



<IBM capstone  
Report>

<Ornelle>

<19/12/2023>

# 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 contextualisation and analysis
- Methodology
  - Data collection
  - Data Analysis
  - Data Visualisations
- Results and output
- Discussion of overall findings and implication
- Final conclusion

# INTRODUCTION

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- Stack Overflow's annual Developer survey is a comprehensive survey of coders around the world
- For anyone interested in the Market for programming Languages
- Reader will get Trends to predict where developers are going
- Describes developers activities around the world
- Insights could be gained from the results

# METHODOLOGY

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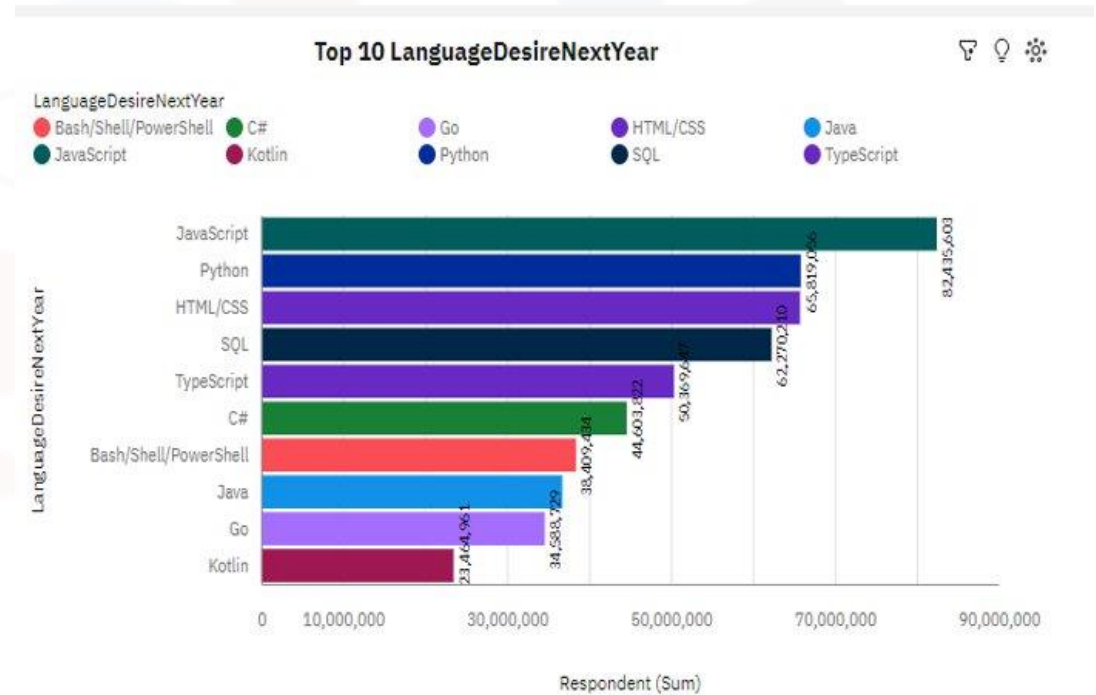
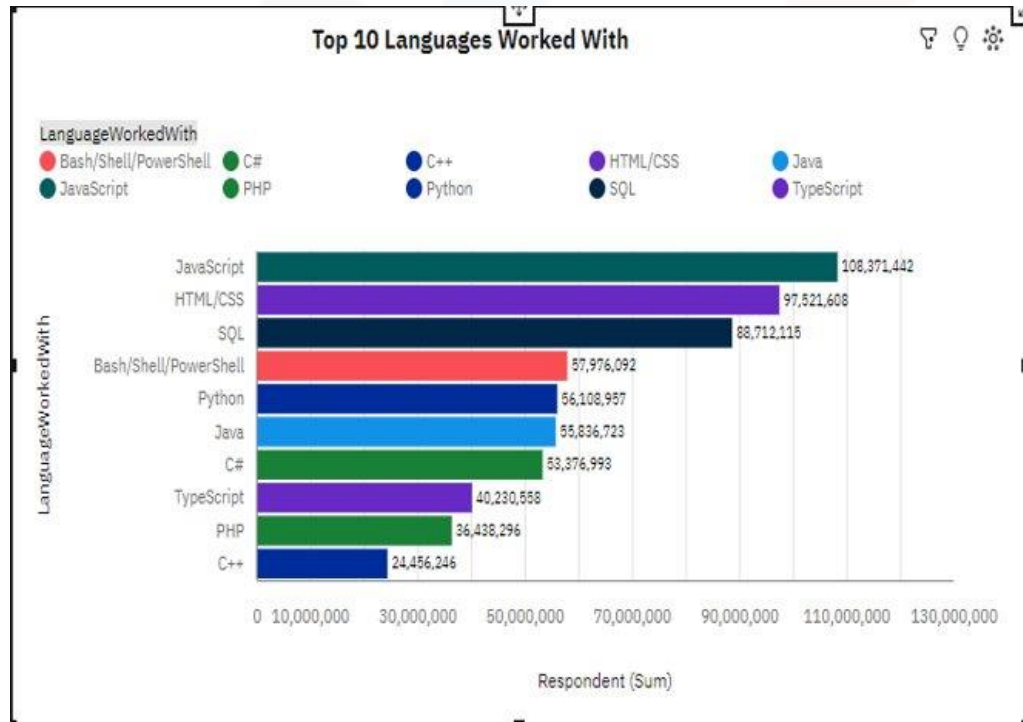


- The data was collected and explored
  - Used Webscraping
  - APIs
  - python
- Sources
  - Stack overflow developer survey results
- Data was wrangled
- Data was explored
  - Analysing
  - Handling outliers
  - Corelations
- Data visualisation
  - Distribution., comparison and composition

# RESULTS



# PROGRAMMING LANGUAGE TRENDS



# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

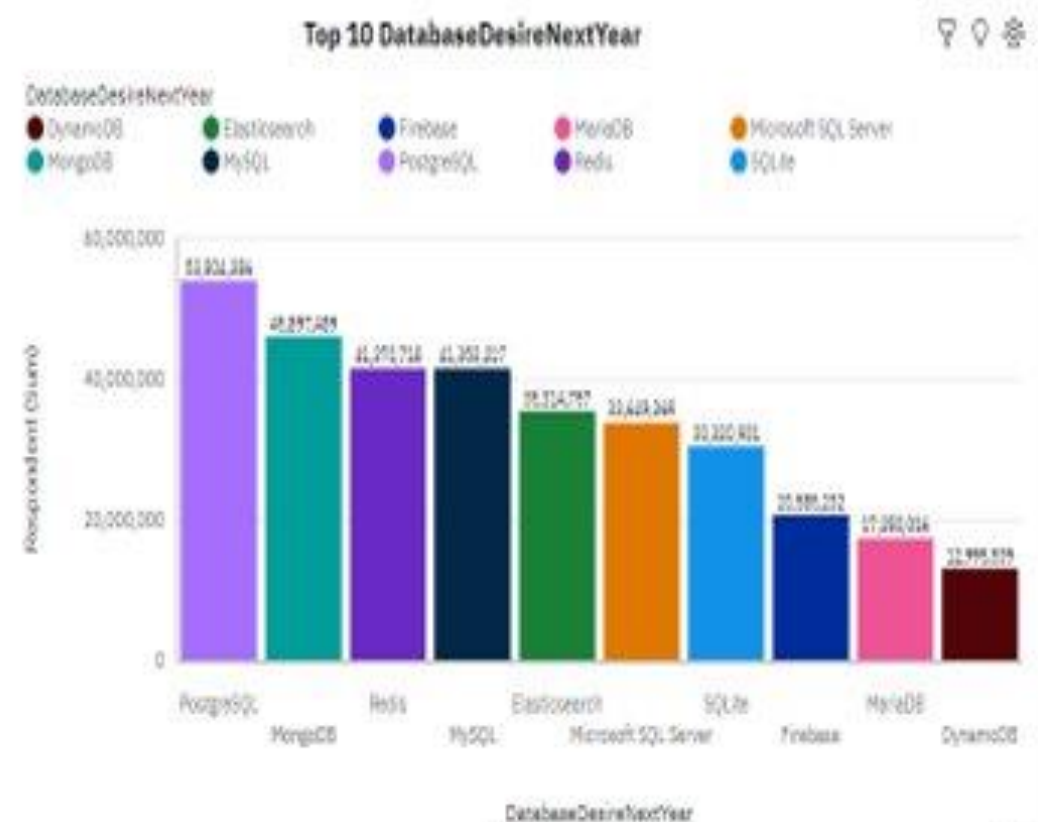
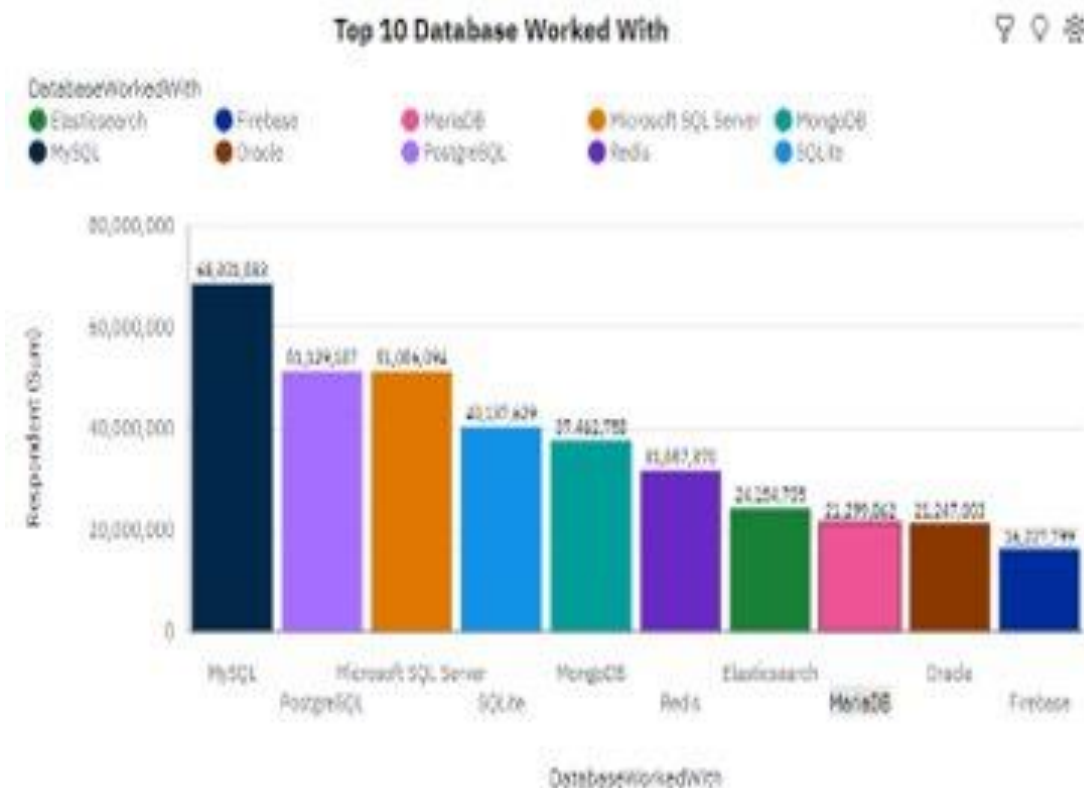
- JavaScript is the most popular programming language
- Python is gaining popularity overcoming Html/CSS
- Kotlin is one of the top 10 desired programming languages
- PHP is not one of the top 10 anymore

## Implications

- JavaScript is used in a variety of fields and projects and this trends may increase
- More people will use python
- Kotlin is increasing in popularity this trend could continue
- PHP popularity is decreasing



# DATABASE TRENDS



# DATABASE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- There is a general increase when it comes to database
- MySQL drops from first place
- PostgreSQL overcomes MySQL, MongoDB and Redis
- There is an increase in Firebase, Redis, Elasticsearch
- A decrease in SQLite and Oracle can be seen

## Implications

- More people use databases
- This could imply more databases will be used instead of MySQL
- PostgreSQL is growing due to ease of querying
- Firebase is popular because it does not need backend processes
- SQL decrease may be SQLite only allows normal file access permissions

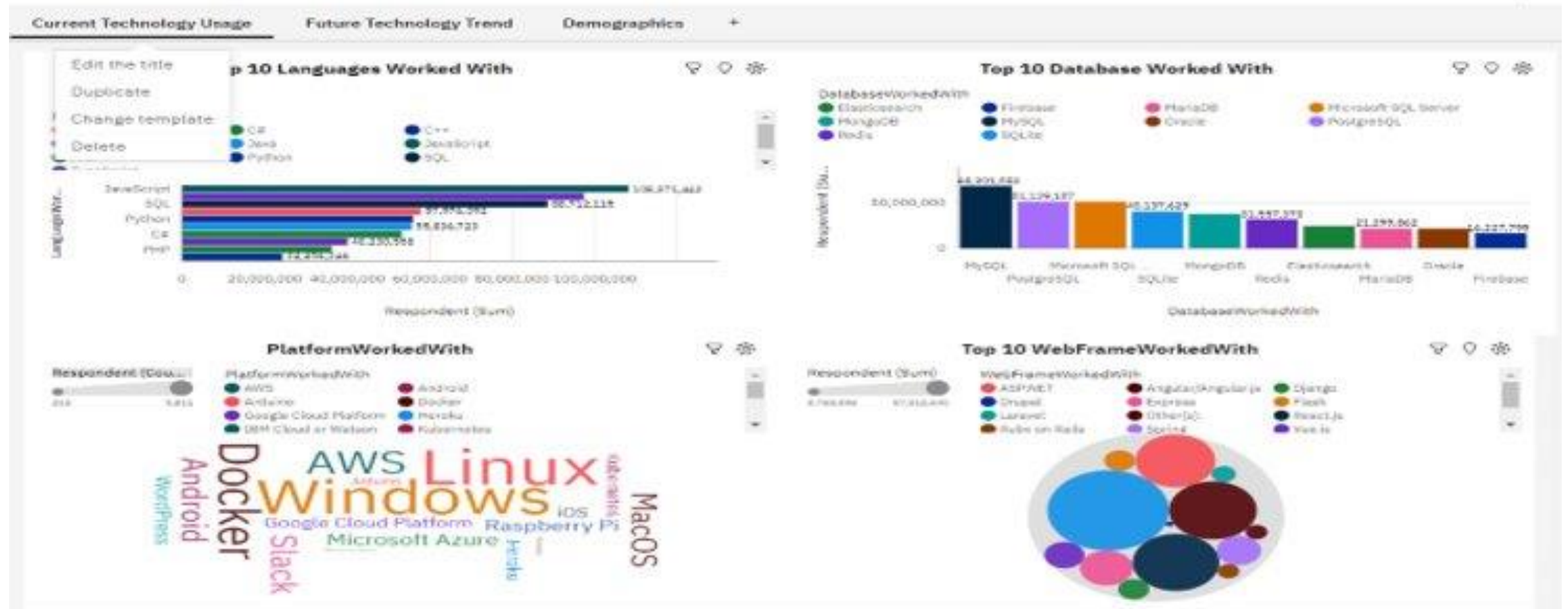
# DASHBOARD

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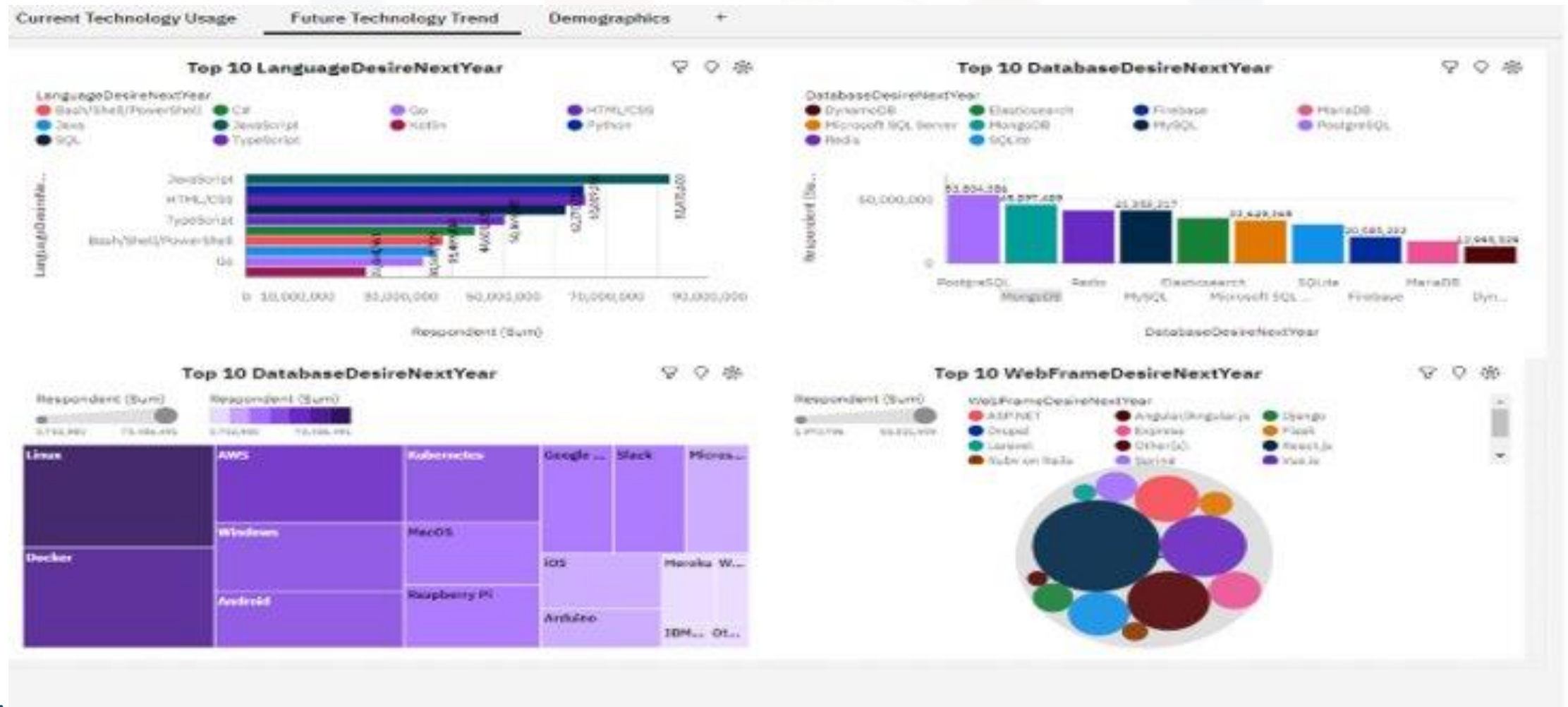


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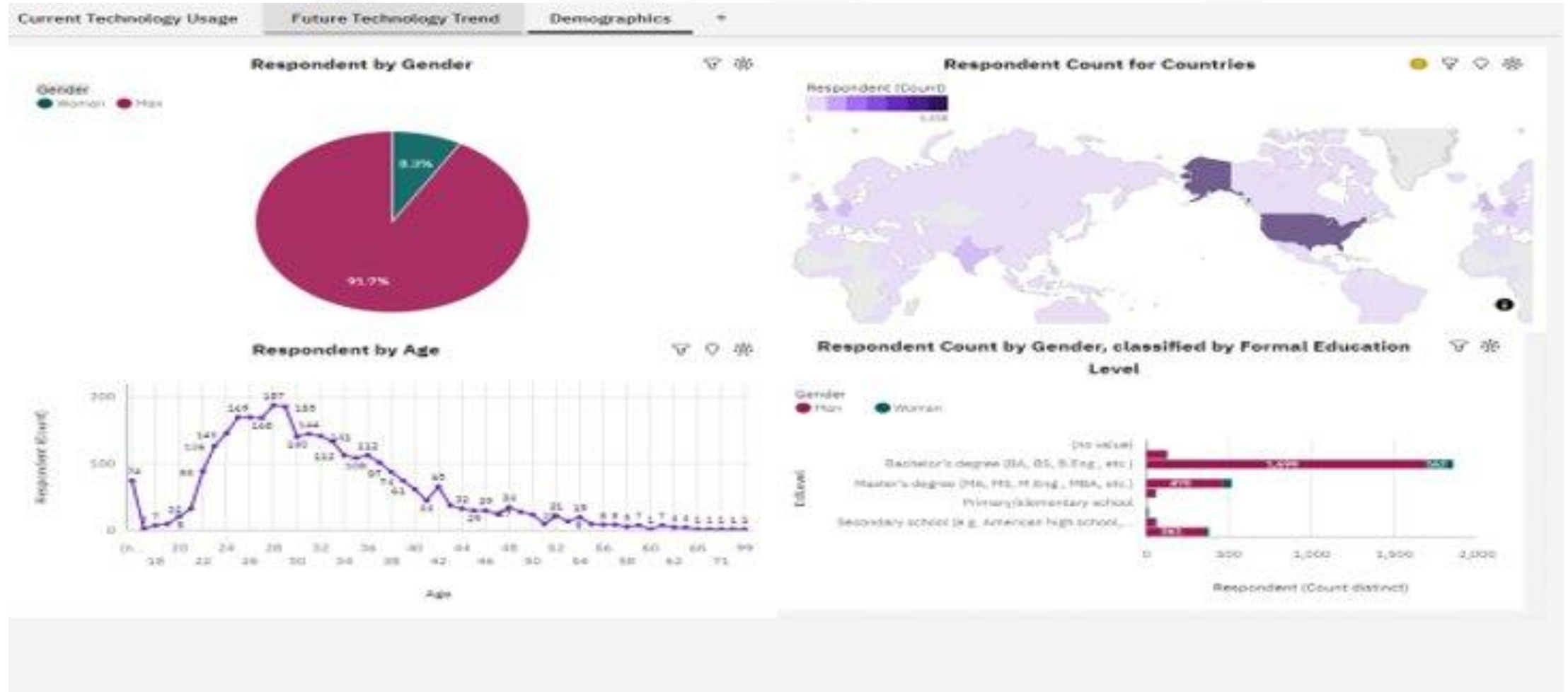
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# DASHBOARD TAB 2

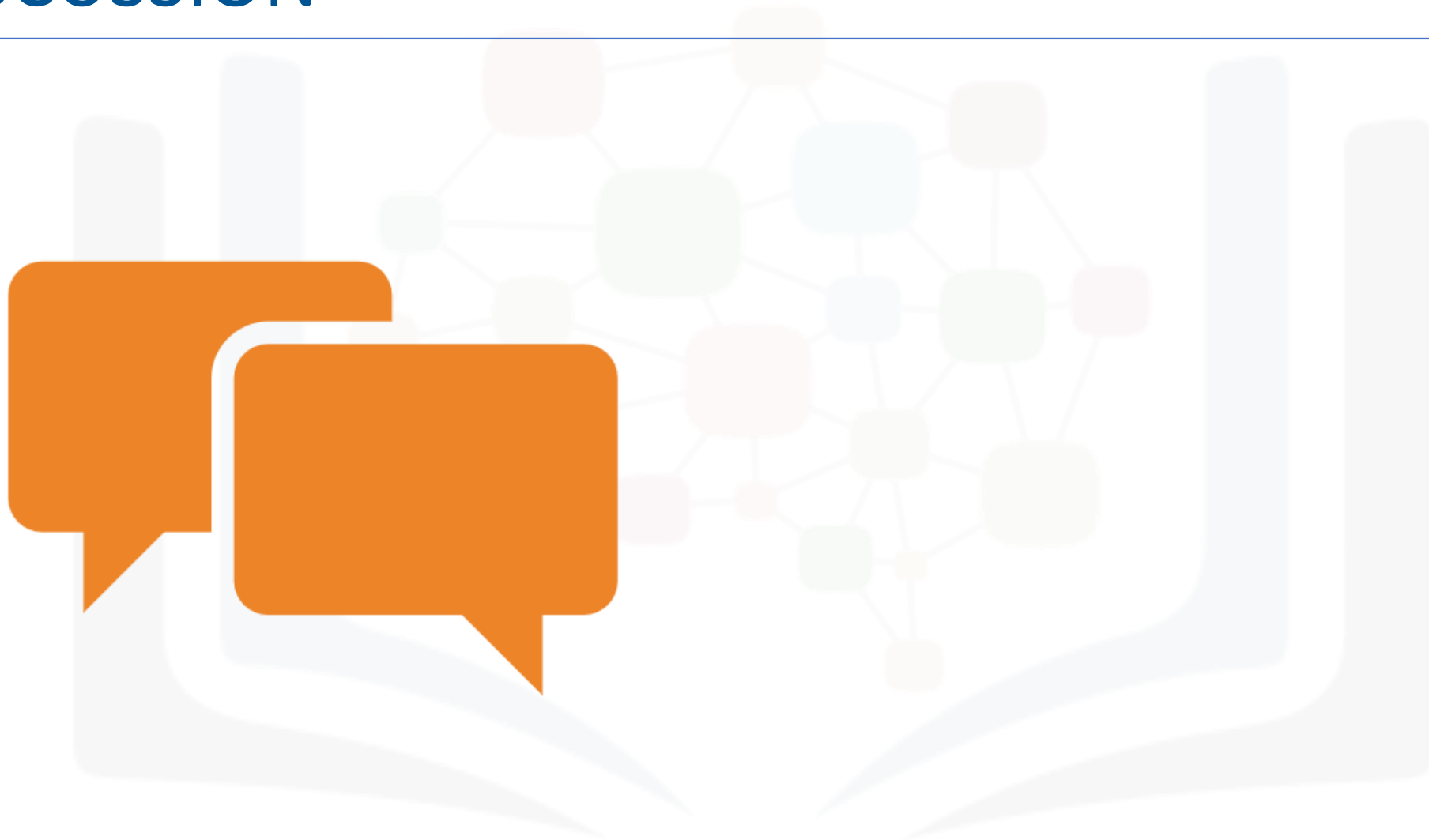


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# DISCUSSION

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# OVERALL FINDINGS & IMPLICATIONS

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## Findings

- There is a rise in the use of programming languages and databases.
- Javascript is very popular and PostgreSQL popularity is increasing
- More than 90% of developers are male
- Developers are mostly from developed countries

## Implications

- This will lead to people being more skilled
- Many more Jobs will be posted related to this language and Database
- More efforts should be made to increase female interest in developers world market
- More young people in developed countries need to be encouraged to get interest in tech and developing



# CONCLUSION

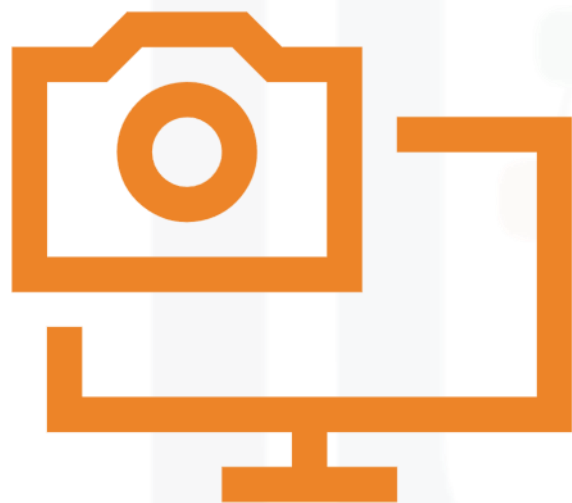
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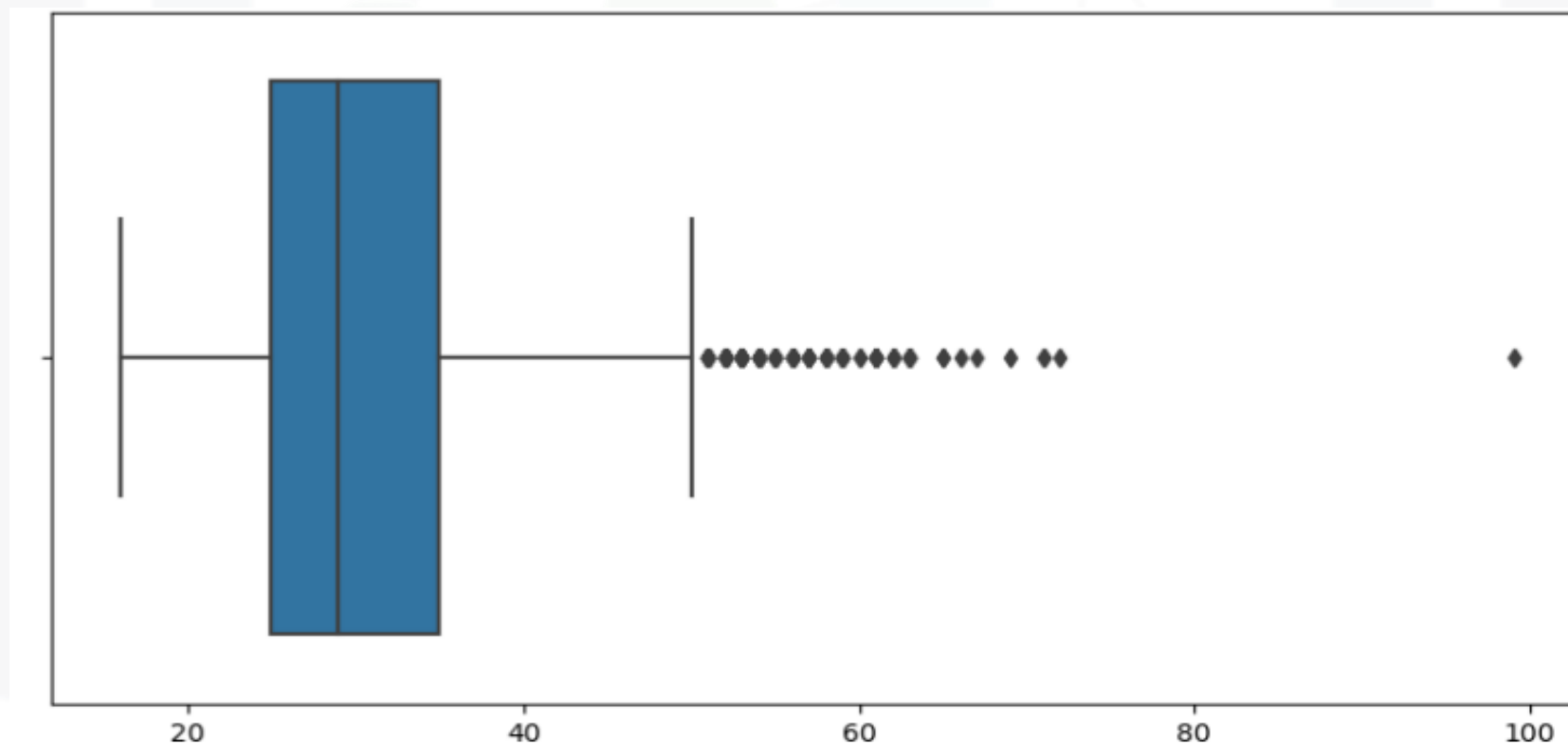
- A good idea of popularity trends of different tools , platforms, and language can be gained.
- Many developing countries do not have wide accessibility of this technical market so improvements could be made.
- Women should be encouraged to join the technical market

# APPENDIX

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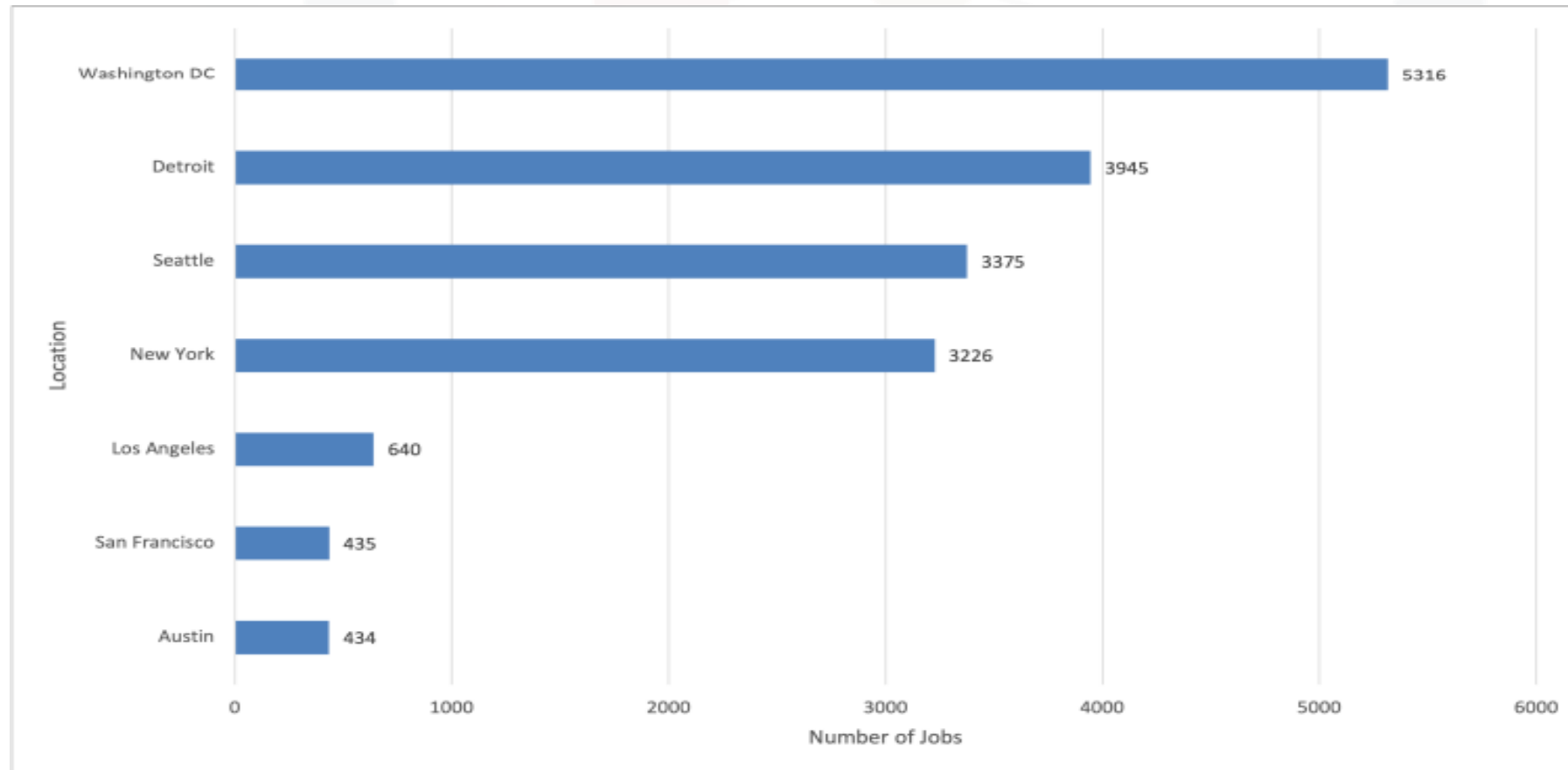


# AGE DISTRIBUTION BOXPLOT



# JOB POSTINGS

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# POPULAR LANGUAGES

