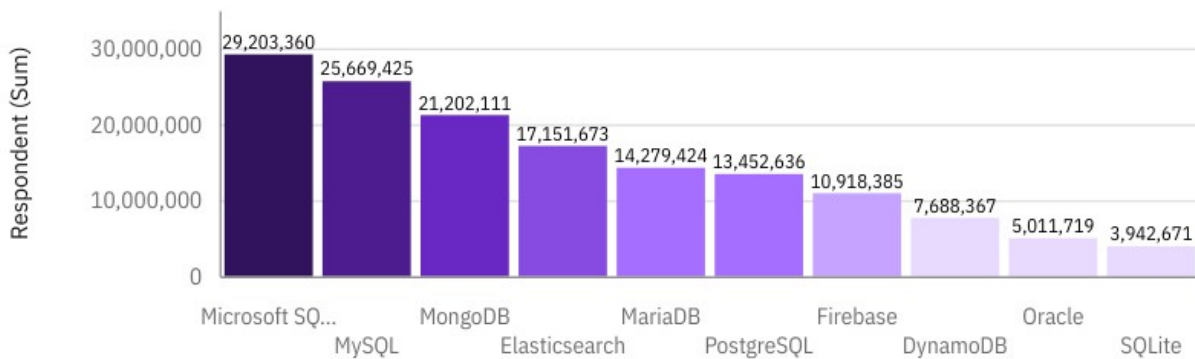
Current  
Year

Next  
Year

Respondent (Sum)



3,942,671 29,203,360



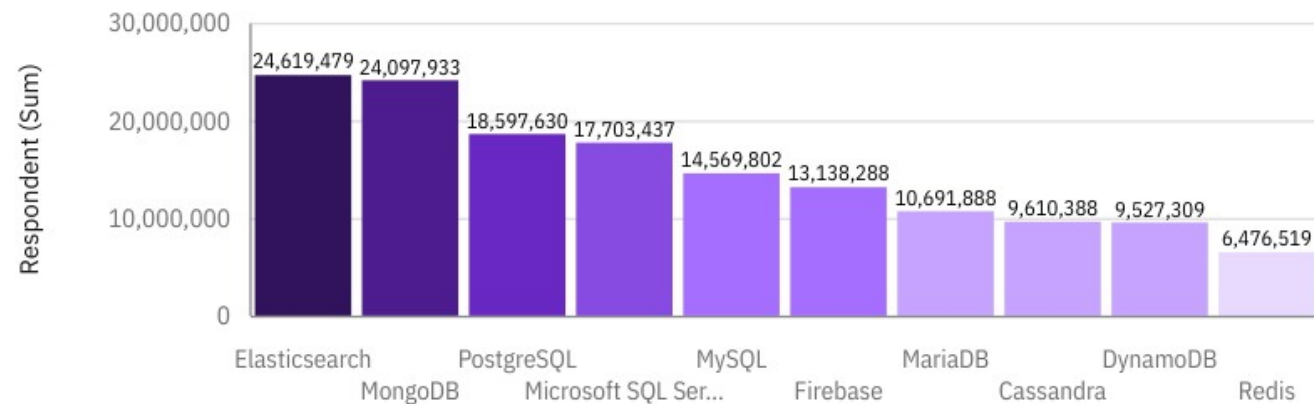
DatabaseWorkedWith

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Respondent (Sum)



6,476,519 24,619,479



DatabaseDesireNextYear

# DATABASE TRENDS - FINDINGS & IMPLICATIONS

## Findings

- Elasticsearch and MongoDB have much larger desired than current numbers
- MS SQL Server and MySQL have smaller desired than current numbers

## Implications

- Elasticsearch/MongoDB are on the rise
- MySQL/MS SQL are on the decline.

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# DASHBOARD

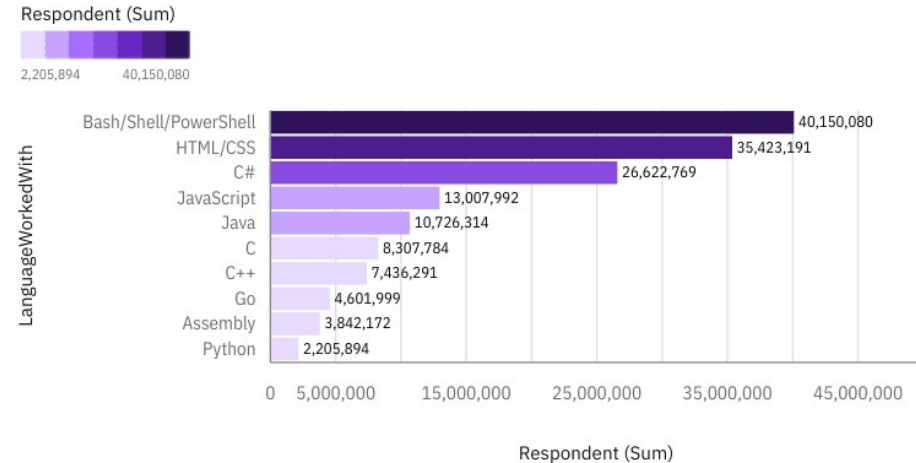


- <https://github.com/kacpersienkiewicz/IBM-Capstone-Project/tree/main/IBM%20Cognos%20Dashboard>

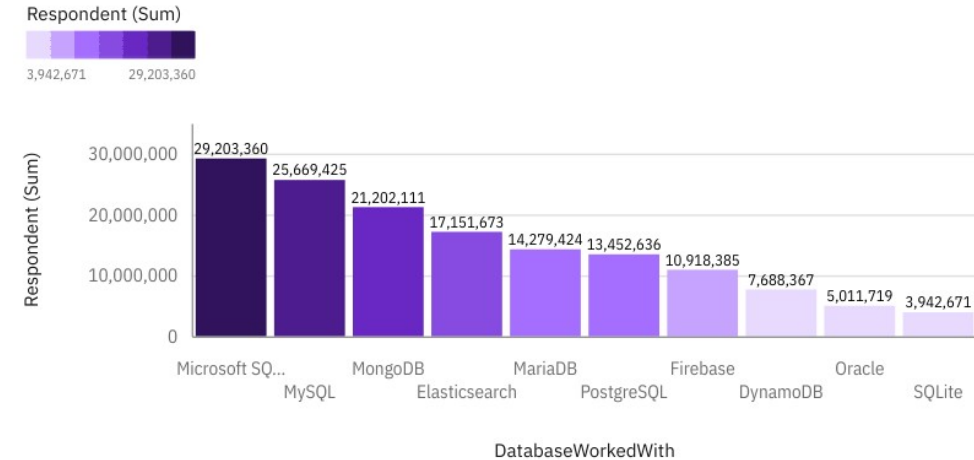
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# Current Technology Usage

Top 10 Most Worked with Languages



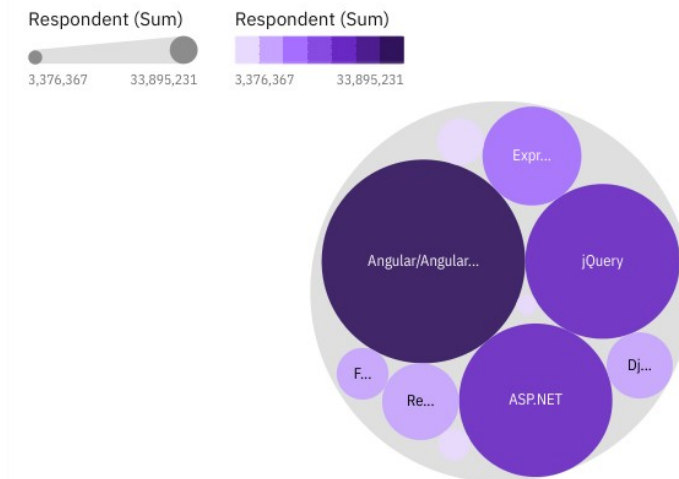
Top 10 Most Worked with Databases



Most Worked on Platforms

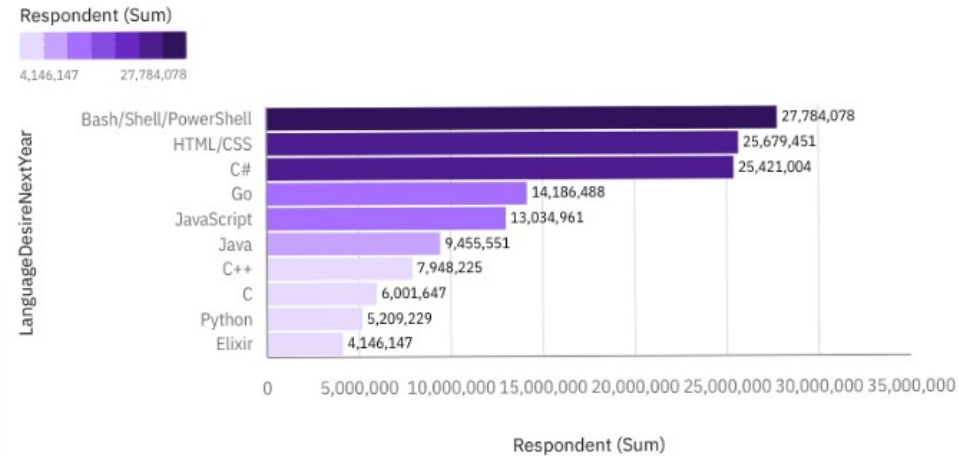


Top 10 Used Webframes

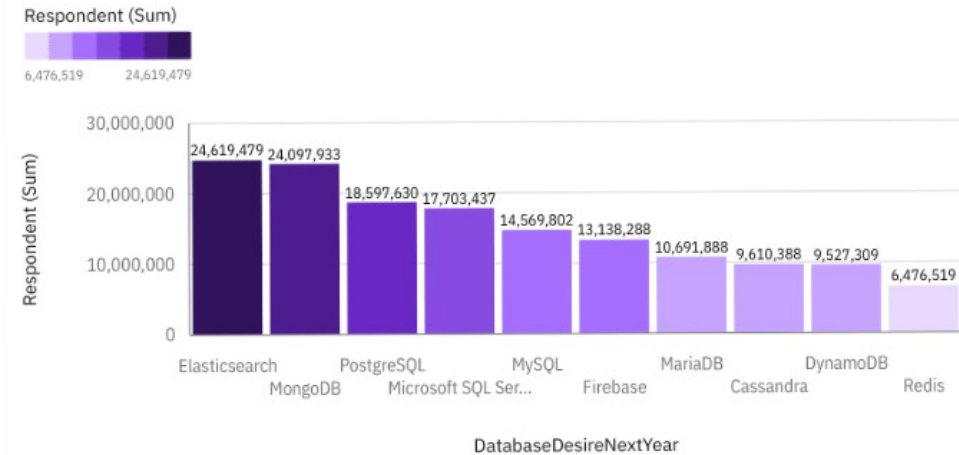


# Future Technology Trends

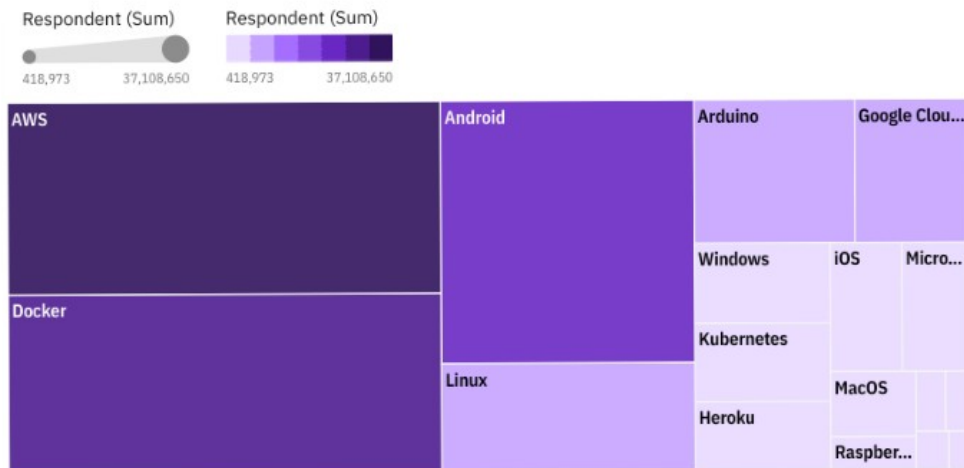
Top 10 Most Desired Languages to Use



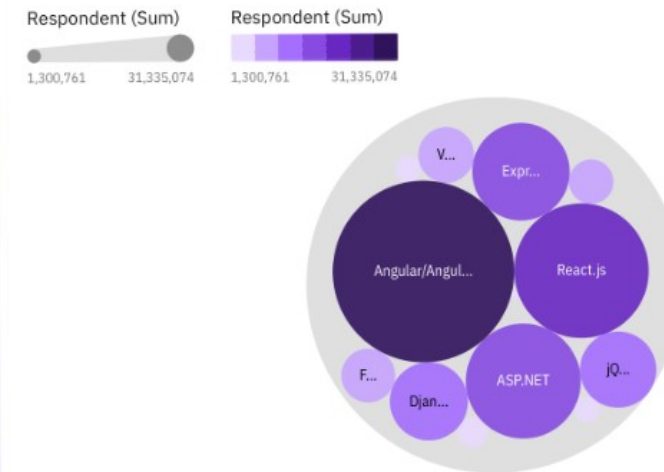
Top 10 Most Desired Databases to Use



Desired Platform to use next Year



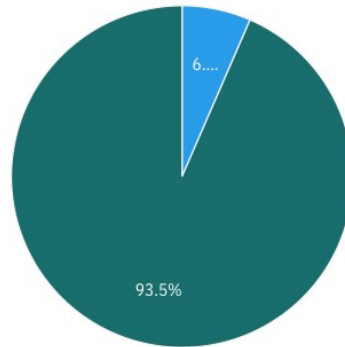
Top 10 Most Desired Web Frames to Use



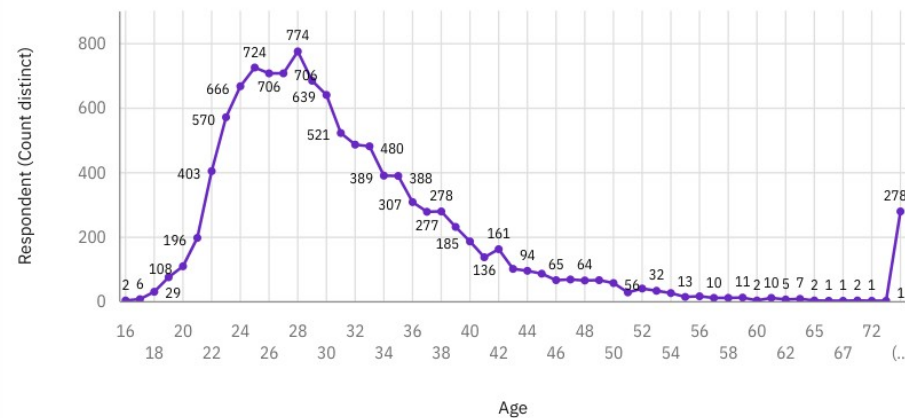
# Demographics

Respondent classified by Gender

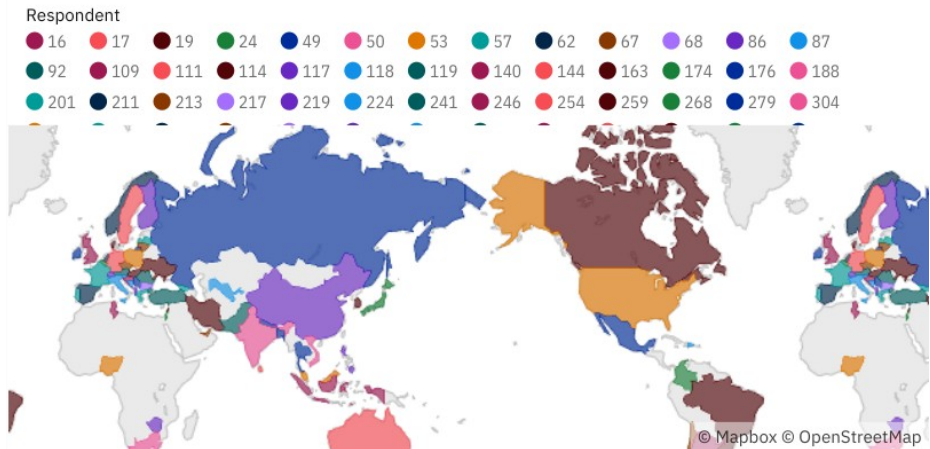
Gender  
 ● Woman ● Man



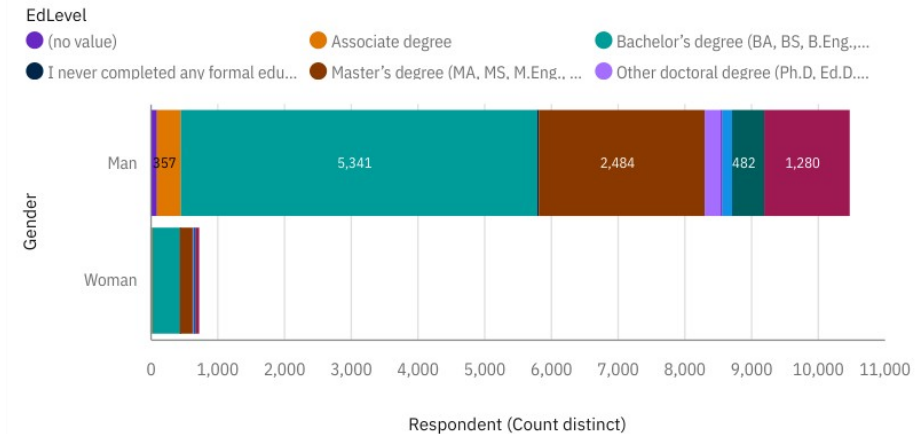
Respondent Count by Age



Respondent Count for Countries



Respondent Count by Gender, classified by Formal Education Level



# DISCUSSION



- The platforms seem stagnant.
- Angular is popular now and is likely to be in the future.
- Demographics are varied geographically.

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# OVERALL FINDINGS & IMPLICATIONS

## Findings

- Most fields are stagnant aside from a few outliers.
- Most respondents are college Graduate young males

## Implications

- Outliers like Go, Elasticsearch and MySQL should be kept tabs on
- We do not have much insight into older and hobbyist developers

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# CONCLUSION



- Go, Elasticsearch, Elixir, and MongoDB may explode in popularity
- Bash/Shell/PowerShell, MySQL, and MS SQL Server may decline
- More data needs to be gathered specifically on hobbyist, older, and female developers.

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- Point 4

# APPENDIX



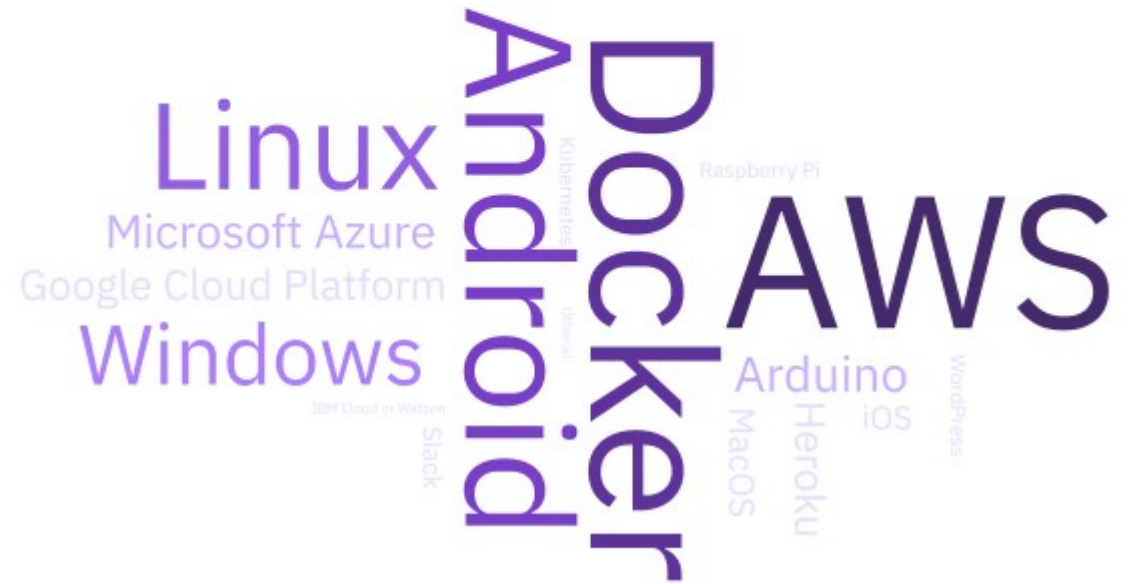
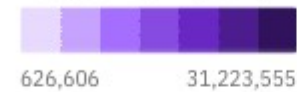
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## Most Worked on Platforms

Respondent (Sum)

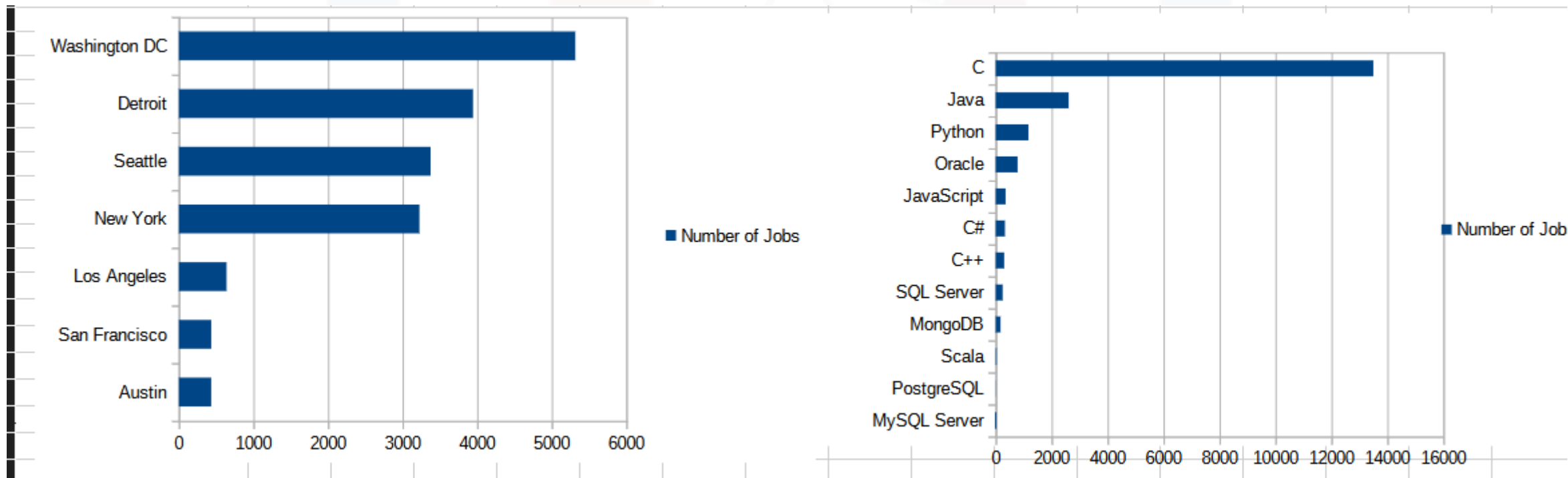


Respondent (Sum)



# JOB POSTINGS

## Organized by Location and Language



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# POPULAR LANGUAGES

