

# DEVELOPER JOB MARKET

Stack Overflow Developer Survey 2019 – Capstone Project

Klaudia Chudzynska

02/07/2022

# OUTLINE

 EXECUTIVE SUMMARY

 METHODOLOGY

 DISCUSSION

 APPENDIX

 INTRODUCTION

 RESULTS

 CONCLUSION

# EXECUTIVE SUMMARY

## PROGRAMING LANGUAGE TRENDS

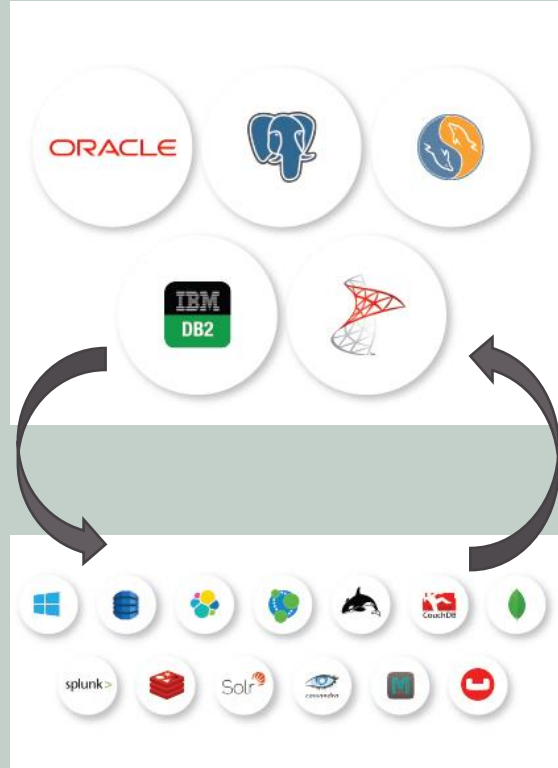


FUTURE



## DATABASE TRENDS

NON-RDBMS are starting to gain popularity



## WEBFRAME TRENDS

SIMPLICITY defeat difficulties

Most desired WebFrame for the next year

React

Vue.js

## DEMOGRAPHICS INSIDES



# INTRODUCTION

## PURPOSE

Analysis current and desired technologies in developer job market for identify future skill requirements.

Analysis for **GLOBAL IT AND BUSINESS CONSULTING FIRM "STACK OVERFLOW"**

## QUESTIONS

How will changing the technologies and what future skills requirements will be?

- ✓ What are **the top programming languages** in demand?
- ✓ What are **the top database skills** in demand?
- ✓ What are **the popular WebFrames**?
- ✓ How works as **Developer**? For whom is it recommended?

# METHODOLOGY

## Data Collection

- Collect Jobs Data using GitHub Jobs using **API** converted XLSX -> [LINK](#)
- Collect Programming\_Languages using **Webscriping – HTML** converted to CSV - [LINK](#)

## Data Wrangling

- Finings and deteminate Missing Values
- Finding and removing Duplicates
- Normalizing Data

[CODE](#)

## Exploratory Data Analysis

- Analyses data for finding distribution, relationship, correlations

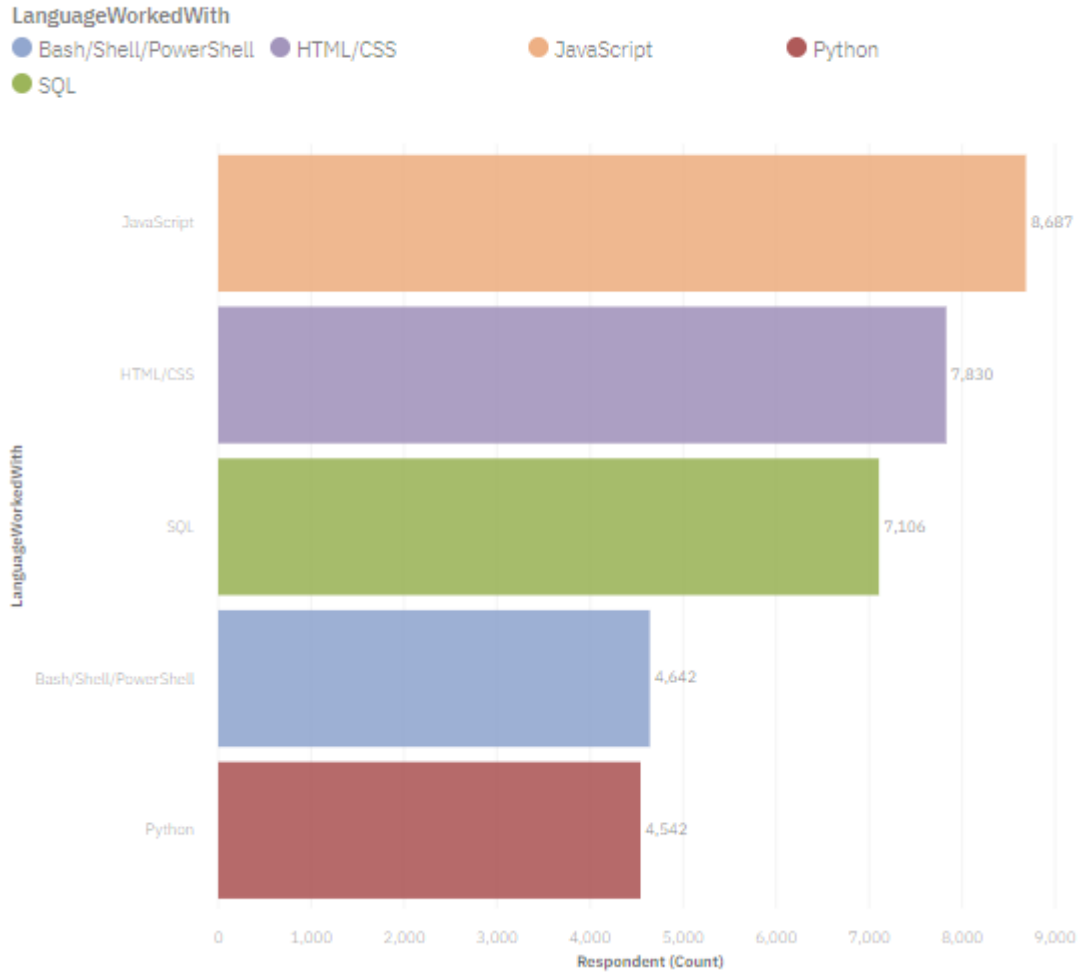
## Data Visualization

- Preperetion DASHBORDING TOOL in IBM COGNOS analitic with main bollet points
- FILES -> [LINK1](#), [LINK2](#)

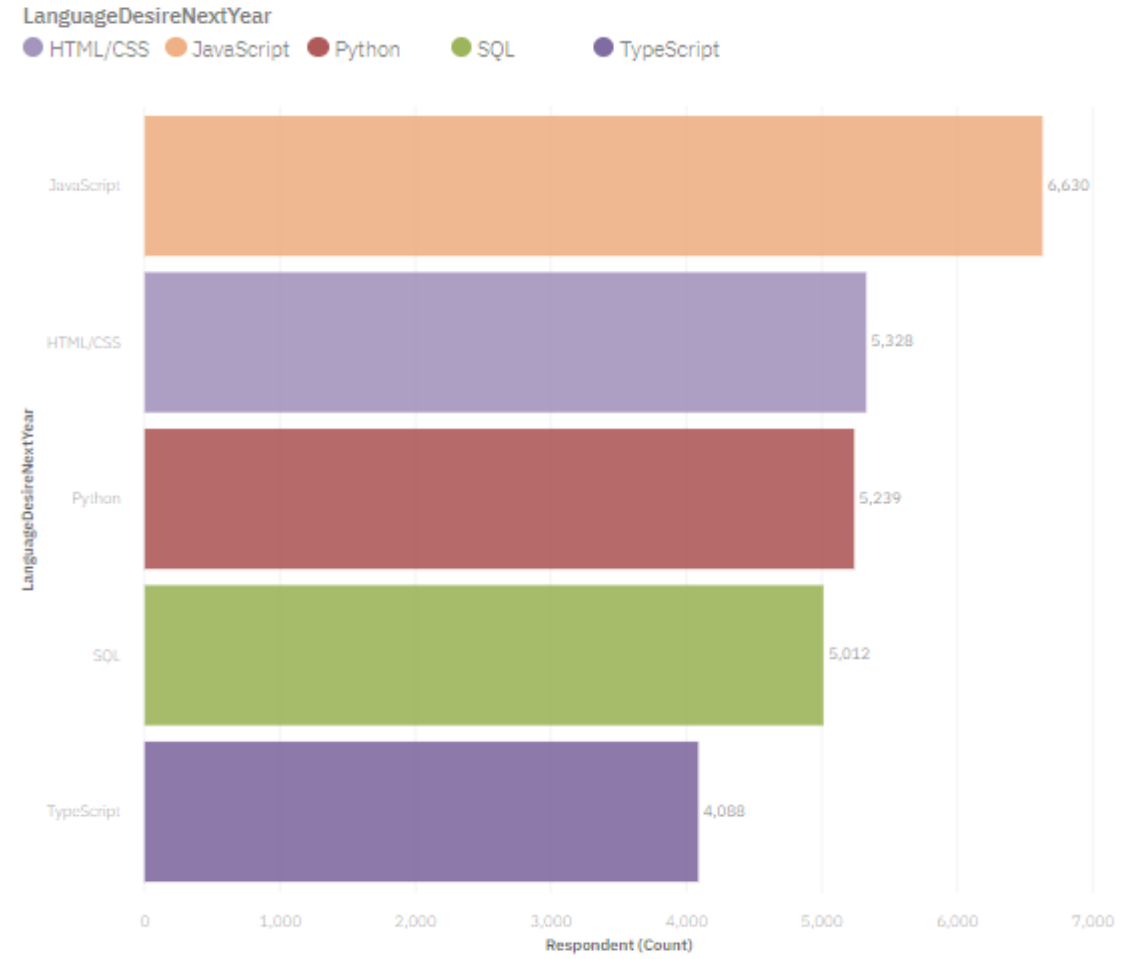
# RESULTS

# PROGRAMING LANGUAGE TRENDS

## Top 5 Languages currently used



## Top 5 Languages desired for the next year



## FINDINGS

- ✓ The 1st place remains unchanged in both measured periods: current and future: **JAVAScript**
- ✓ The 2nd place remains unchanged in both measured periods: current and future: **HTML**
- ✓ **Python** has the rising trend

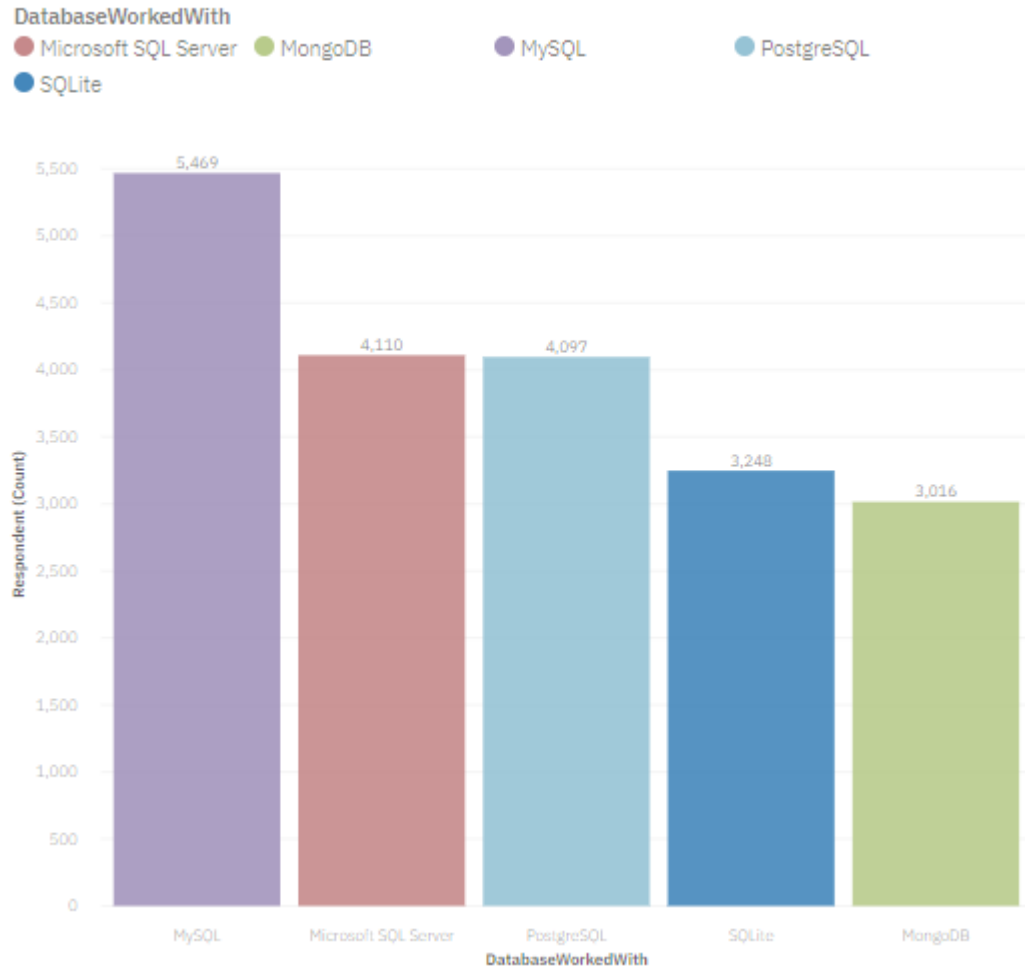
## IMPLICATIONS

- ✓ **JAVAScript** and **HTML** positions remain the same, but we can see that they are losing interest among developers in favor of easier languages
- ✓ **Python** is the fastest-growing major programming language and stands as the 3rd most desire language in the future
- ✓ The coming future will belong to the data world, and we can assume that developers will continue to use their most important language, but we can see that they are open to the future and follow trends in the developer world.

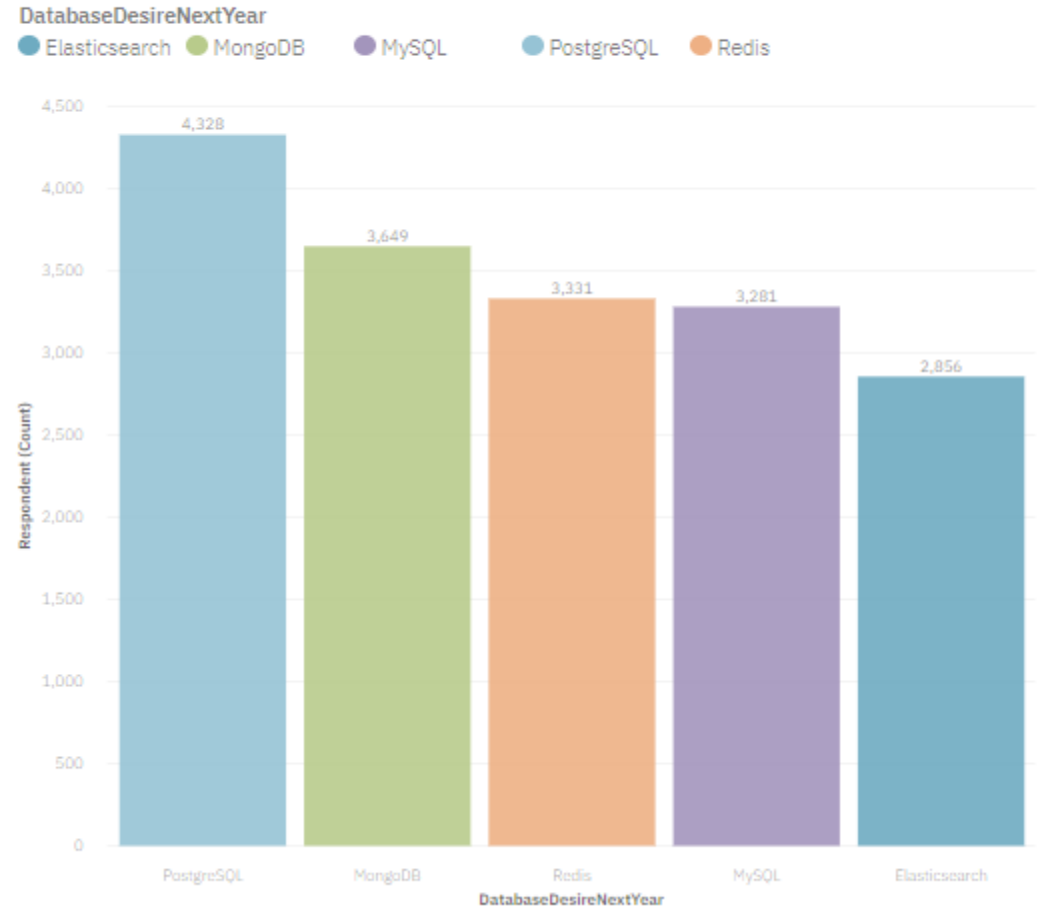


# DATABASE TRENDS

## Top 5 Database currently used



## Top 5 Databases desired for the next year



## FINDINGS

- ✓ Relational Databases are a more common trend in the present time
- ✓ Non-Relational Databases will become more often choosing by users

## IMPLICATIONS

- ✓ The present and the future belong to the data world, especially if we look at social media. We have data everywhere not only in tables. Social media are a really important tool and knowledge of how to use these types of data will become very important in the future.
- ✓ Users/Developers start to learn/use Non-Relational Databases.

# WEBFRAME TRENDS

## Top 5 WebFrame currently used

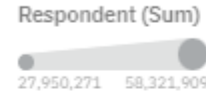


WebFrameDesireNextYear

- ASP.NET
- Angular/Angular.js
- Express
- React.js
- jQuery

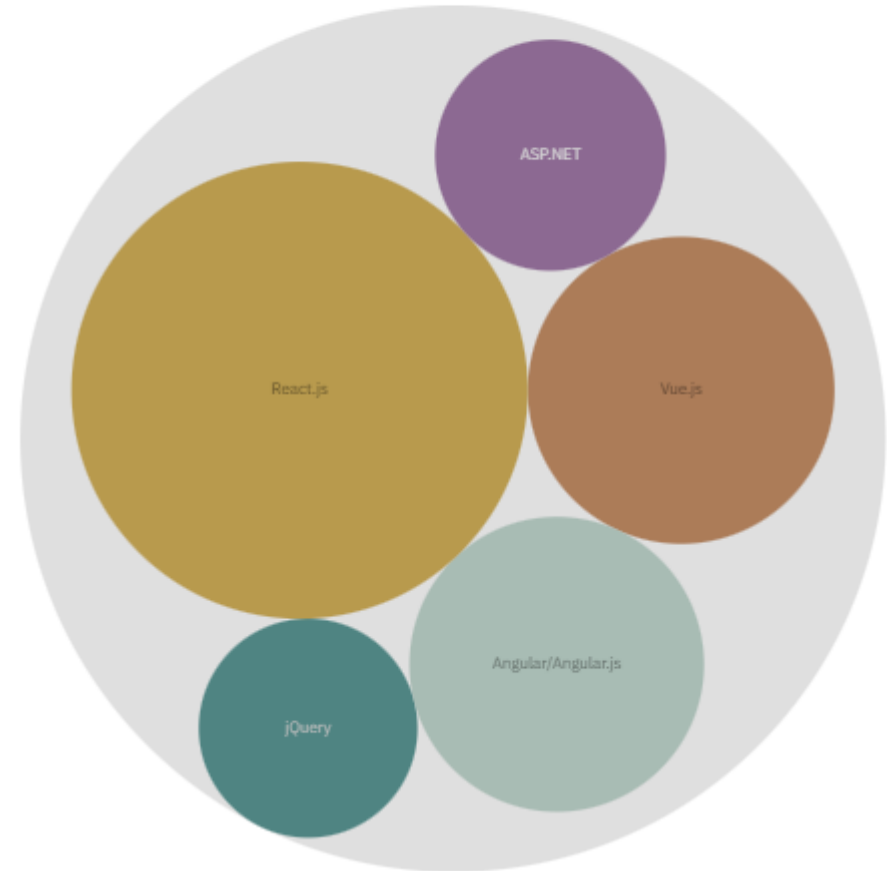


## Top 5 WebFrames desired for the next year



WebFrameDesireNextYear

- ASP.NET
- Angular/Angular.js
- React.js
- Vue.js
- jQuery



## FINDINGS

- ✓ Currently most common WebFrames are **Angular** and **ASP.NET**
- ✓ In the Future more servants want to know WebFrames as **React.js** and **Vue.js**

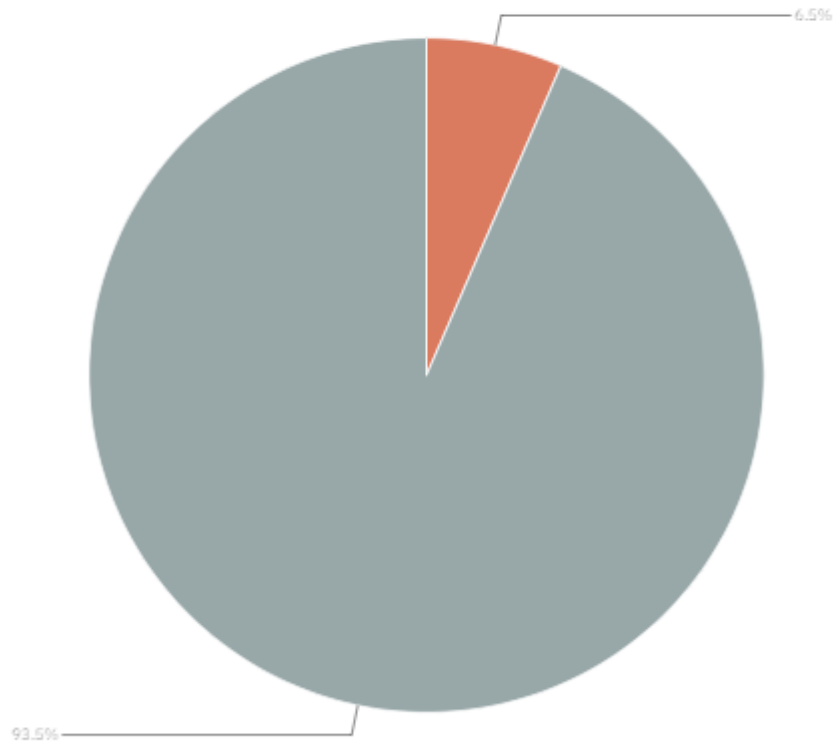
## IMPLICATIONS

- ✓ Execlly the same lake previous slides we can observe the simplicity defeat difficulties. In the Future most common WebFrames become easier frameworks like React or Vue.

# DEMOGRAPHY INSIDES

## Respondent classified by Gender

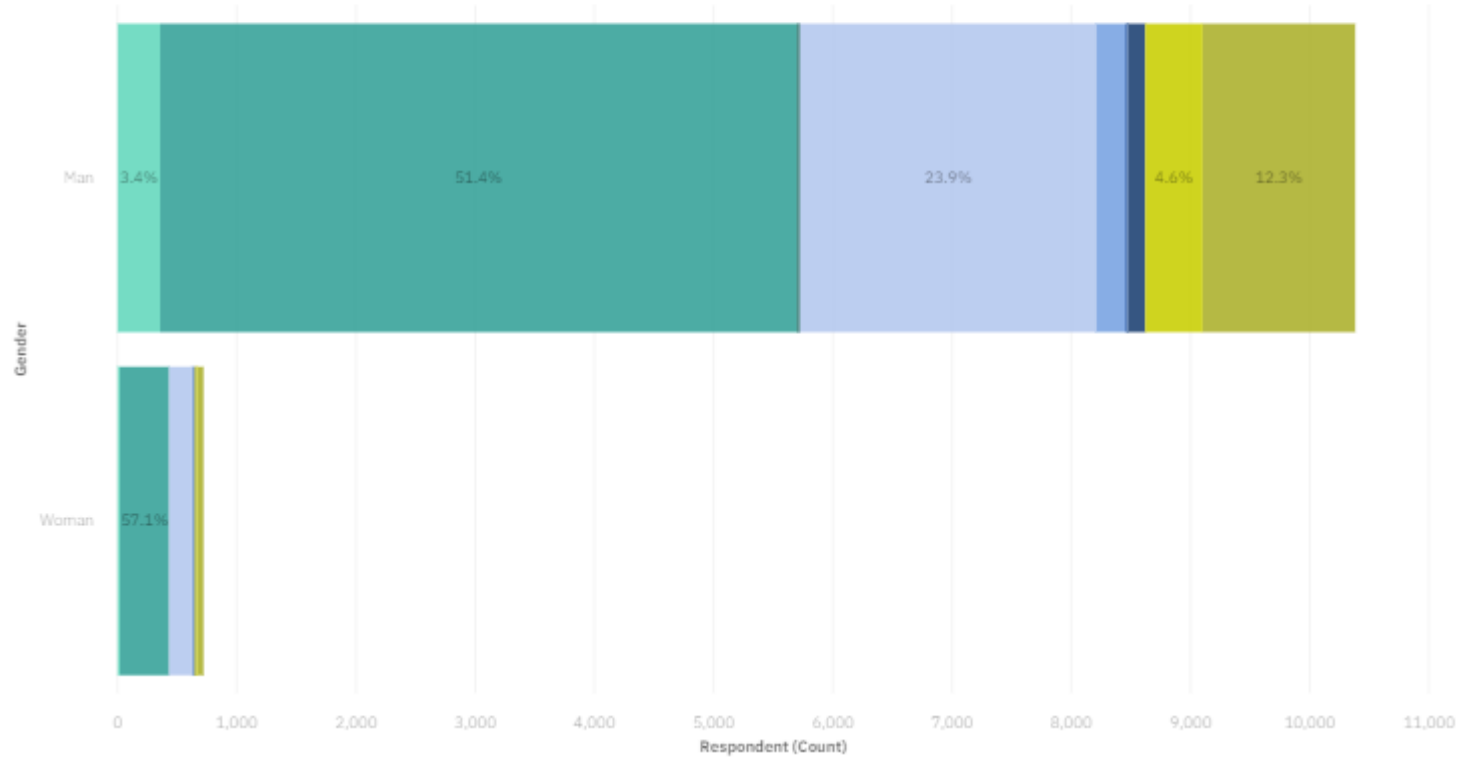
Gender  
● Woman ● Man



## Respondent Count by Gender classified by Formal Education Level

EdLevel

● Associate degree ● Bachelor's degree (BA, BS, B.E... ● I never completed any formal ... ● Master's degree (MA, MS, M.E...  
● Other doctoral degree (Ph.D, E... ● Primary/elementary school ● Professional degree (JD, MD, e... ● Secondary school (e.g. Americ...  
● Some college/university study ...





**IBM Cognos**  
Analytics

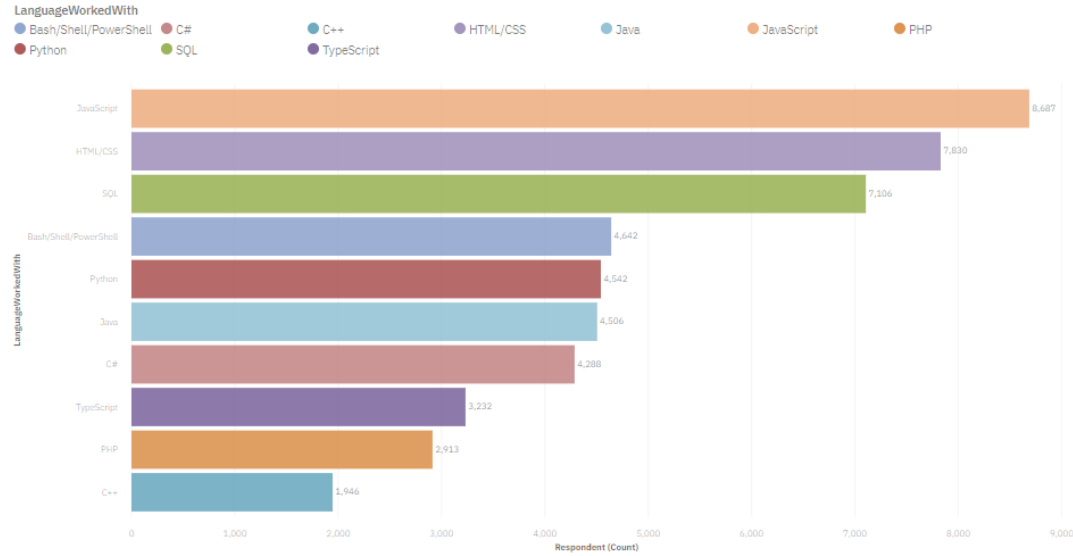
LINK

Stack Overflow  
Developer Survey 2019  
**DASHBOARD**

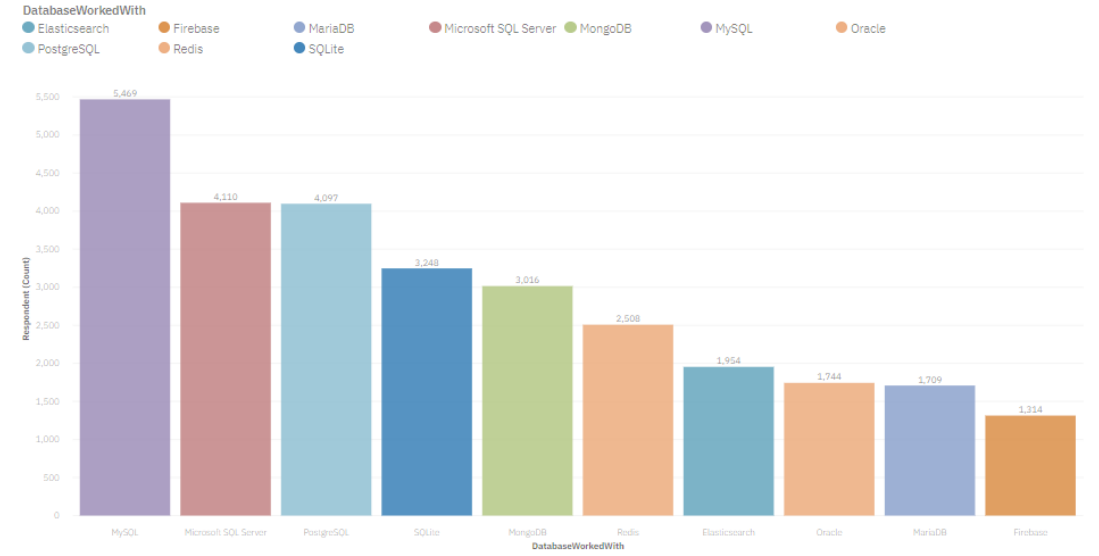


# CURRENT TECHNOLOGY USAGE

Top 10 Languages currently used



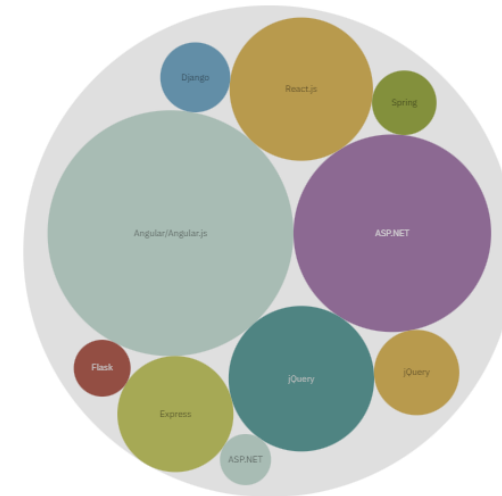
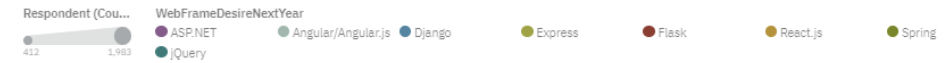
Top 10 Database currently used



PlatformWorkedWith

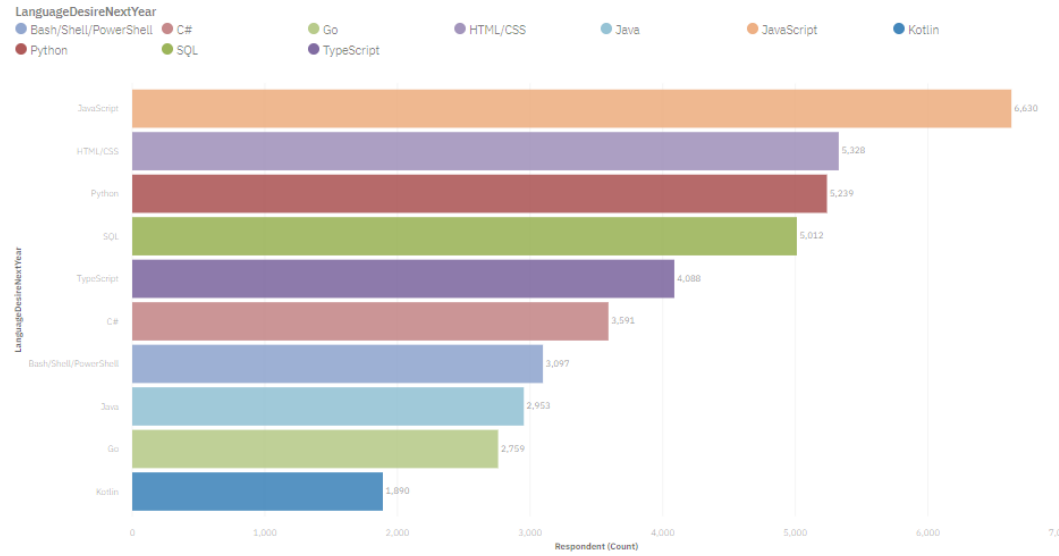


Top 10 WebFrame currently used

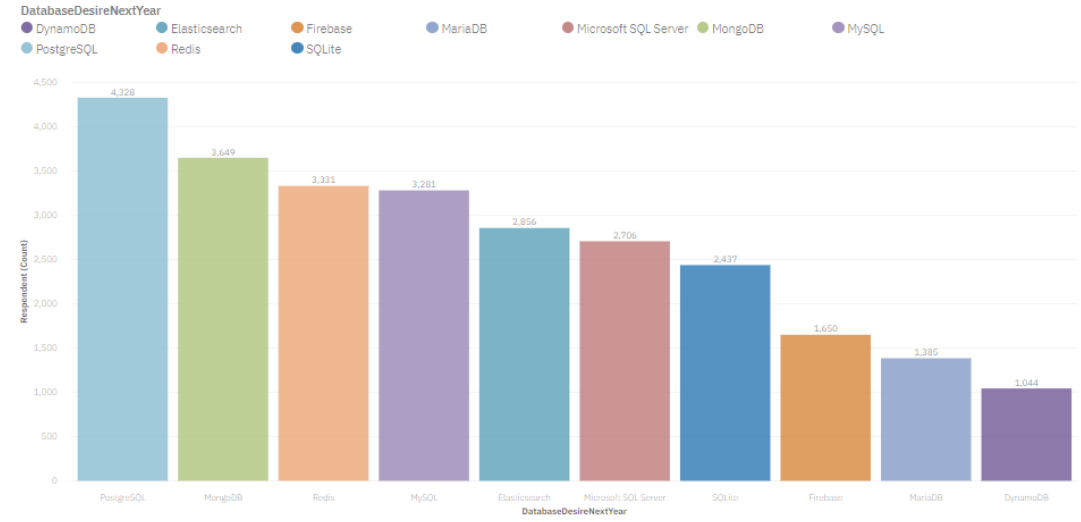


# FUTURE TECHNOLOGY TREND

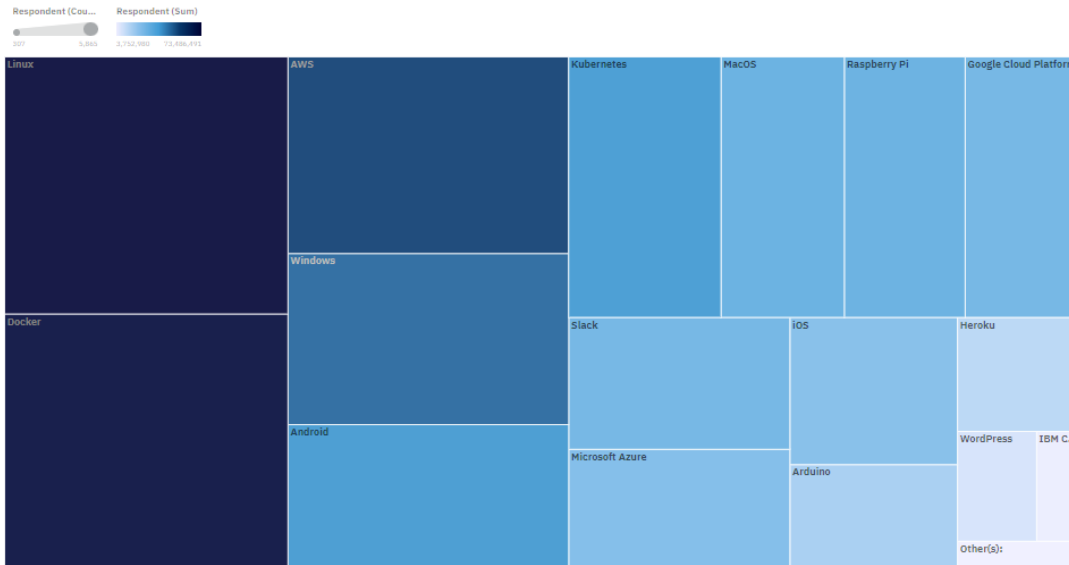
## Top 10 Languages desired for the next year



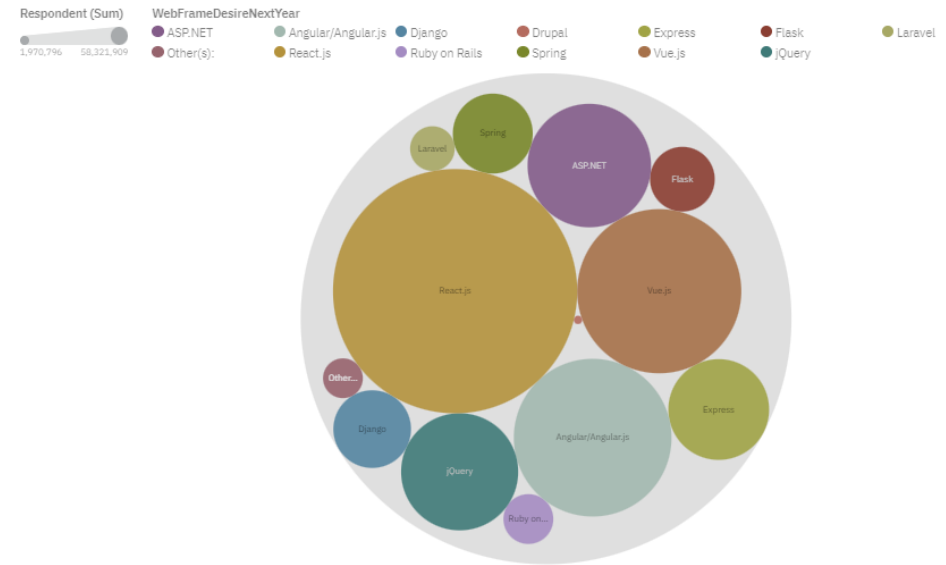
## Top 10 Databases desired for the next year



## Desired platforms for the next year



## Top 10 WebFrames desired for the next year

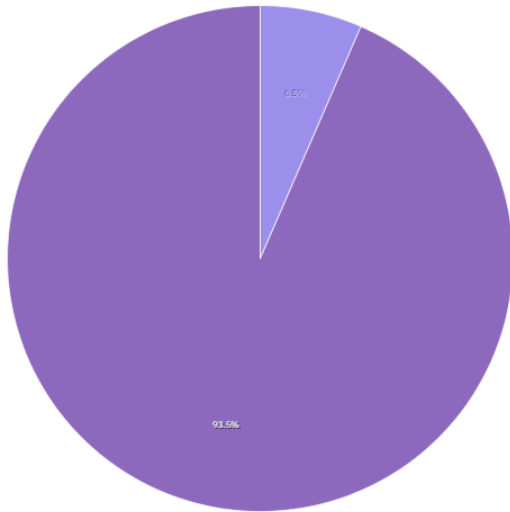




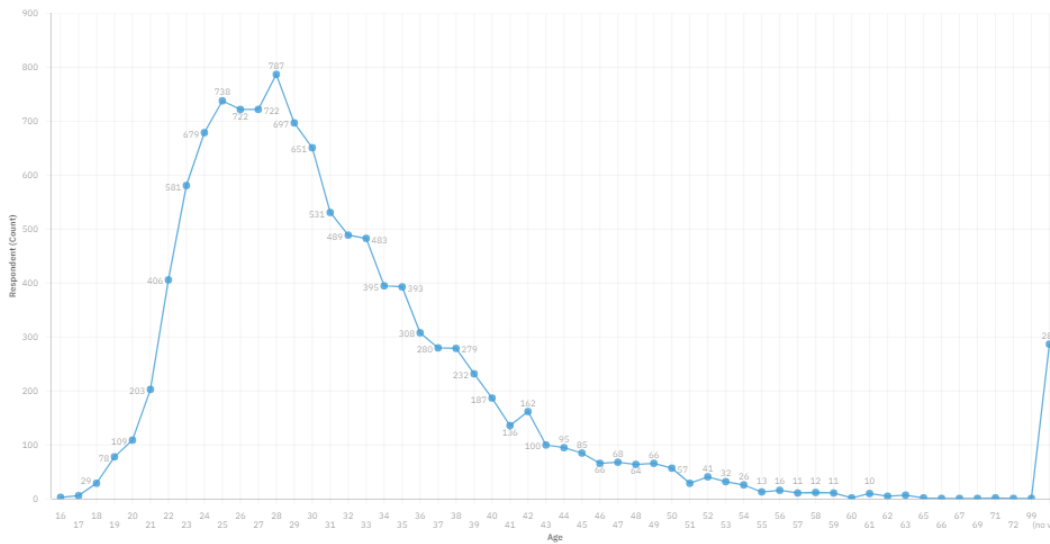
# DEMOGRAPHICS

Respondent classified by **Gender**

Gender  
● Woman ● Man



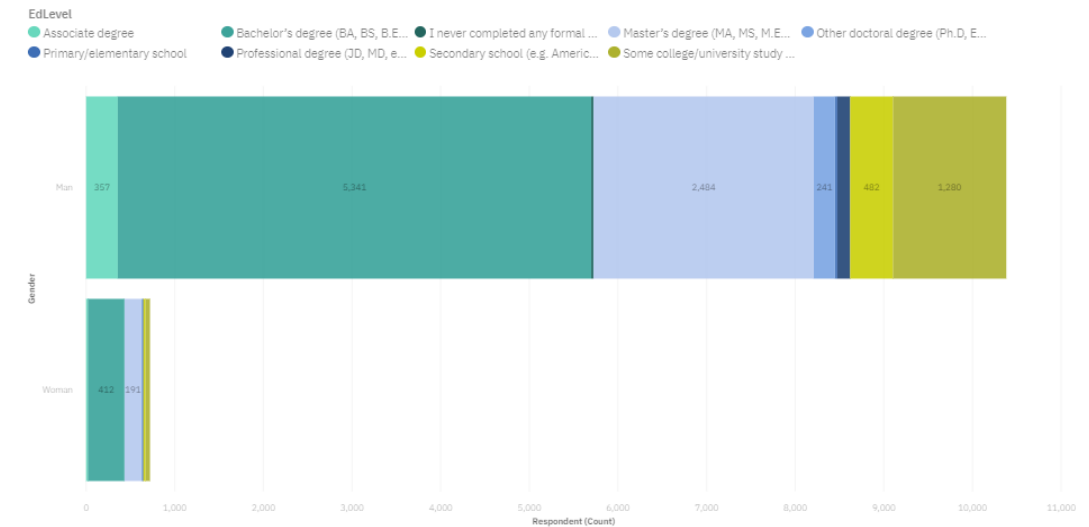
Respondent Count by **Age**



Respondent Count for **Countries**



Respondent Count by **Gender**  
classified by Formal Education Level



# DISCUSSION

## FINDINGS

- ✓ The 1st and 2nd place remains unchanged in both measured periods: current and future - **JAVAScript** and **HTML**
- ✓ **Python** has the rising trend
- ✓ Relational Databases are a more common trend in the present time
- ✓ Non-Relational Databases will become more often choosing by users
- ✓ Currently most common WebFremes are **Angular** and **ASP.NET**
- ✓ In the Future more servants want to know WebFrames as **React.js** and **Vue.js**
- ✓ In job market the vast majority are man.
- ✓ More then 50% respondents had Bachelor degree

## IMPLICATIONS

- ✓ The present and the future belong to the data world. We have data everywhere not only in tables. Even now we can see how changes developers world. We can observe like the simplicity defeat difficulties:
  - ✓ Languages: the simple PROGRAMING LANGUAGE become more popular like Python.
  - ✓ Non-Relational Databases gives as more date easier to collect.
  - ✓ WebFrames which are easier to learn and use defeat a more difficult one.
- ✓ In job market definitely is a space for women who would like to develop their careers in this IT industry.
- ✓ “PRACTICE MAKES PERFECT” Practice is important we can assume it is important then Master degree.

# CONCLUSION

## PURPOSE

Analysis current and desired technologies in developer job market for identify future skill requirements.

Analysis for **GLOBAL IT AND BUSINESS CONSULTING FIRM**  
“STACK OVERFLOW”

## CONCLUSION

How will changing the technologies and what future skills requirements will be?

Technology develops very rapidly and does not stop.  
It is certain that developers have to grow with it

✓ What are **the top programming languages** in demand?

Still most demand are JAVAScript and HTML, but we can observe how fast interest in Python grow

✓ What are **the top database skills** in demand?

Knowledge about RDBMS and non RDBMS will be demand. We have data everywhere from the table to the websites with photos

✓ What are **the popular WebFrames**?

WebFrames which are easier to learn and use defeat a more difficult one

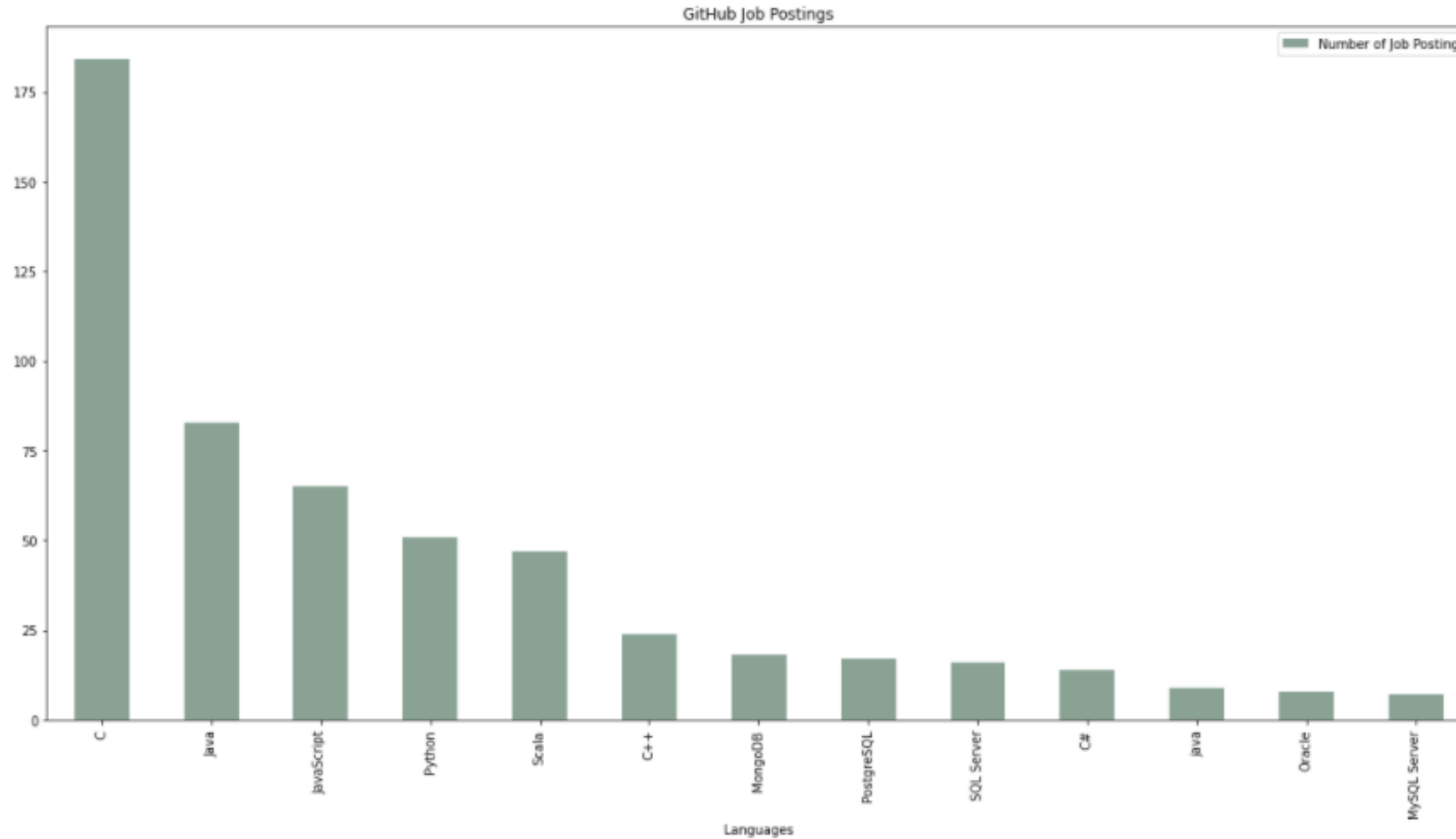
✓ How works **as Developer**? For whom is it recommended?

This JOB is recommended for everyone who love working with code and datas

# APPENDIX

# GITHUB JOB POSTINGS

CODE



# POPULAR LANGUAGES

CODE

