



# Mapping Current and Future Technology Usage by Developers

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# OUTLINE

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

# EXECUTIVE SUMMARY

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- The analysis is about exploring today's technology trends.
- The following information will be analyzed:
  - Current Technology Usage
  - Future Technology Trend
  - Current Demographic Situation
- Explanation of Insights from Data Analysis
- Conclusions from the analysis

# INTRODUCTION

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- This report analyzes current and futures technology usage by developers classified by gender, age, country and education level.
- Target audience are: Business leaders, developers, IT managers.
- The gain is a clear understanding of current technology trends, receive a practical guidance on adapting to these trends and understand the implications of technology choices on business operations and competitiveness.

# METHODOLOGY

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- Data sources used in this report came from a 2019 Stack Overflow Developer Survey; this dataset include nearly 90,000 respondents
- The data was collected considering:
  - Survey analysis
  - Community insights
  - Statistical analysis
  - Supplementary data (for demographics)
- The data has been cleaned of any omissions and errors in their preparation
- The data have been formatted to produce the clearest graphical representation possible.

# RESULTS

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The following findings highlight current trends in the use of programming languages , databases, platforms and webframes.

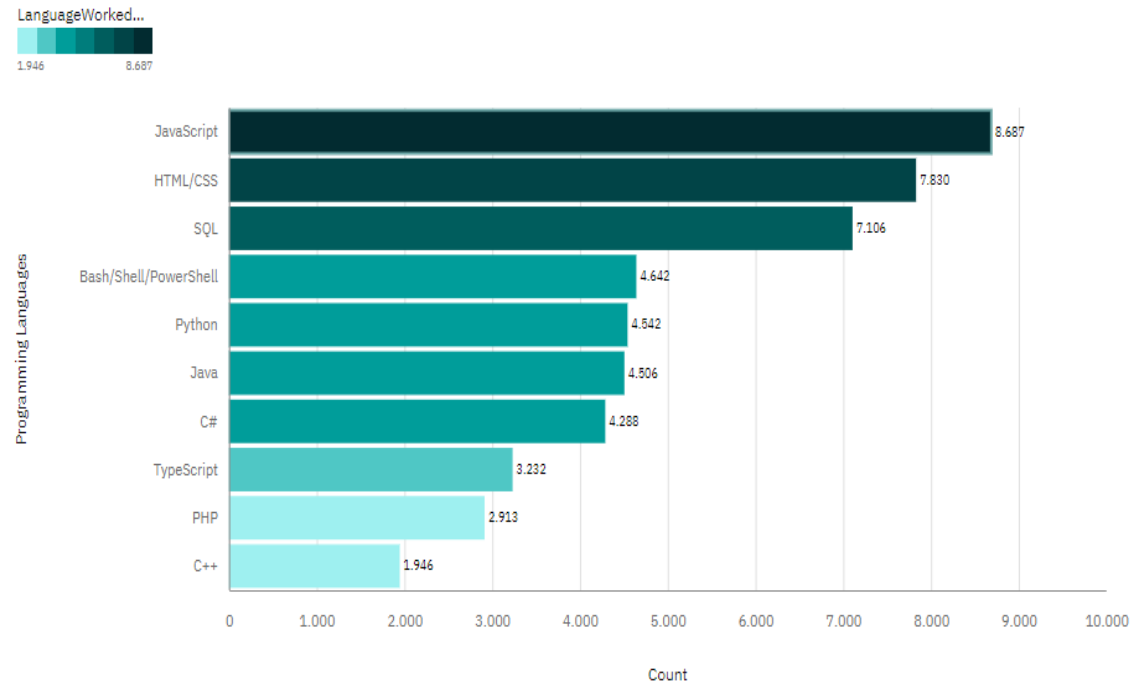
Furthermore, expected scenarios in the use of the same items are also highlighted.

A key to understanding the results in terms of the demographics of the respondents is provided.

# PROGRAMMING LANGUAGE TRENDS

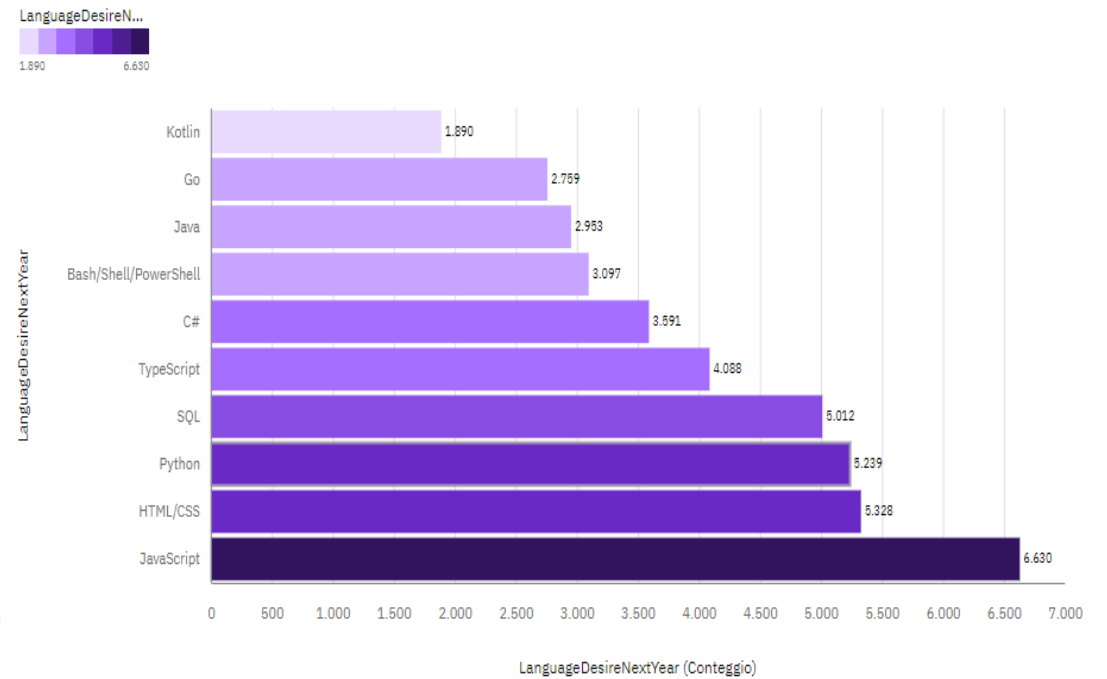
## Current Year

Top 10 Programming Languages Worked With



## Next Year

Top 10 Languages Desired NextYear



# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- JavaScript is the most used language today and the most popular for the future
- the least used today is C++ and it does not even appear in future trends
- there are languages that are not currently considered but that will gain more visibility in the future

## Implications

- JavaScript and HTML/CSS remain choices to invest in in human capital training
- It is very likely that some older languages will go out of fashion
- it is necessary to reconsider some languages that will be subject to growth in their use

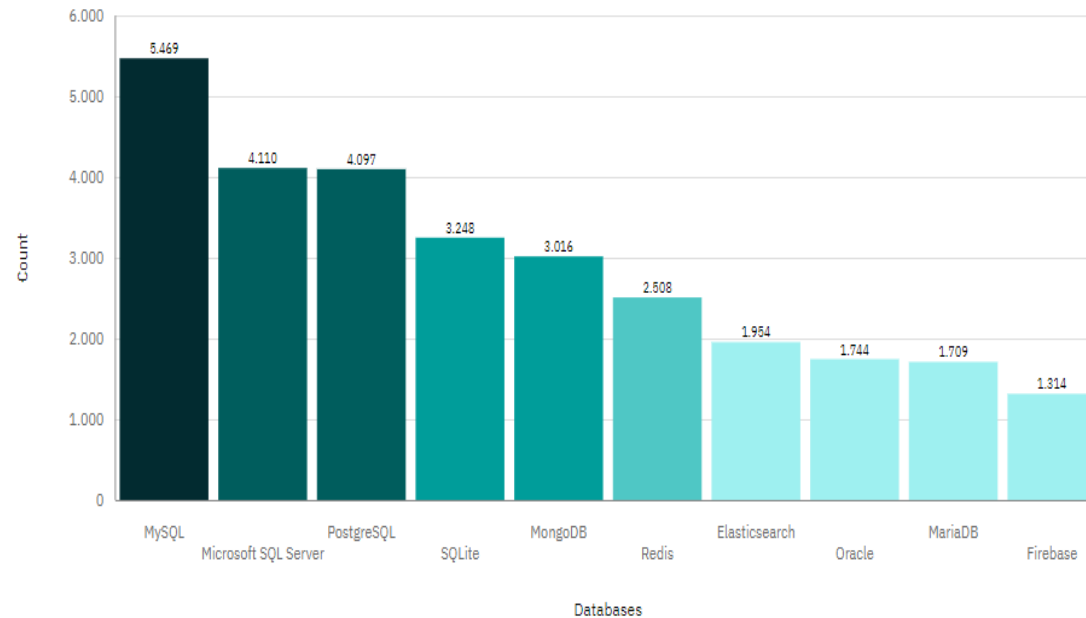


# DATABASE TRENDS

## Current Year

Top 10 Database Worked With

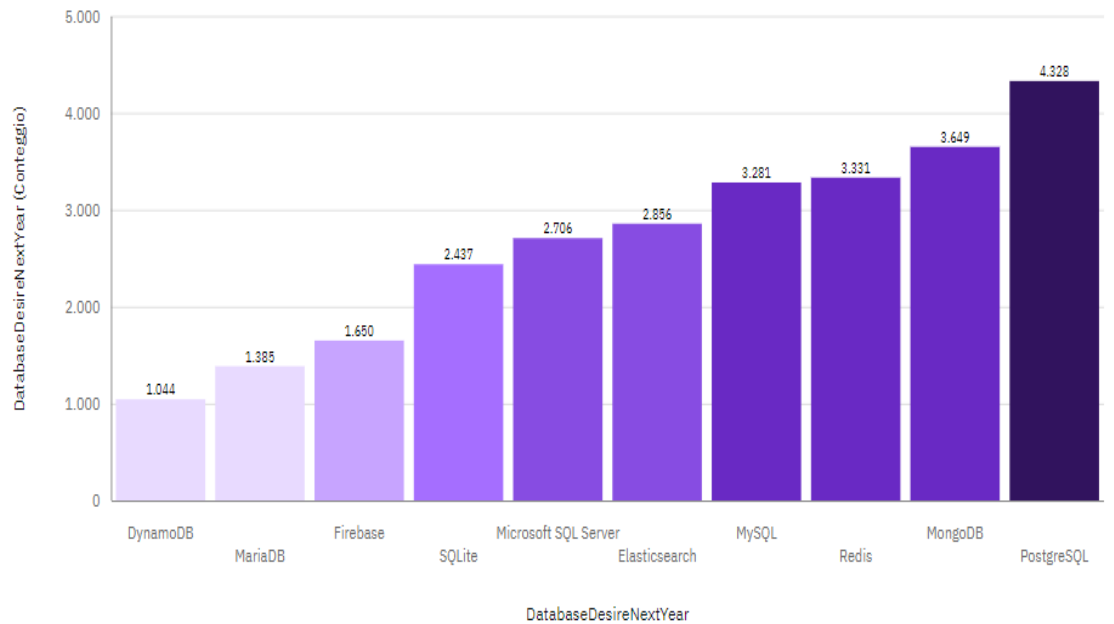
DatabaseWorked...  
1.314 5.469



## Next Year

Top 10 Databases Desired NextYear

DatabaseDesireN...  
1.044 4.328



# DATABASE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- The data shows a clear difference in the most used databases today versus the near future
- MySql and MsSqlServer are widely used today but tomorrow they will be surpassed by PostgreSql, MongoDB and Redis
- in the databases there is a varied and linear use that is also maintained in the future trend

## Implications

- the difference in products between today and tomorrow is an indicator that there is greater variability of use in this sector
- In the future there is a greater focus on non-relational databases such as Redis and MongoDB
- the linearity in use is a clear indication of strong interchangeability between the same type of database

# DASHBOARD

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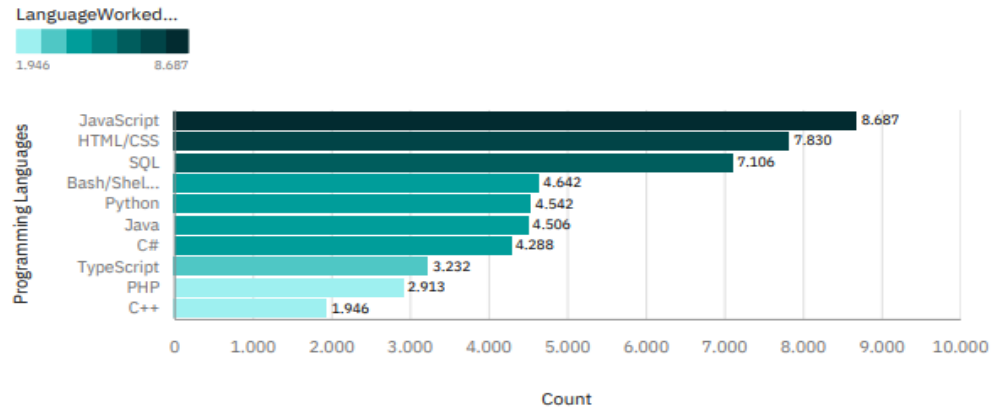


[https://github.com/emanueleciffo/EdX\\_CapstoneProject\\_P1.git](https://github.com/emanueleciffo/EdX_CapstoneProject_P1.git)

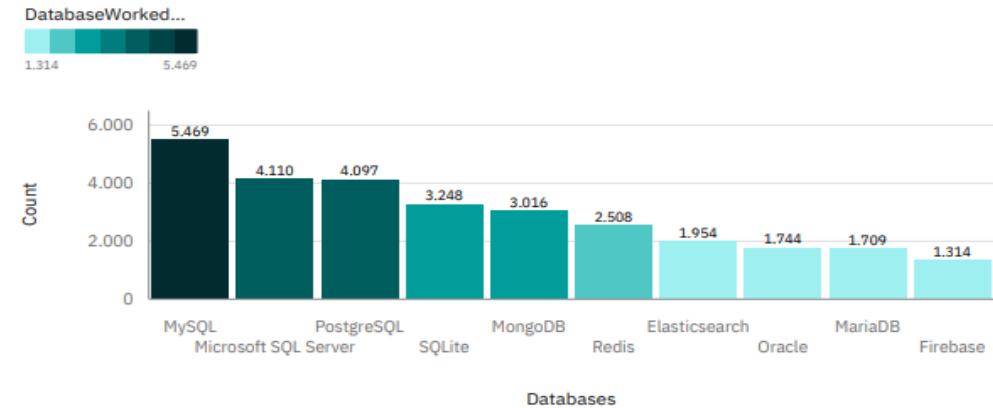
# DASHBOARD TAB 1

## Current Technology Usage

### Top 10 Programming Languages Worked With



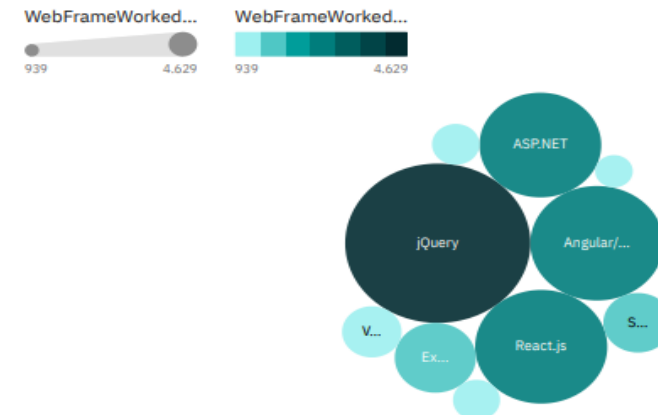
### Top 10 Database Worked With



### Most Popular Platforms Respondent Worked With



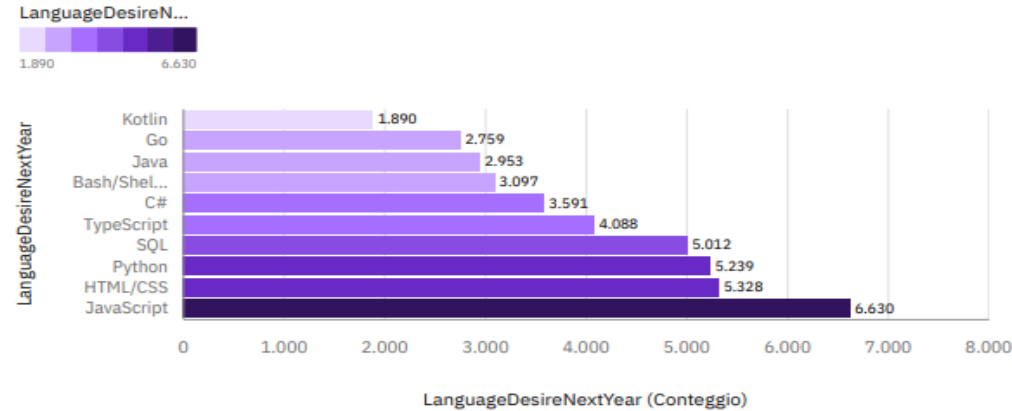
### Top 10 Web Frame Respondent Worked With



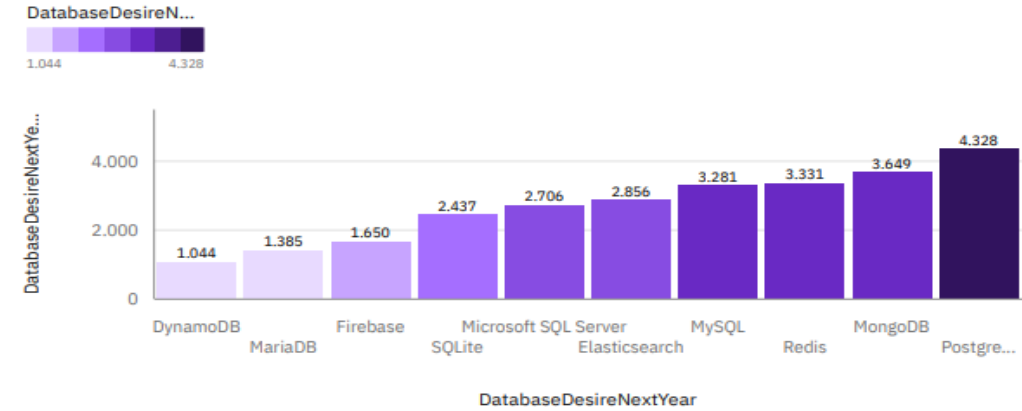
# DASHBOARD TAB 2

## Future Technology Trend

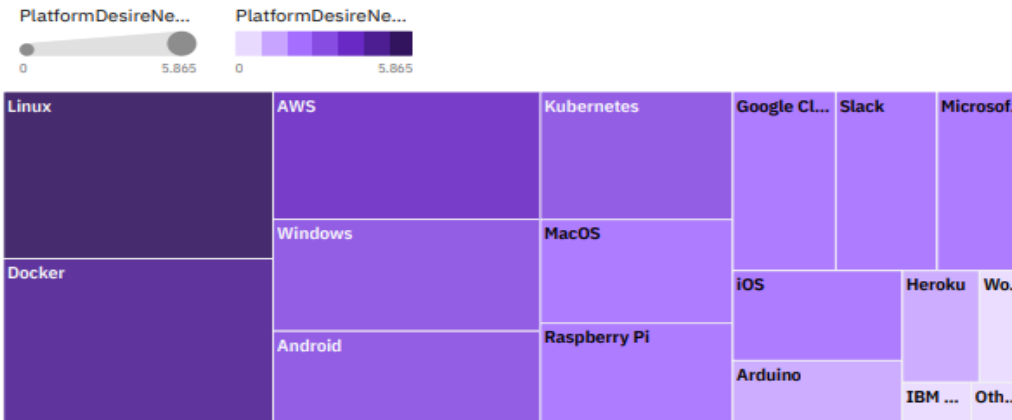
### Top 10 Languages Desired NextYear



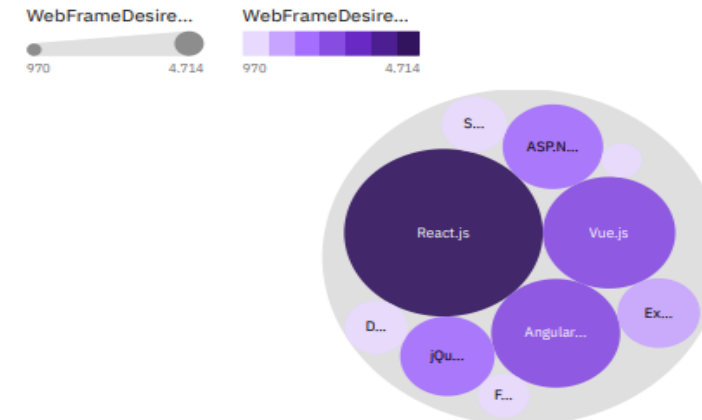
### Top 10 Databases Desired NextYear



### Platforms Desired NextYear



### Top 10 WebFrame Desired NextYear

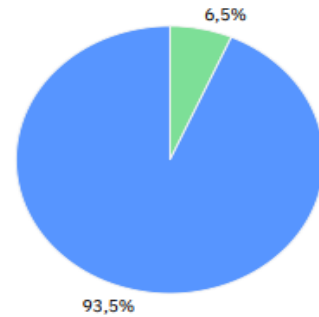


# DASHBOARD TAB 3

## Demographics

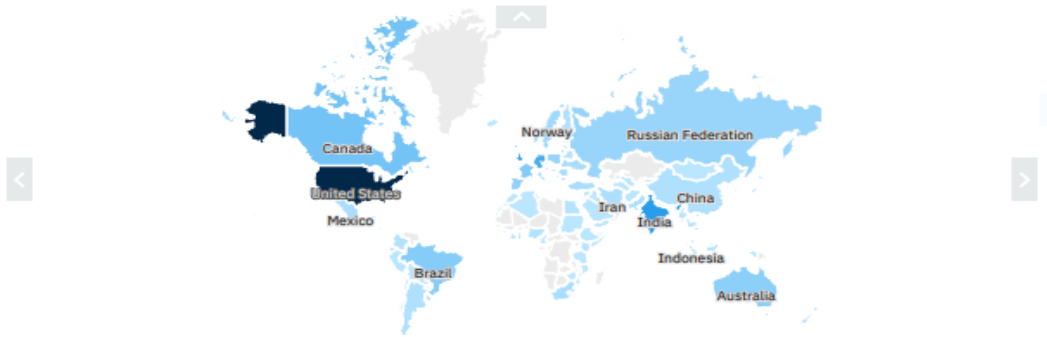
Respondent classified by Gender

Gender  
● Woman ● Man

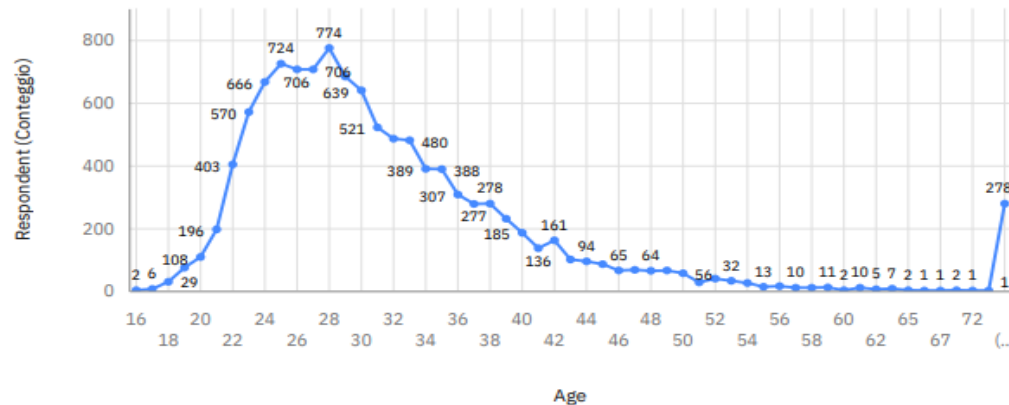


Respondent Count for Countries

Respondent (Cont...  
1 3.058

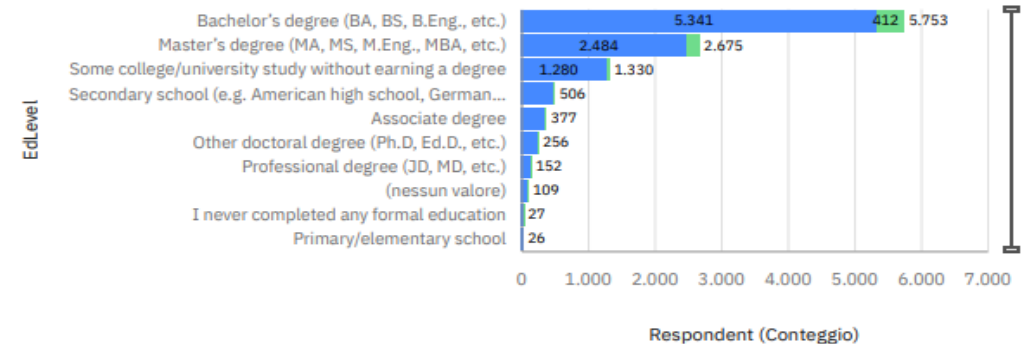


Respondent by Age



Respondent by EdLevel and Gender

Gender  
● Man ● Woman



# DISCUSSION

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- Will there be more female developers in the future?
- What are the most used tools by developers?
- Which new tools are growing the most and which ones have characteristics of resilience over time?

# OVERALL FINDINGS & IMPLICATIONS

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## Findings

- The data shows that the developer is a profession mainly performed by very young men (22-34 years old), is American and has a bachelor's degree.
- Mainly uses Windows or Linux and writes in JavaScript, HTML/CSS or SQL. Uses relational databases such as MySQL or MsSQLServer and WebFrame jQuery.
- The future Developer imagines almost the same programming languages that he currently uses but with new tools: Docker among the platforms, React.js as WebFrame and PostgreSQL and MongoDB as database.

## Implications

- The profession of developer is still little undertaken by women.
- Probably this activity does not find adequate academic training. Those who want to learn this activity must do it young and must learn on their own
- It would seem easier to change platforms, databases or WebFrames rather than programming languages.
- There are some programming languages that, perhaps because they are easy to learn, will be very successful



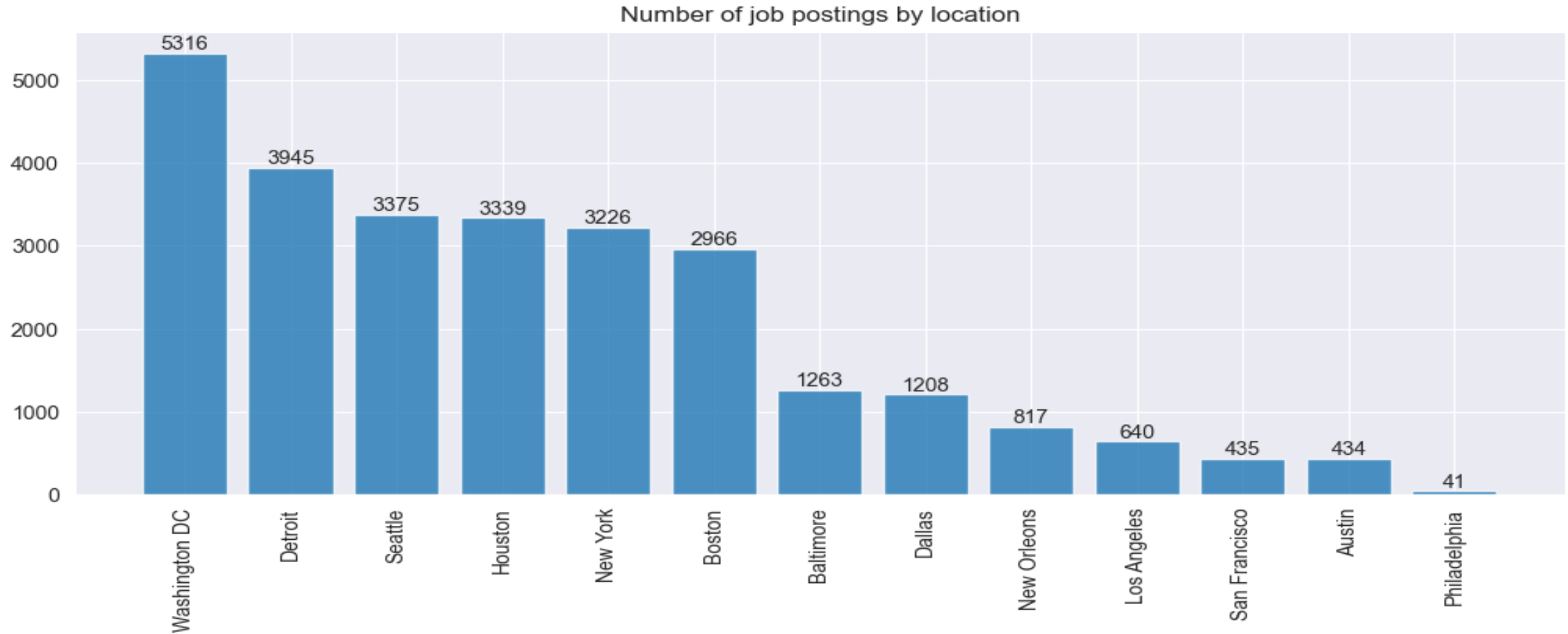
# CONCLUSION

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- The most popular programming language is JavaScript
- Developer is a profession performed by very young men
- Linux is the most used platform today and in the future for its versatility
- There are significant growth prospects for platforms such as Docker and the Python programming language.

# JOB POSTINGS



# POPULAR LANGUAGES

