Survey Stack Overflow 2019

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OUTLINE

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- Discussion
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EXECUTIVE SUMMARY

This project analyzes the Stack Overflow Survey 2019. Analyze starts with pulling the data and ends with Dashboard. From the data, we can conclude the conclusion is javascript, python, postgreSQL, and mongoDB is the best choice for learning in 2019.

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INTRODUCTION

In this project, I will analyze a survey from Stack Overflow in 2019. That survey collects data like a skill programming language, skill database, skill desire next year, compensation from the job, and many more. I will make a story from the data that I find in the dashboard.

METHODOLOGY

The methodology is:
1. I pull the data with API and web scraping,
2. After that I check the data like handling duplicate and missing values, and make new columns to normalize the data.
3. The next step is exploratory data analysis with Python and data visualization.
4. Last, I made the dashboard with Cognos Dashboard Embedded (CDE) to make the story my findings.
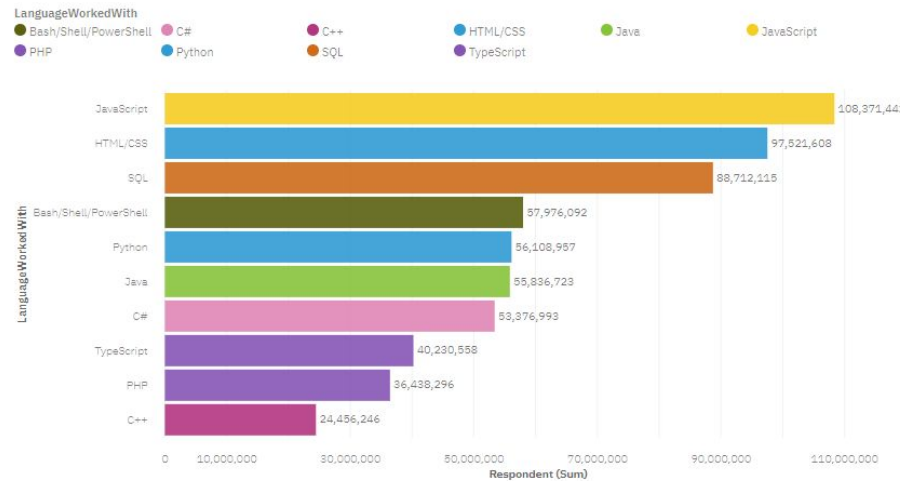
RESULTS

This is link for github to
1. [Pull data with API](#)
2. [Pull data with Web Scraping](#)
3. [Explore the Dataset](#)
4. [Data Wrangling](#)
5. [Exploratory Data Analysis (EDA)](#)
6. [Statistics with Data Visualization](#)

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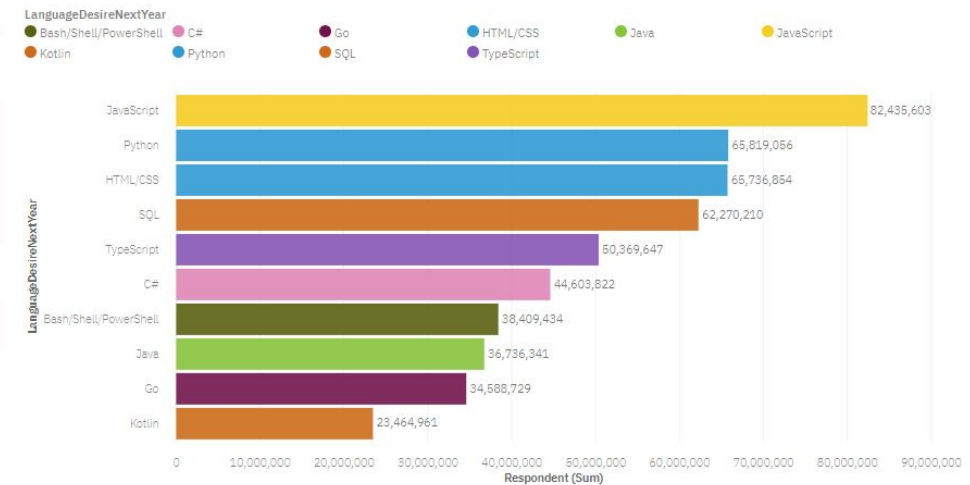
PROGRAMMING LANGUAGE TRENDS

2019

Desired for The Next Year

Top 10 Languages

LanguageWorkedWith
- Bash/Shell/PowerShell
- C#
- C++
- HTML/CSS
- Java
- JavaScript
- PHP
- Python
- SQL
- TypeScript

Language	Respondent (Sum)
JavaScript	108,371,442
HTML/CSS	97,521,608
SQL	88,712,115
Bash/Shell/PowerShell	57,976,092
Python	56,108,957
Java	55,836,723
C#	53,376,993
TypeScript	40,230,558
PHP	36,438,296
C++	24,456,246

Top 10 Languages Desired for The Next Year

LanguageDesireNextYear
- Bash/Shell/PowerShell
- C#
- Go
- HTML/CSS
- Java
- JavaScript
- Kotlin
- Python
- SQL
- TypeScript

Language	Respondent (Sum)
JavaScript	82,435,603
Python	65,819,056
HTML/CSS	65,736,854
SQL	62,270,210
TypeScript	50,369,647
C#	44,603,822
Bash/Shell/PowerShell	38,409,434
Java	36,736,341
Go	34,588,729
Kotlin	23,464,961

PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript has the most programming language in 2019 and is desired for the next year

- Python has rise from 5th in 2019 to 2nd in desired for the next year

- HTML/CSS and SQL top 5 in 2019 and still top 5 in desired for the next year

- Bash/Shell/PowerShell drop from 4th in 2019 to 7th in desired for the next year

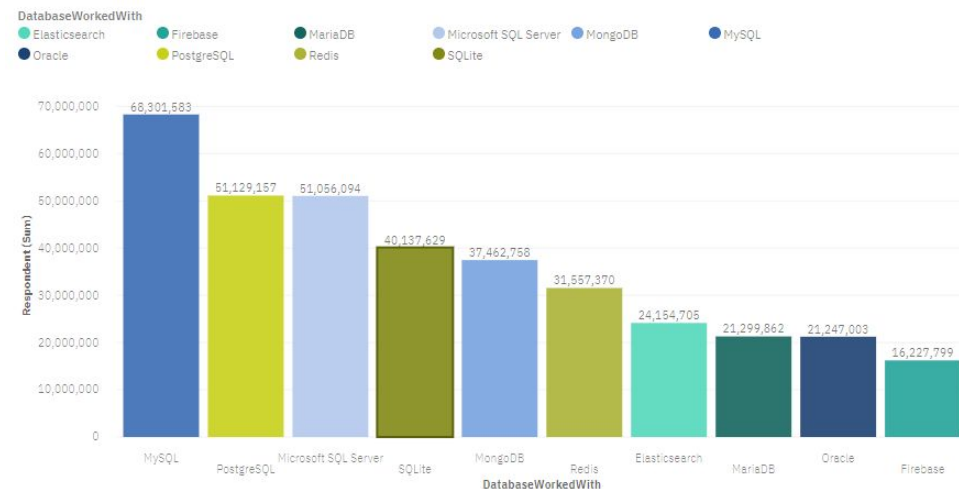- TypeScript has rise from 8th in 2019 to 5th in desired for the next year

Implications

- The first skill programming language must have is JavaScript

- The second skill programming language must have is Python

- The third and fourth skill programming language must have is HTML/CSS and SQL

- Bash/Shell/PowerShell can have but not important skill programming language

- The fifth skill programming language must have is TypeScript

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DATABASE TRENDS

2019

Desired for The Next Year

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DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL is the most database platform use in 2019 but 4th in desired for the next year

- PostgreSQL is the most database platform in desired for the next year, rise from 2019 at second position

- MongoDB has rise from 5th in 2019 to 2nd in desired for the next year

- Oracle has disappear from top 10 desired for the next and replaced with DinamoDB

Implications

- We can learn MySQL but We can learn better platform for database

- PostgreSQL is the best choice if we start to learn database platform for SQL

- MongoDB is the best choice if we start to learn database platform for NoSQL

- Oracle and DinamoDB can be learn if we have another time

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DASHBOARD

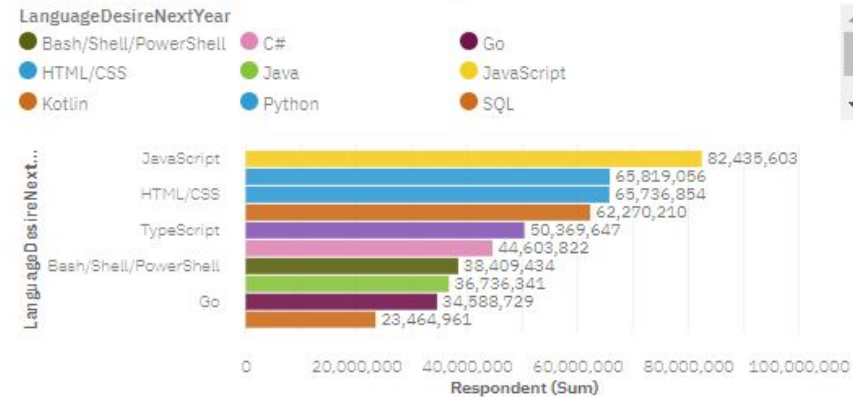[Link Dashboard with Cognos](#)

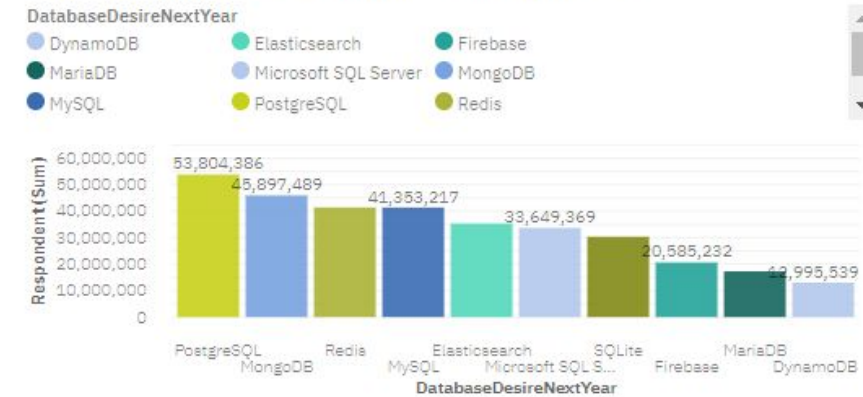# Dashboard Current Technology Usage
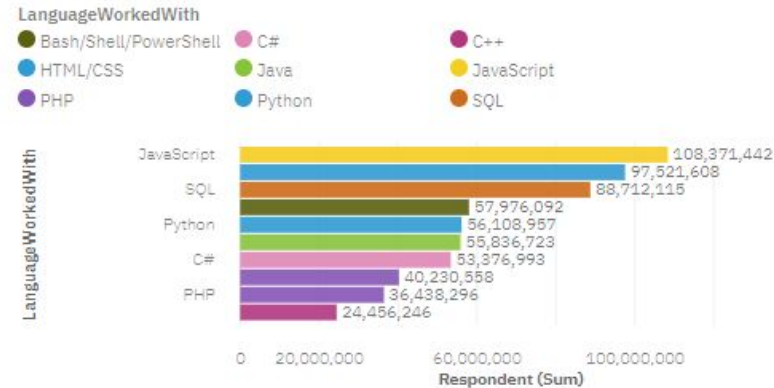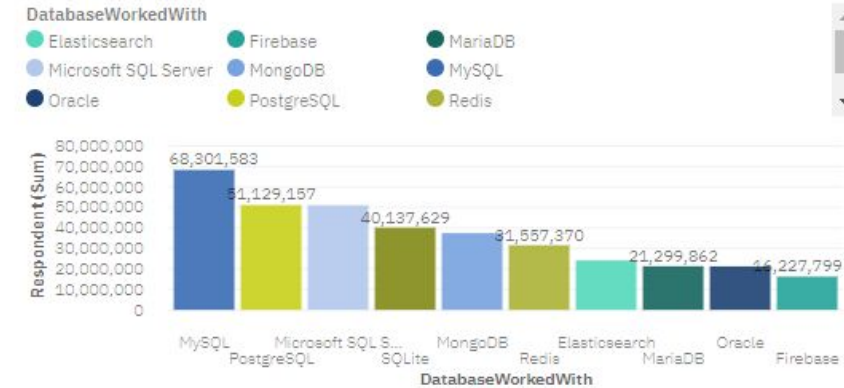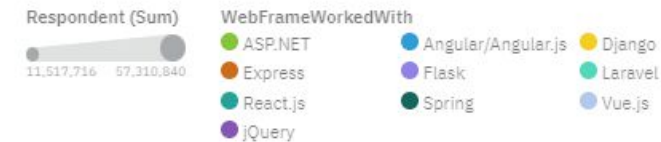
Dashboard Future Technology Trend

Top 10 Languages Desired for The Next Year

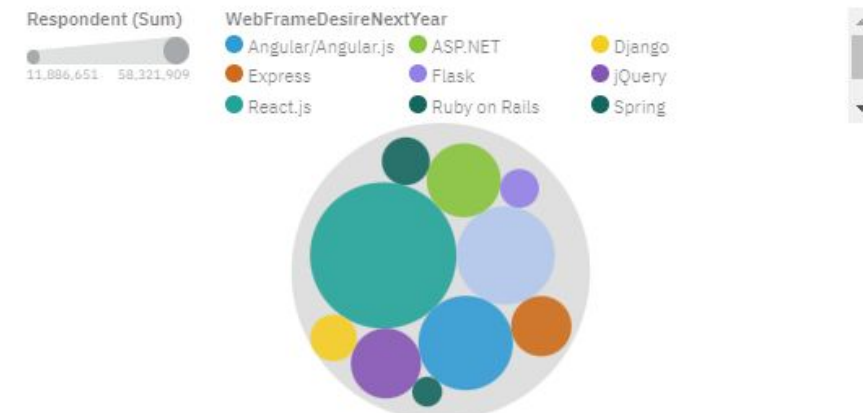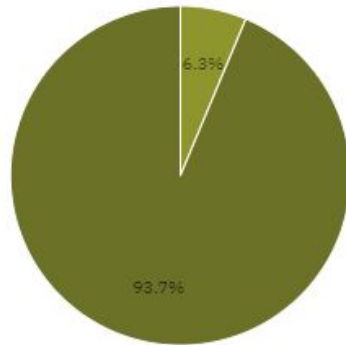Top 10 Databases Desired for The Next Year

Desired Platforms for The Next Year

Top 10 WebFrames Desired for The Next Year

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Dashboard Demographics
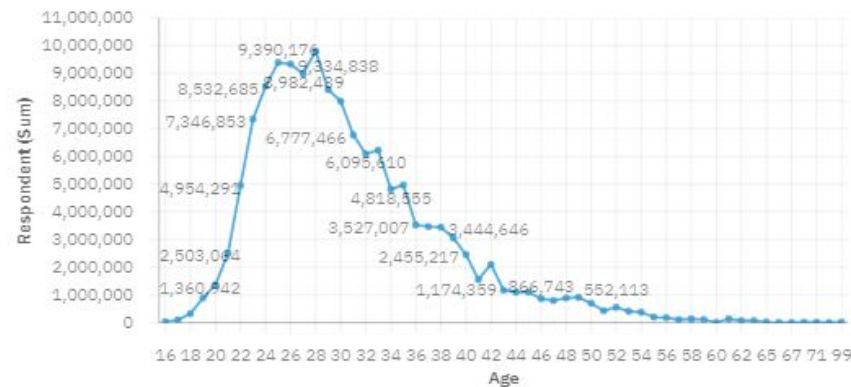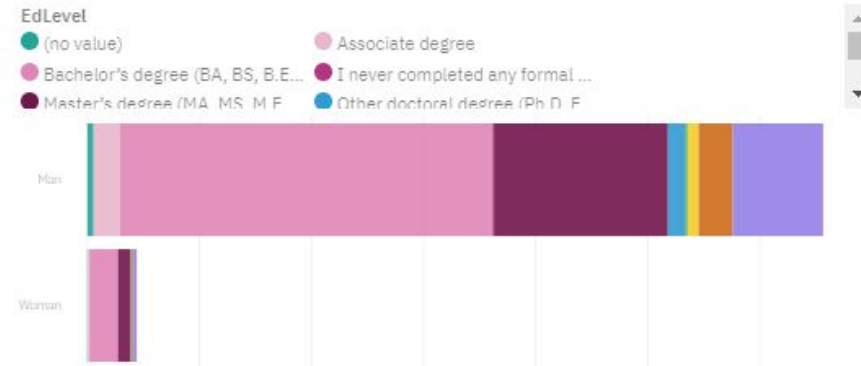
DISCUSSION

If you have any discussion with me, feel free to direct message me on LinkedIn

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OVERALL FINDINGS & IMPLICATIONS

Findings

- JavaScript has the most programming language in 2019 and is desired for the next year

- Python has rise from 5th in 2019 to 2nd in desired for the next year

- PostgreSQL is the most database platform in desired for the next year, rise from 2019 at second position

- MongoDB has rise from 5th in 2019 to 2nd in desired for the next year

- Men and age in 22 to 30 is the most respondent in this survey

Implications

- The first skill programming language must have is JavaScript

- The second skill programming language must have is Python

- PostgreSQL is the best choice if we start to learn database platform for SQL

- MongoDB is the best choice if we start to learn database platform for NoSQL

- IT is dominated by men aged 22 to 30

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CONCLUSION

- In 2020 we can learn programming language javascript and python

- In 2020 we can learn database platform postgreSQL to SQL

- In 2020 we can learn database platform MongoDB to NoSQL

- This survey no presented to this year

APPENDIX

- [URL Pull data with API](#)
- [URL Pull data with Web Scraping](#)
- [URL dataset for Explore and Data Wrangling](#)
- [URL dataset for EDA](#)
- [URL database for Daviz](#)
- [Job-postings.xlsx](#)
- [Popular-languages.csv](#)

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JOB POSTINGS

Skills in City
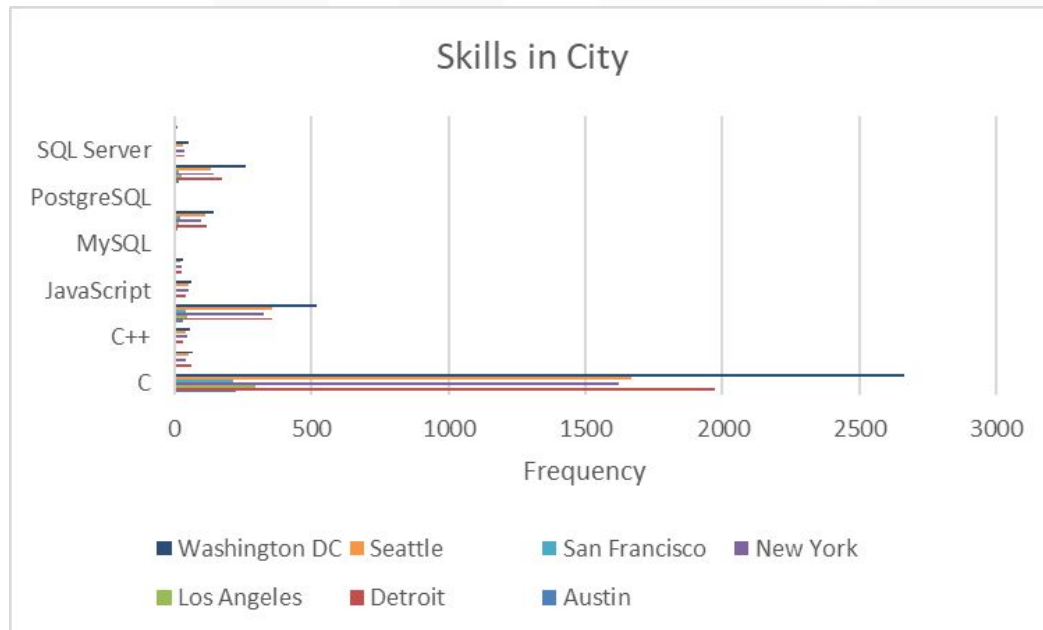
Another data visualization I built with Excel from pulling data with API. Davis shows us skills in several cities. Skill programming language C is dominant in several cities, followed by javascript in the second position.

POPULAR LANGUAGES

Annual Average Salary

On the other hand, I built this Daviz with Excel from data pulled with web scraping. In this Daviz, show us the annual average salary for several skills in IT. Swift in first position with an annual average salary is 130000 USD

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Thank You

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