



# STACK OVERFLOW DEVELOPER SURVEY 2019

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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 goal.
- Methodology description.
  - Data gathering.
  - Data analysis.
  - Data visualizations.
- Results presentation supported with graphs and trends.
- Discussion of overall findings and implications regarding the results previously exposed.
- Final conclusions of the carried out research.

# INTRODUCTION

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- Stack Overflow's annual Developer Survey is the largest and most comprehensive survey of people who code around the world.
  - Results don't represent everyone in the developer community evenly.
- Nearly 90,000 developers.
- Trends to predict where the developers are going.
  - Characterization of developers around the globe.

# METHODOLOGY

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- Collect survey data & explore its content
  - Web Scraping
  - APIs.
  - Request library.
- Data Wrangling
- Exploratory data analysis
  - Analyzing data distribution.
  - Handling outliers.
  - Correlations.
- Data Visualization
  - Highlight distribution of data, relationships, the composition and comparison of data.
- Dashboards

# RESULTS

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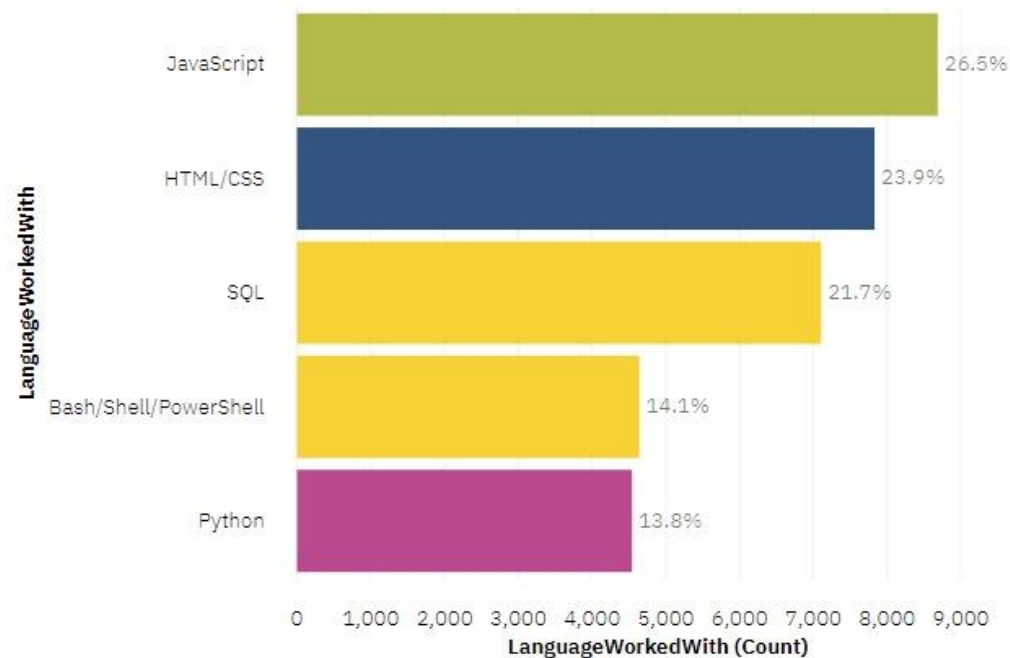
# PROGRAMMING LANGUAGE TRENDS

## Current Year

Top 5 programming languages for the Current year

LanguageWorkedWith

JavaScript  
HTML/CSS  
SQL  
Python  
Bash/Shell/PowerShell

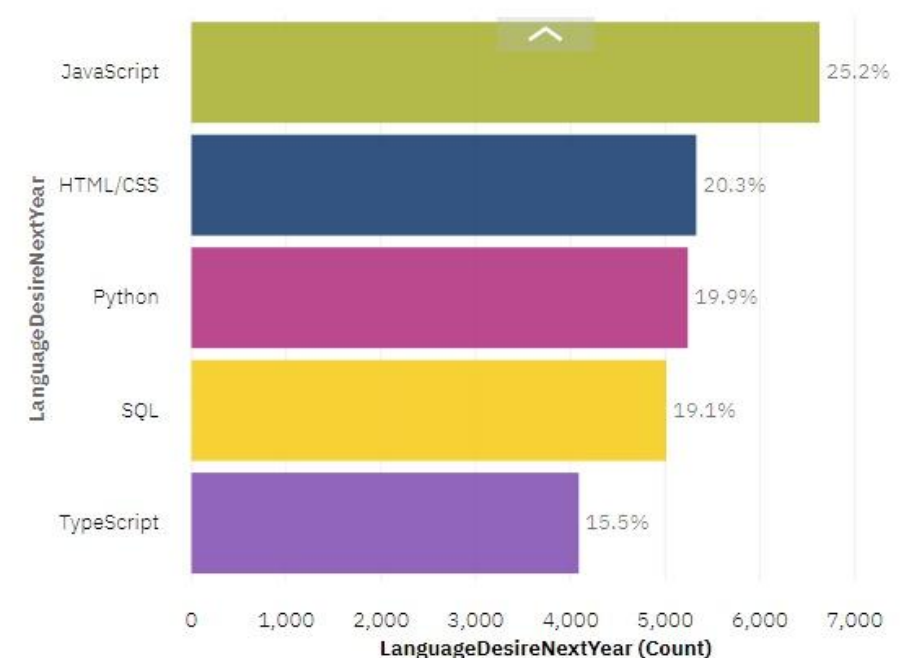


## Next Year

Top 5 programming languages for Next year

LanguageDesireNextYear

JavaScript  
HTML/CSS  
Python  
SQL  
TypeScript



# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- Javascript, HTML/CSS, SQL, Shell languages and Python are the most used languages currently.
- Javascript, HTML/CSS, Python, SQL, and Typescript will be the most used languages next year and future years.
- Python will have more demand than SQL next year.

## Implications

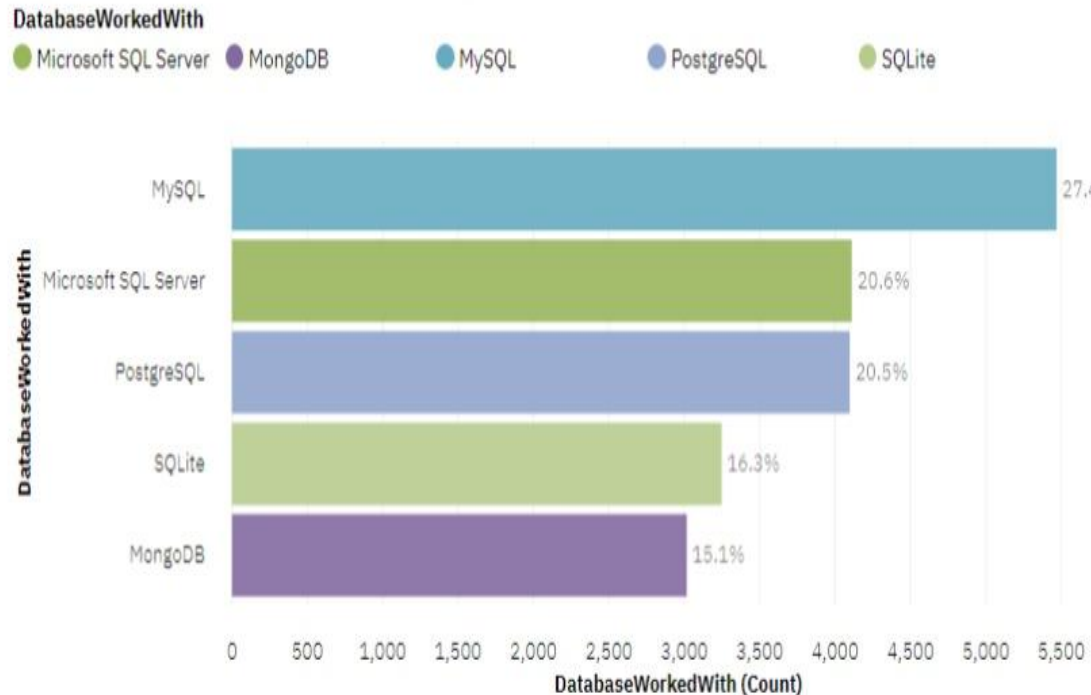
- Javascript and HTML are used for web development which means that web development as a tech skill has the highest demand, especially as Typescript is getting viral.
- Python is gaining more and more traction due to the increase in demand for AI and ML skills.
- SQL is still the most relevant language for data professionals. It is important for aspiring data analysts, scientists, business analysts etc to have SQL skills.



# DATABASE TRENDS

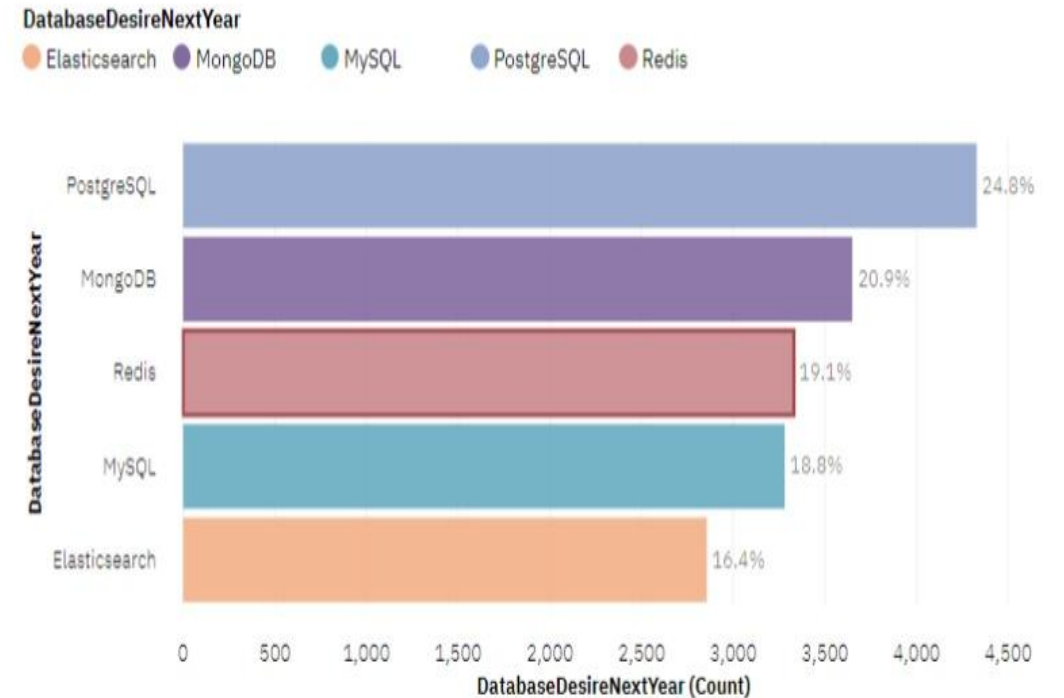
Current Year

Top 5 Databases in the Current year



Next Year

Top 5 Databases for the Next Year



# DATABASE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- MySQL, Microsoft SQL server, Postgre SQL, SQLite and MongoDB are the top 5 most used databases at the moment.
- However, Postgre SQL, MongoDB, Redis, MySQL and Elasticsearch are projected to become more popular in the future.
- Redis and Elasticsearch are relatively new tools and are set to gain more traction in the IT space.

## Implications

- SQL is still a top tool to watch out for in data specialists.
- Companies still prefer Open source databases.
- Oracle SQL was not among the top 5. It is losing relevance as time passes.

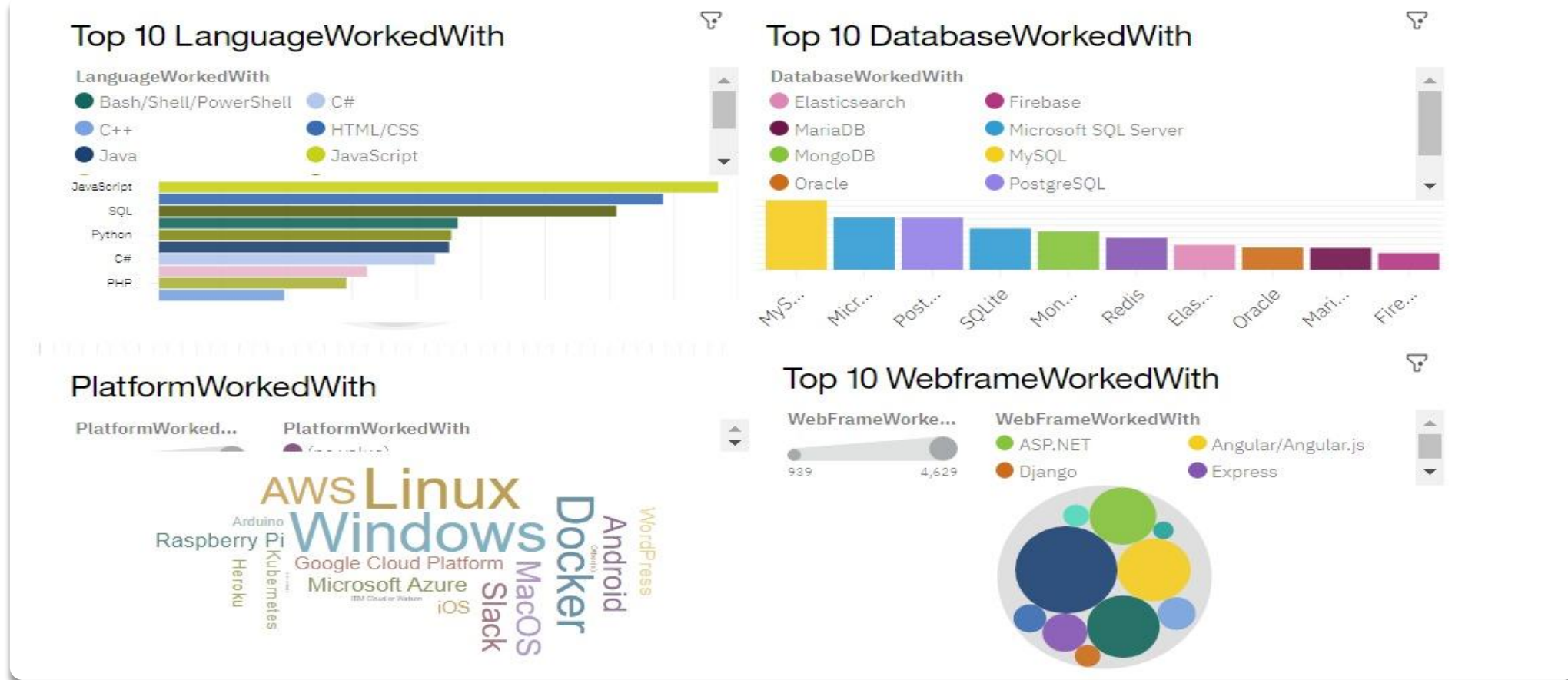
# DASHBOARD

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The permanent link of the Cognos dashboard:  
<https://github.com/MinaJadav/testtepro>

# DASHBOARD TAB 1

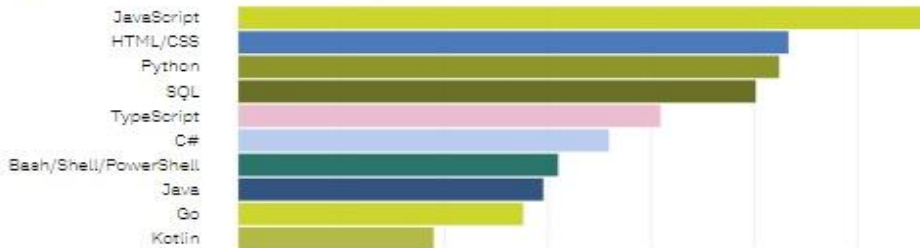


# DASHBOARD TAB 2

## Top 10 LanguageDesireNextYear

LanguageDesireNextYear

● Bash/Shell/PowerShell ● C#  
● Go ● HTML/CSS



## Top 10 Most Desired Databases

DatabaseDesireNextYear

● DynamoDB ● Elasticsearch  
● Firebase ● MariaDB



## Most desired Platforms next year

PlatformDesireN...

PlatformDesireN...

0 5,865 0 5,865



## Most Desired Web frames Next Year

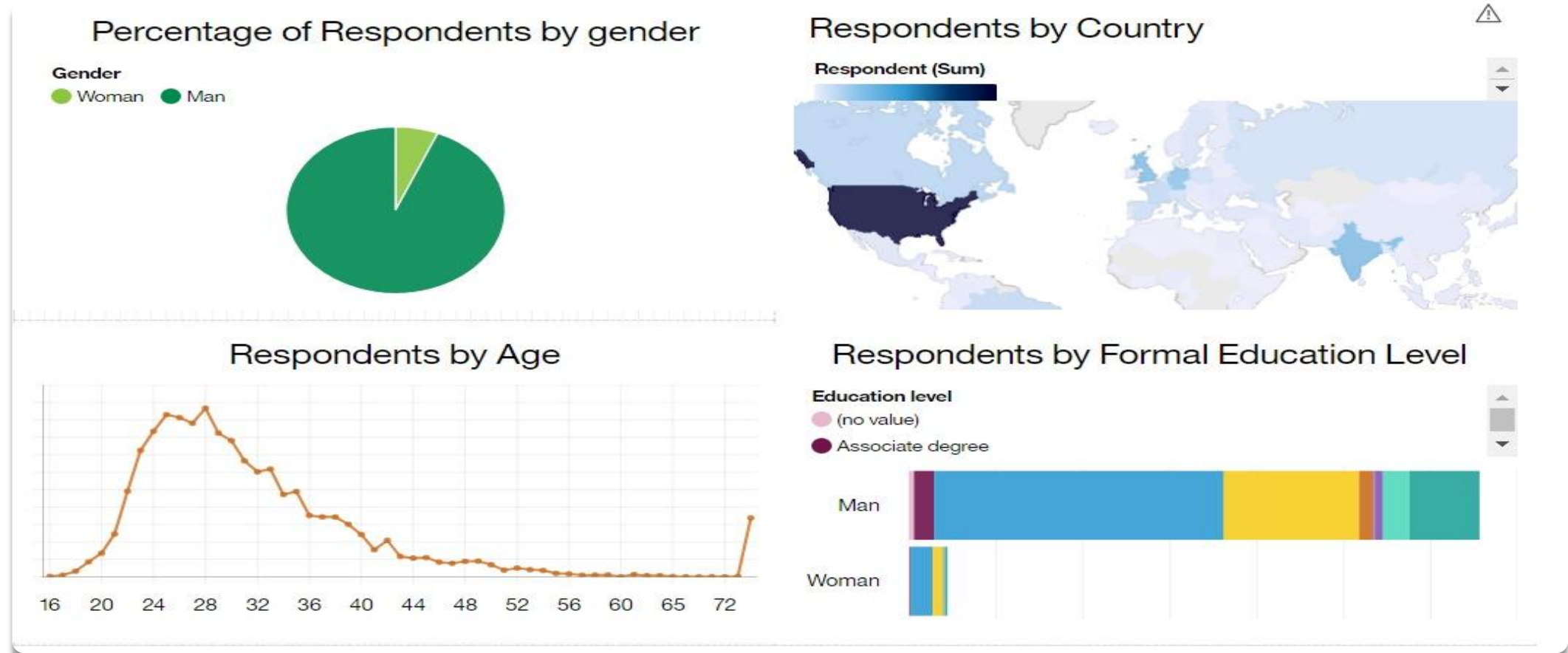
WebFrameDesire...

WebFrameDesireNextYear

0 4,714 ● (no value) ● ASP.NET



# DASHBOARD TAB 3



# DISCUSSION

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- Upskilling in the Technology sector.
- How do we close the wide gender gap in the Technology sector?
- Is completing a masters or doctorate degree really a requirement?
- The increasing demand for mobile development as Kotlin is getting popular.
- More tech education, access and development in less developed regions in South east Asia, South America, Africa and some parts of Europe.
- How relevant will Oracle SQL still be in the future?



# OVERALL FINDINGS & IMPLICATIONS

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## Findings

- Findings
- JavaScript widely used and TypeScript getting popular.
- Over 90% 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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- Developers are people with very marked characteristics.
- A good idea of popularity trends of different tools, platforms and languages can be obtained.
- There is a job to be done to spread accessibility of this labor market to countries in development.

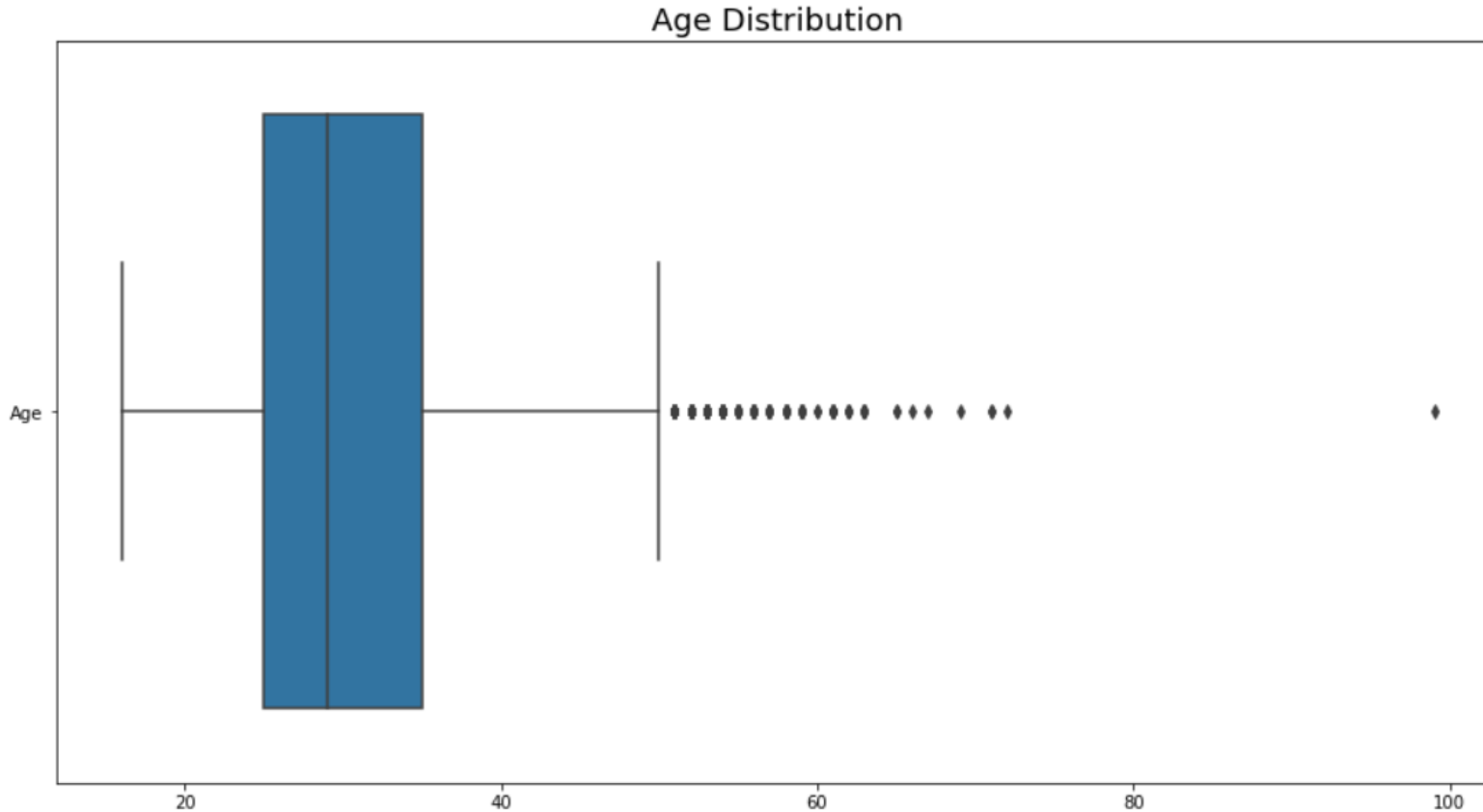
# APPENDIX

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- Include any relevant additional charts, or tables that you may have created during the analysis phase.

# JOB POSTINGS



# POPULAR LANGUAGES

