

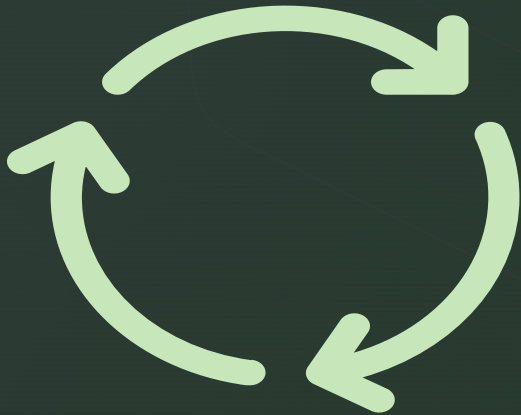


# 2019 trends in IT industry

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31/12/2023

# OUTLINE



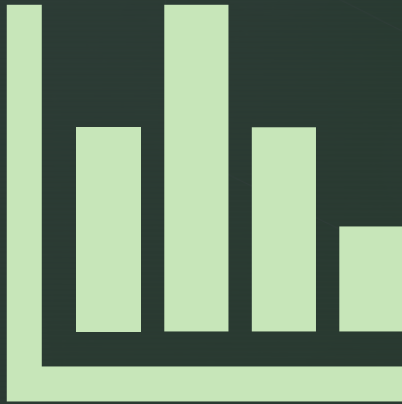
- Executive Summary
- Introduction
- Methodology
- Results
  - Visualization – Charts
  - Dashboard
- Discussion
  - Findings & Implications
- Conclusion
- Appendix

# EXECUTIVE SUMMARY



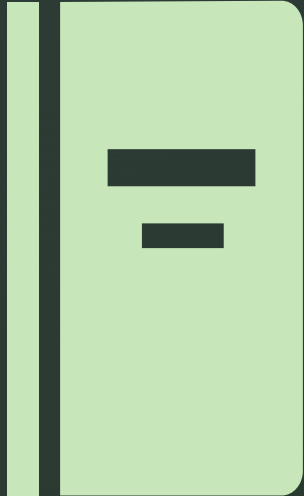
- Relevant skills required in the field of IT and Business are ever-changing and evolving.
- It is important to define future skills requirements and trends to keep pace with changing technologies and remain competitive.
- This presentation shows current and future trends in:
  - programming languages
  - Databases
  - Platforms and Webframes.

# INTRODUCTION



- The IT industry must be competitive and always updated. For this reason it requires to develop different skills, to meet new market trends.
- We are going to answer to some meaningful questions like:
  - Which are the most used Languages and Databases in 2019?
  - Which are the new skills that a programmer want to develop in the future?
  - Which are gender, education and age of 2019 programmers?

# METHODOLOGY



- The analyzed Dataset is "2019 Stack Overflow Developer Survey"
  - Demographics
  - Survey Data Technologies
- "Survey data technologies" data was used to analyze actual and future skills of 2019 programmers
- "Demographics" data was used to discover ethnicity, gender, education, age of 2019 programmers.
- To create graphics, Cognos Dashboard Embedded (CDE) has been used.
  - Three different dashboards has been created
  - Graphics don't show null values



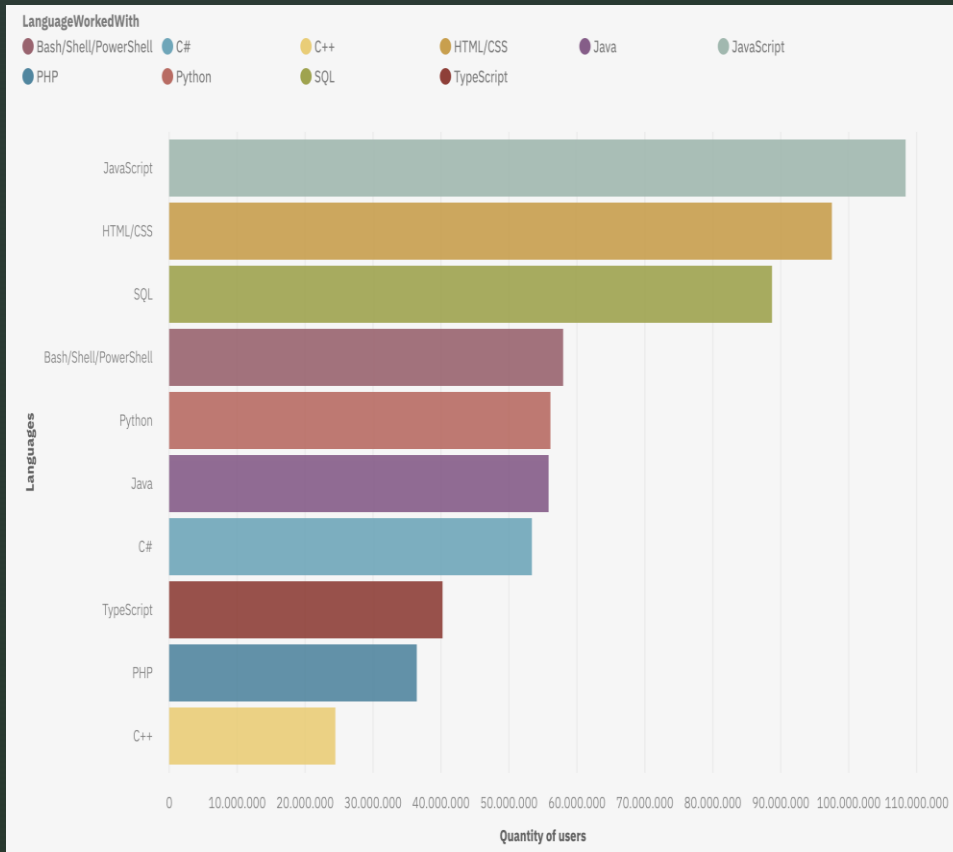


# RESULTS

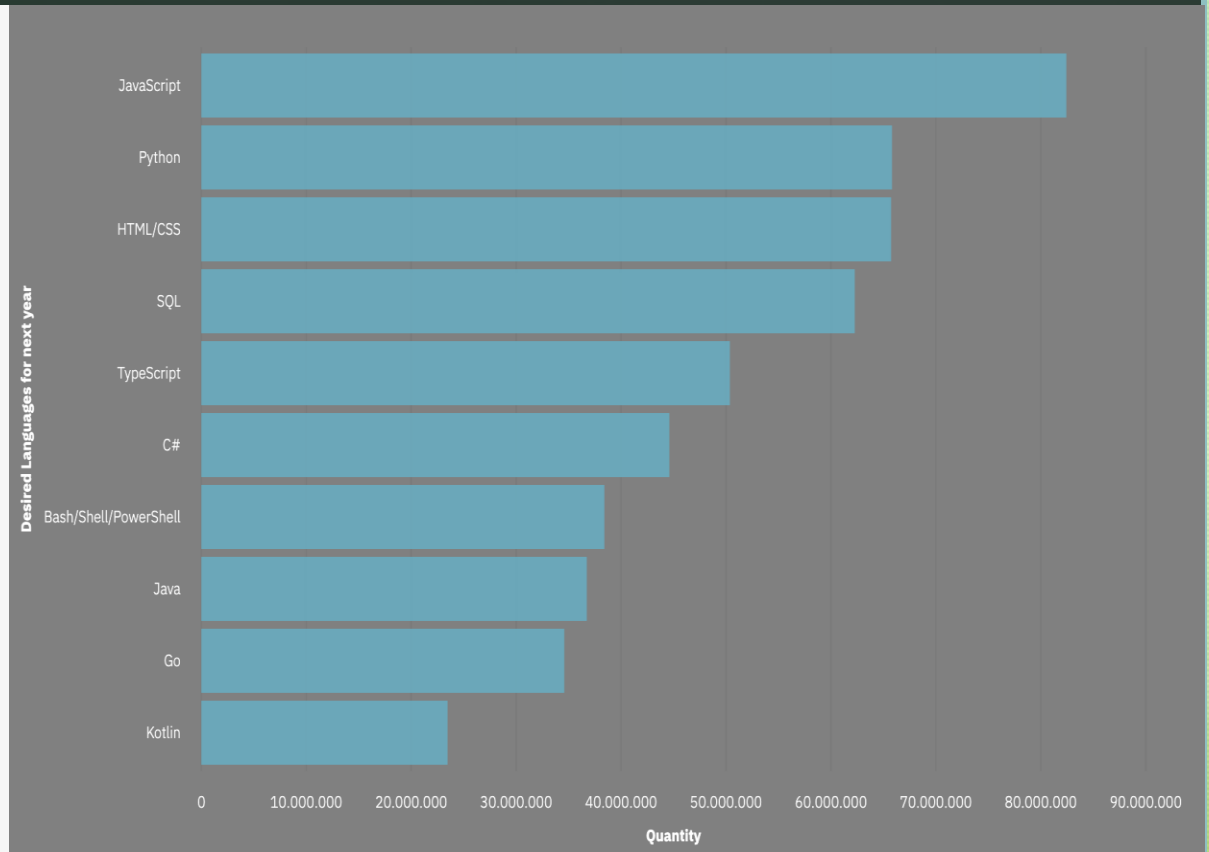
Next slides will show you the results, dashboards and findings of this project.

# PROGRAMMING LANGUAGE TRENDS

## CURRENT YEAR



## NEXT YEAR



# PROGRAMMING LANGUAGE TRENDS – FINDINGS & IMPLICATIONS

## Findings

- Javascript is the most used language and the most desired language for the future.
- Python isn't the most used language yet, but a lot of Programmers would like to use it in the future.
- I don't consider HTML a programming language...

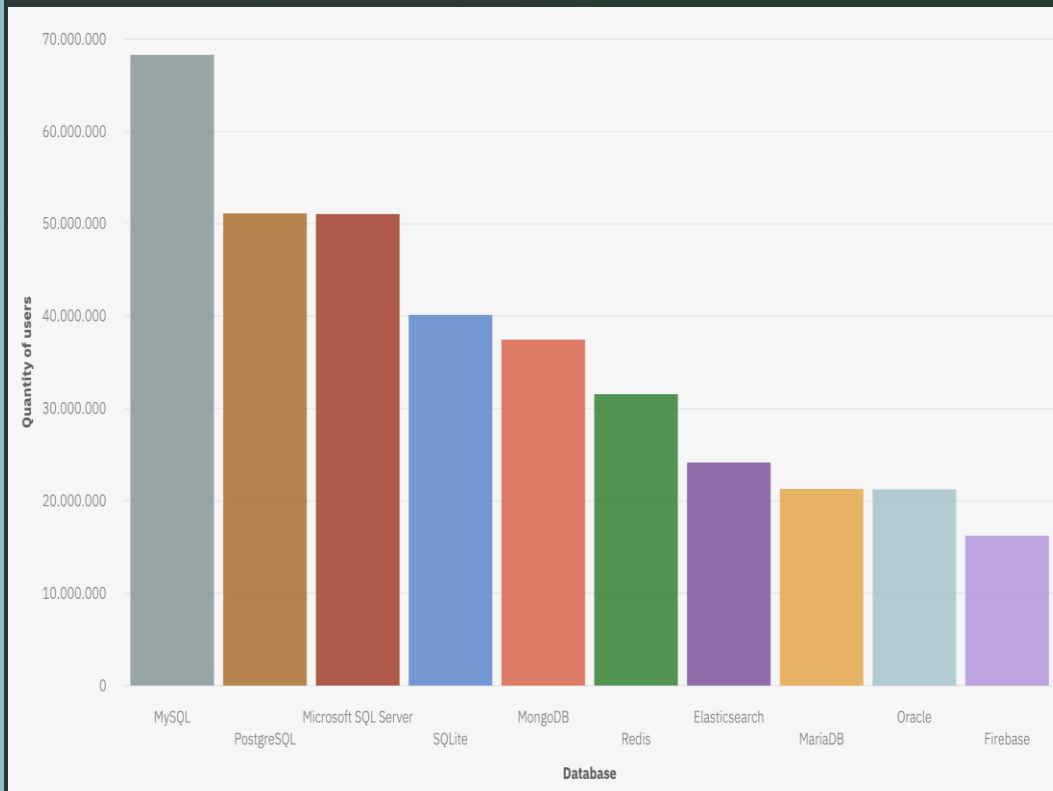
## Implications

- Javascript is still the most used and popular language in IT industry.
- Python is becoming a new required skill in IT industry.
- Javascript, python and SQL are the most desired languages for 2020.

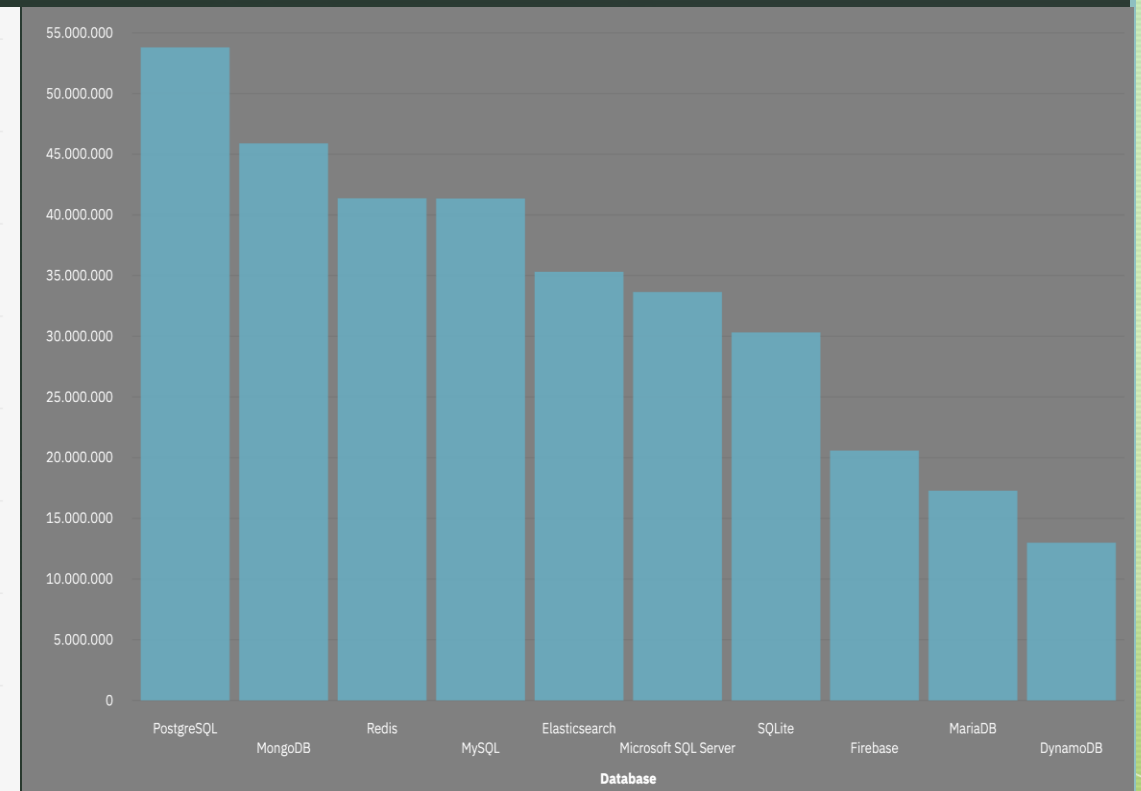


# DATABASE TRENDS

Current year



Next year



# DATABASE TRENDS - FINDINGS & IMPLICATIONS

## Findings

- MySQL, PostgreSQL and Microsoft SQL server are the most used Databases in 2019.
- PostgreSQL, MongoDB and Redis are the most desired Databases for 2020.
- Oracle is in ninth place in the list of used databases, but there isn't anymore, in the list of the most desired databases of 2020.

## Implications

- PostgreSQL is the programmer's favourite Database.
- MongoDB and Redis aren't very well known, but between the most desired Databases of 2020.
- Programmers are no longer interested in using the Oracle database, (in 2023 this looks weird to me, in fact Oracle is the main sponsor of RedBull Racing in F1 and everybody knows it).

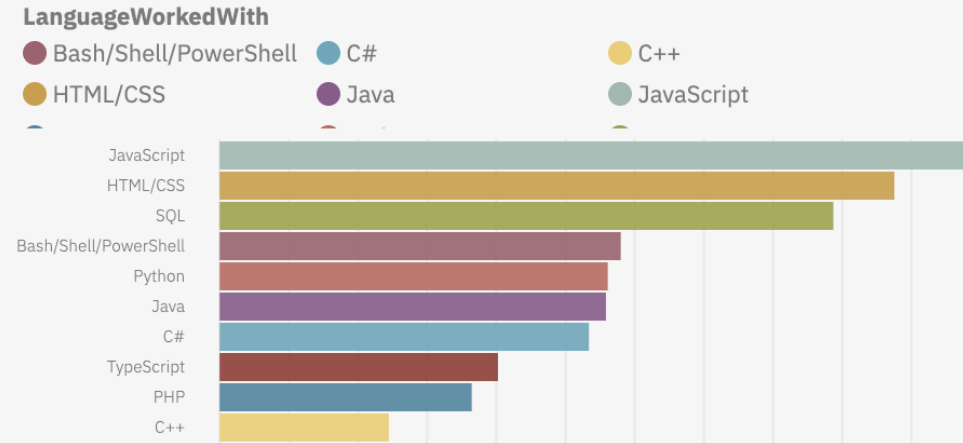
# DASHBOARD



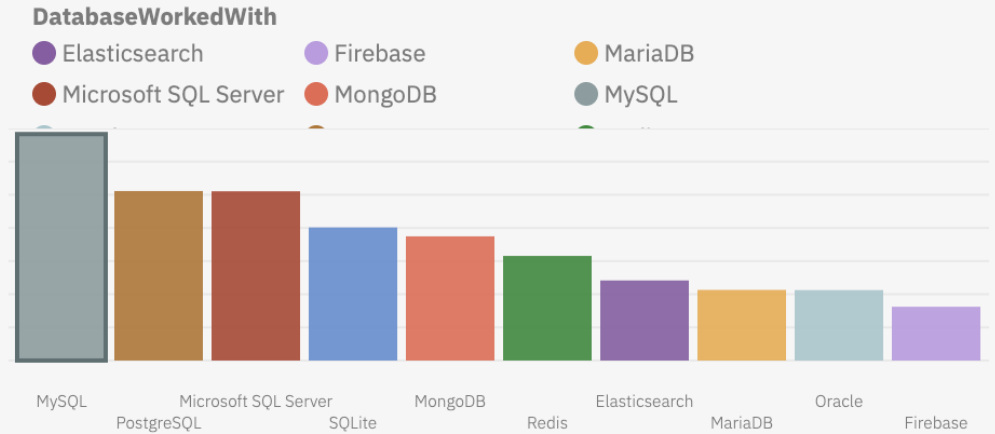
<https://eu-de.dataplatform.cloud.ibm.com/dashboards/62e75614-c586-4ecb-8346-4424ff4dfcdc/view/0666f83e31ae2fd71ec9d4e4079d24522e36265db4bb850584d17b495b632097a93c4098c8791a0bd2470566a0be175eca>

# DASHBOARD TAB 1

## Top 10 used languages



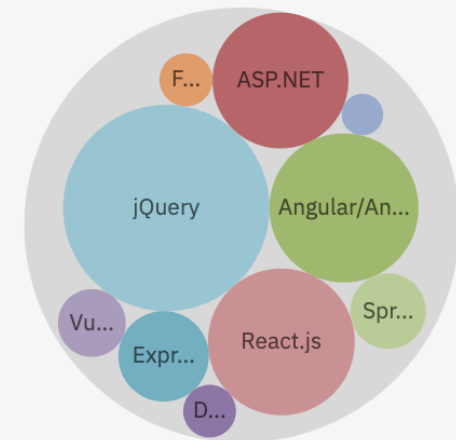
## Top 10 used databases



## Most used Platforms

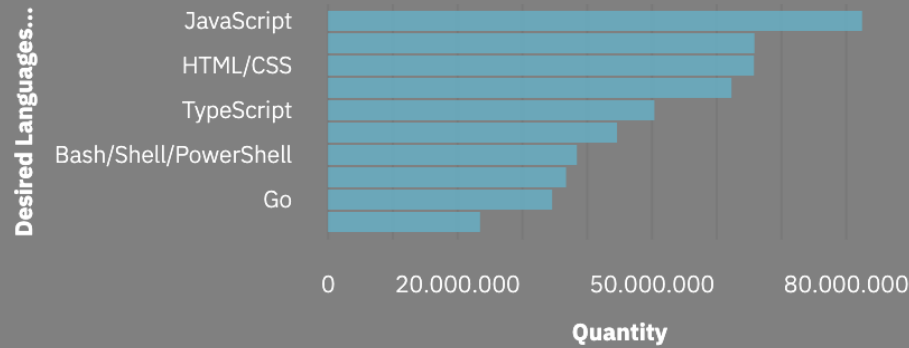


## Top 10 Webframe

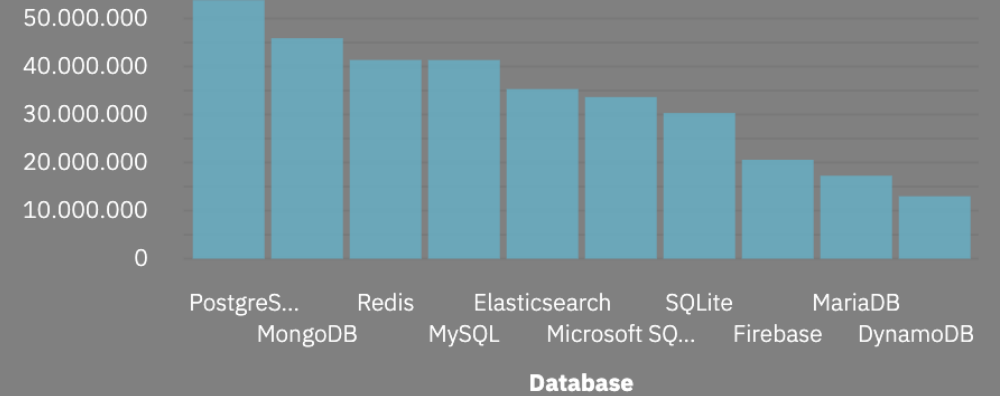


# DASHBOARD TAB 2

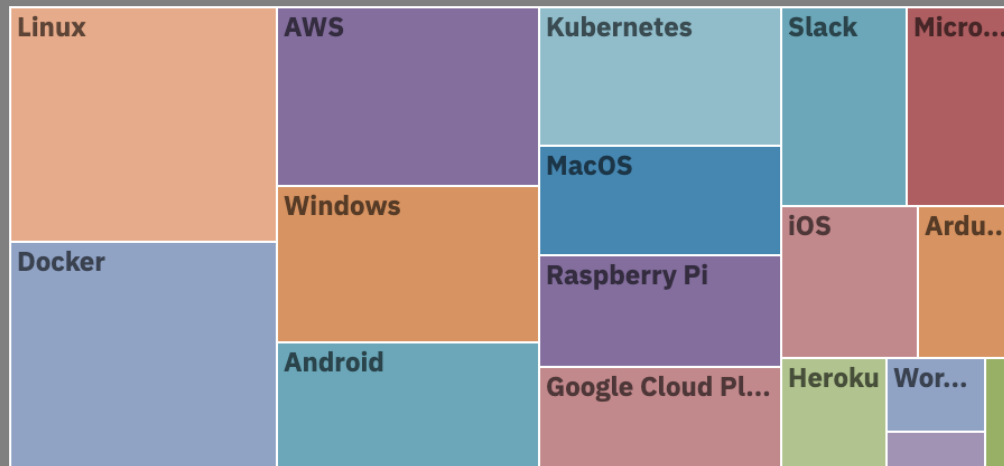
Top 10 desired Languages for Next Year



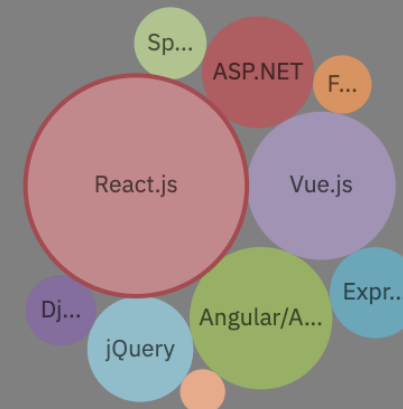
Top 10 desired Databases for Next Year



Desired Platforms for Next Year



Top 10 desired Web for Next Year

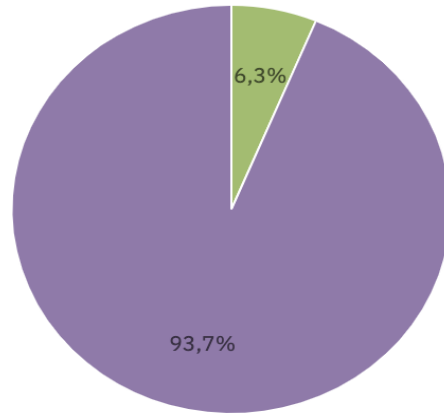




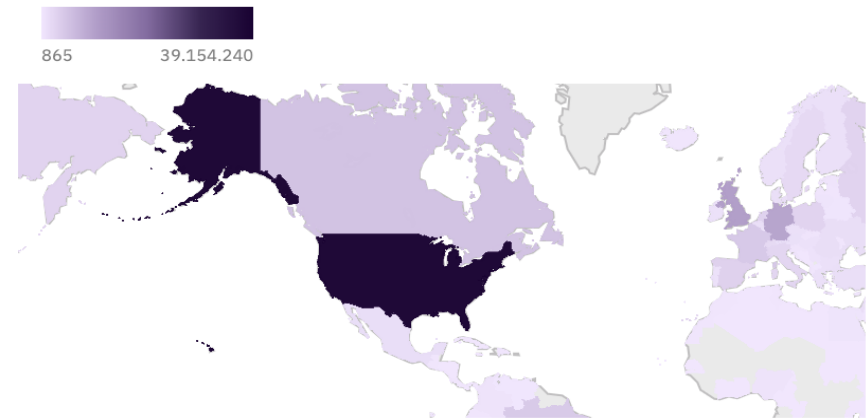
# DASHBOARD TAB 3

Respondents classified by Gender

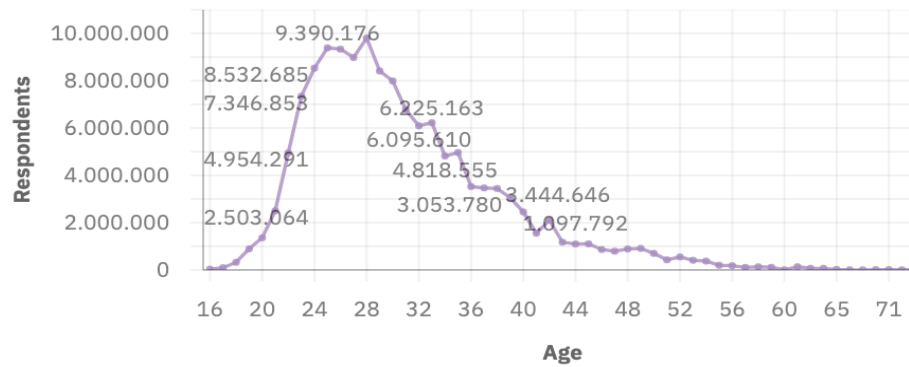
**Gender**  
● Woman  
● Man



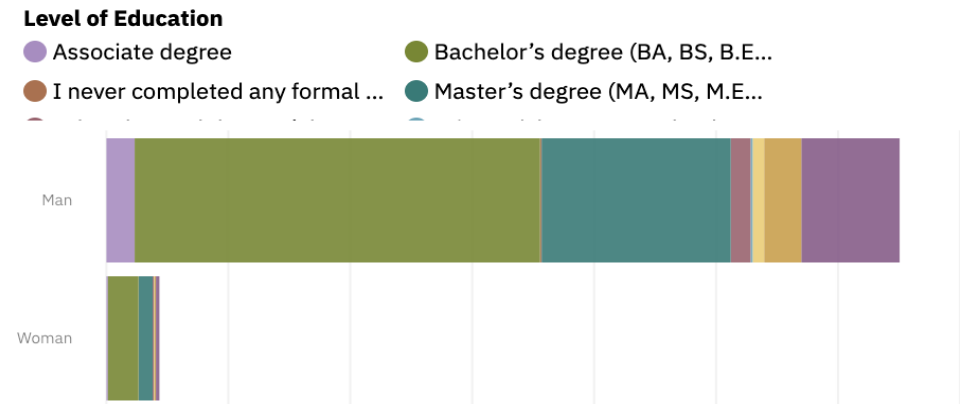
Respondent classified by Country



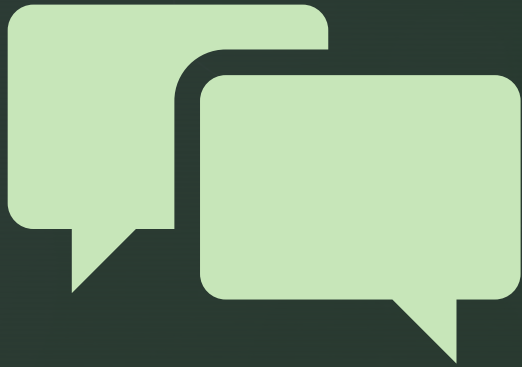
Respondent classified by Age



Level of Education of Respondents per Gender



# DISCUSSION



- Is it useful to have so many different programming languages, databases, platforms and webframes? So programmers can develop different skills for any purpose?
- Would it be better to have less available tools, so that they would be well known to every programmer?

# OVERALL FINDINGS & IMPLICATIONS

## Findings

- Programming languages: Javascript, Python, HTML/CSS, SQL, Typescript are the new desired programming languages.
- Database: Redis, Elasticsearch, PostgreSQL and MongoDB are gaining more interest.
- Platforms: Interest Slack and Windows is dropping significantly.
- Webframes: Vue.js is gaining substantial interest and React.Js continues to grow as well.
- The most of programmers are young men with a degree.

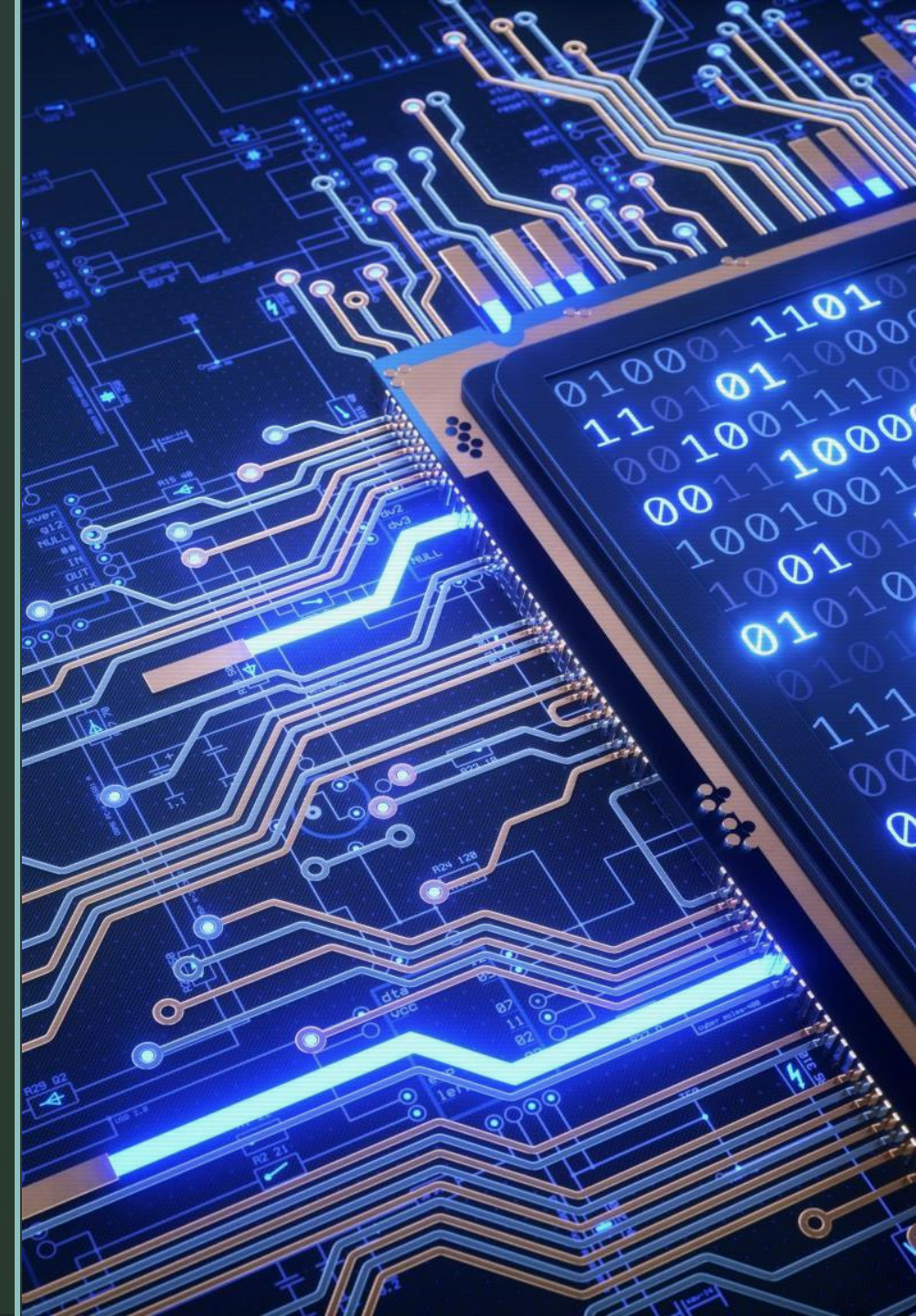
## Implications

- Programmers should implement their knowledge in Python and Typescript.
- Programmers should be skilled in the use of PostgreSQL database.
- IT industry should be more open to women. The low percentage of interviewed women is disturbing.



# CONCLUSIONS

- Carve out budget in order to hire additional staff (possibly women) with needed skills to fill any gap.
- Setup programs in order to upskill employers.
- Consider to change the tools used within your company (databases, platforms and webframes), in order to
- be ready for new trends.

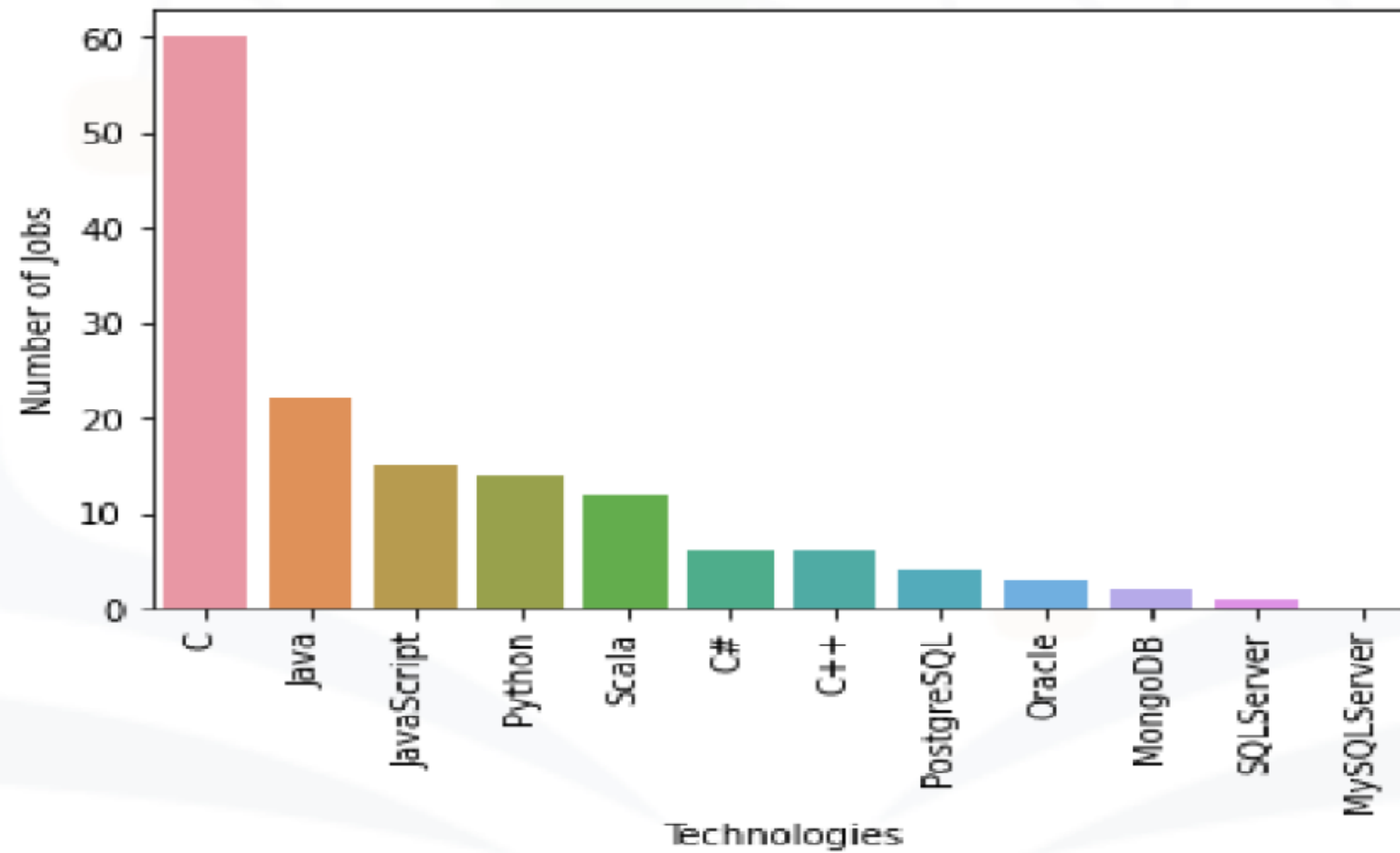


# APPENDIX





# JOB POSTING



# POPULAR LANGUAGES

