

# IDENTIFICATION OF FUTURE SKILL REQUIREMENTS

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# OUTLINE

 Executive Summary

 Introduction

 Methodology

 Results

Visualization – Charts  
Dashboard

 Discussion

Findings & Implications

 Conclusion

 Appendix

# EXECUTIVE SUMMARY



Objective of data contextualization and analysis



Methodology description

Data Collection

Exploratory Data Analysis

Data Wrangling

Data Visualization



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

To keep pace with changing technologies and remain competitive, it is required to regularly analyzes data to help identify future skill requirements.

The focus problems are

- What are the top programming languages in demand?
- What are the top database skills in demand?
- What are the popular IDEs?

# METHODOLOGY



Collect a data of the most in-demand programming skills from a variety of sources

Web Scraping  
APIs.  
Request library.



## Data Wrangling



## Exploratory data analysis

Analyzing the data to find patterns and insights.  
Handling missing values and outliers.  
Correlations.



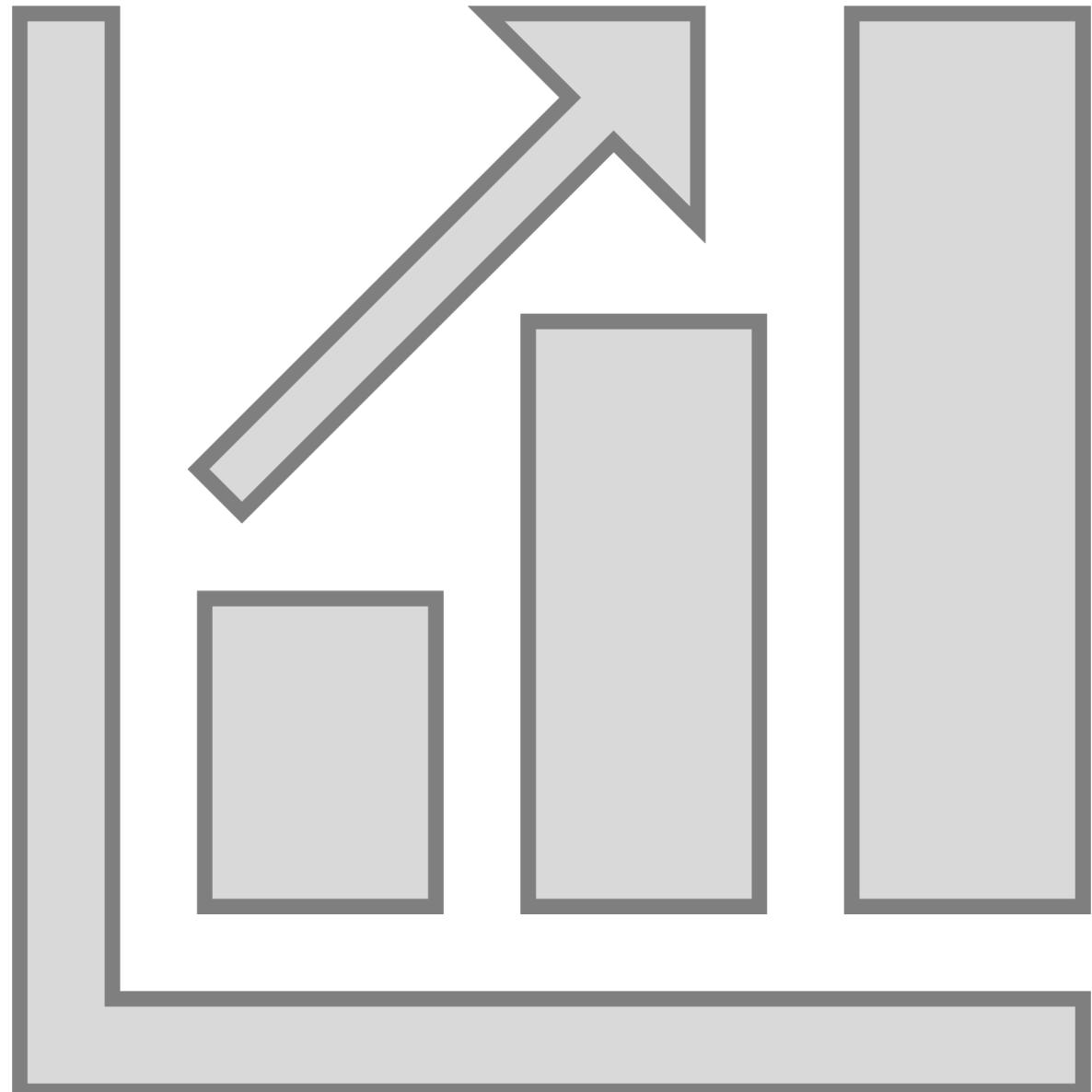
## Data Visualization

Highlight distribution of data, relationships, the composition and comparison of data.



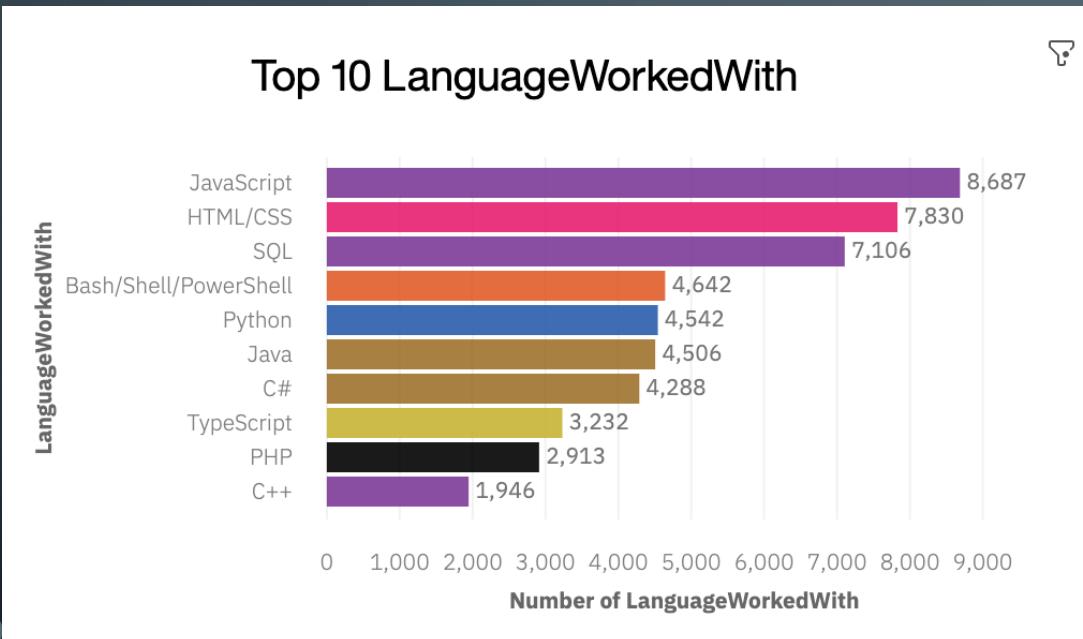
## Dashboards

# RESULTS

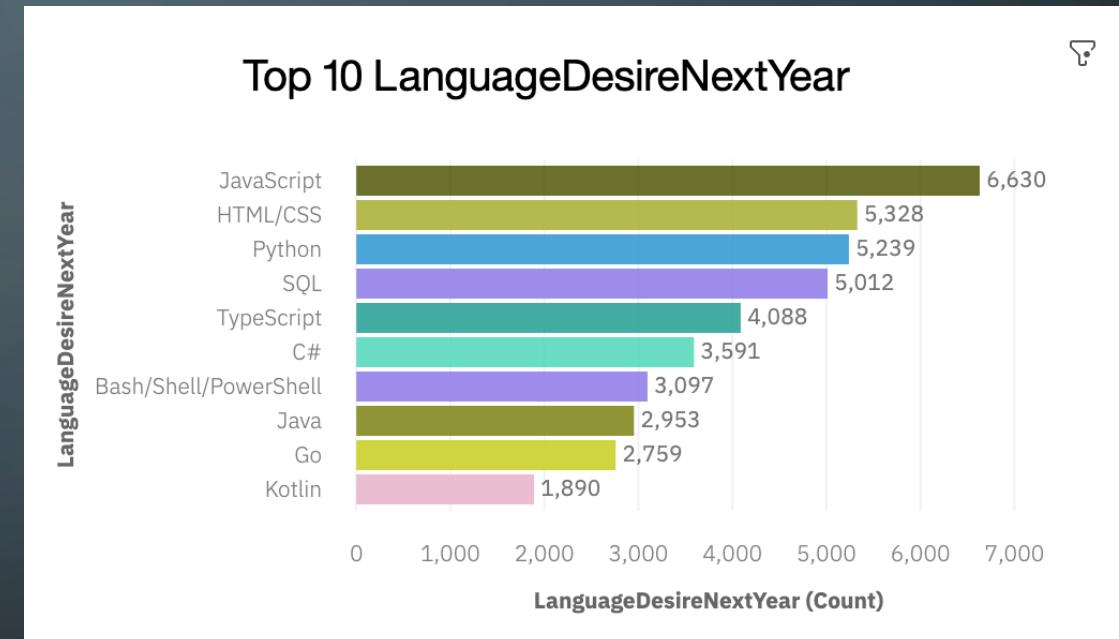


# PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

## Findings

- JavaScript is the highest number of people working with, followed by HTML/CSS for current as well as future
- The third is SQL in current but will be replaced by Python in future
- TypeScript is expected to be in the 5th place.
- Bash/Shell/PowerShell is expected to fall in future.

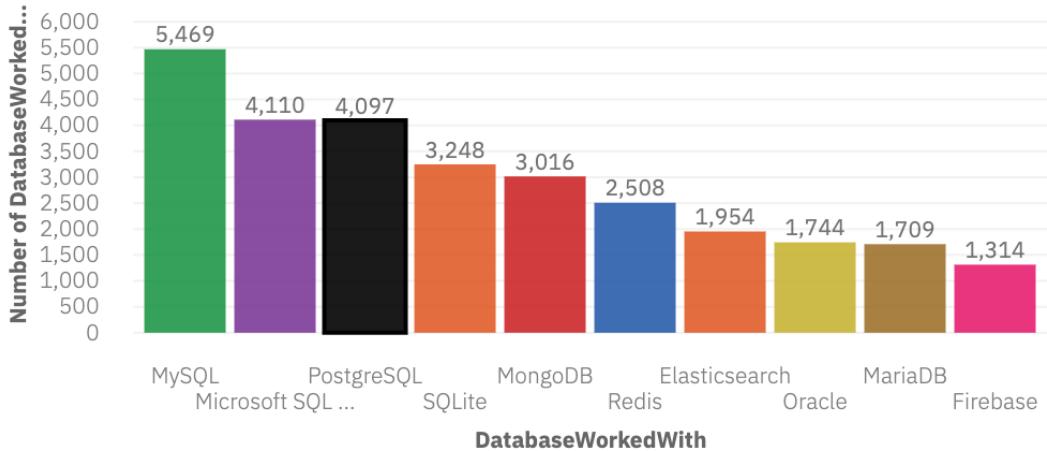
## Implications

- JavaScript and HTML/CSS will be still in the trends
- People are more interested in Python
- SQL will be still preferable

# DATABASE TRENDS

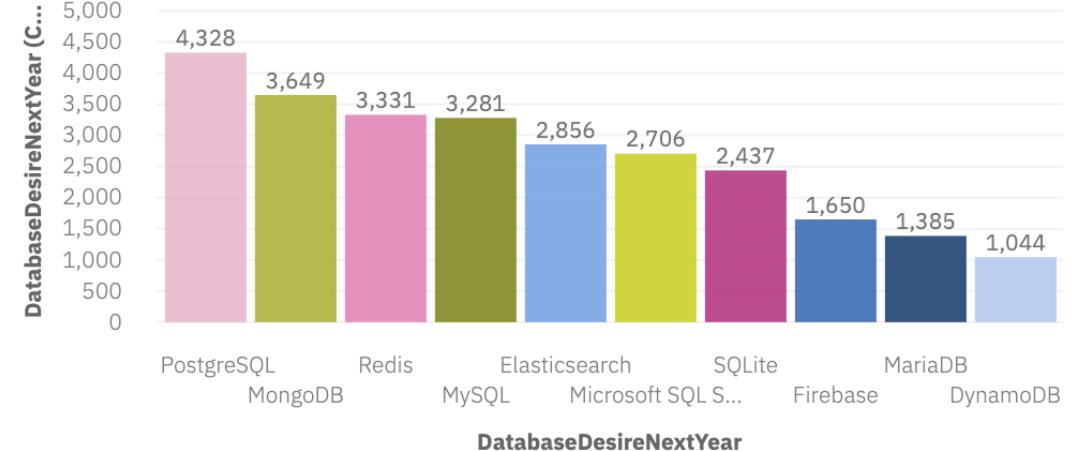
Current Year

Top 10 DatabaseWorkedWith



Next Year

Top 10 DatabaseDesireNextYear



# DATABASE TRENDS - FINDINGS & IMPLICATIONS

## Findings

- In future, PostgreSQL will be the 1st place instead MySQL
- MongoDB will be up from 5th to 2nd place
- Microsoft SQL Server and SQLite is estimated to be replaced by Radish and Elasticsearch

## Implications

- MySQL will be the most requirement to use
- MongoDB will be much more popular
- Radish and Elasticsearch will be used in the top 5th used databases

# DASHBOARD

[CLICK HERE FOR DASHBOARD WITH COGNOS](#)

# DASHBOARD TAB 1

Filters

All tabs

No filters have been applied.

This tab

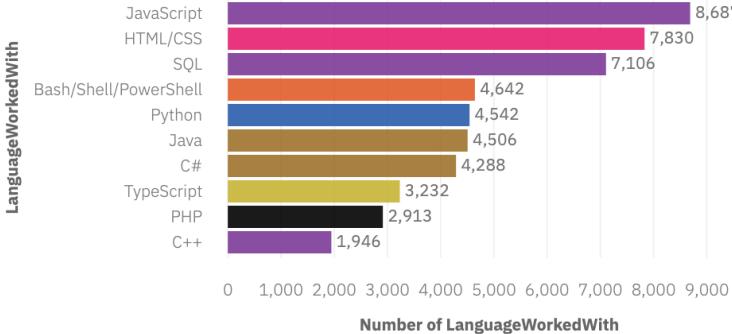
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Current Technology Usage

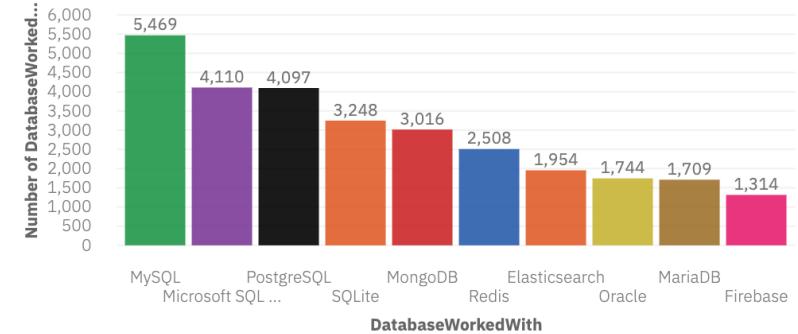
Future Technology Trend

Demographics

Top 10 LanguageWorkedWith



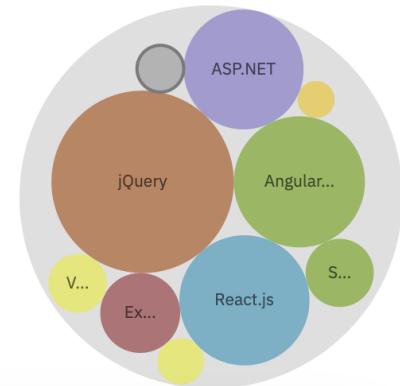
Top 10 DatabaseWorkedWith



PlatformWorkedWith



Top 10 WebFrameWorkedWith



# DASHBOARD TAB 2

Filters

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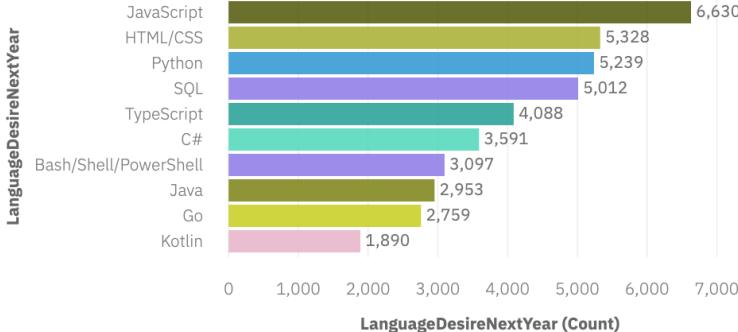
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Current Technology Usage

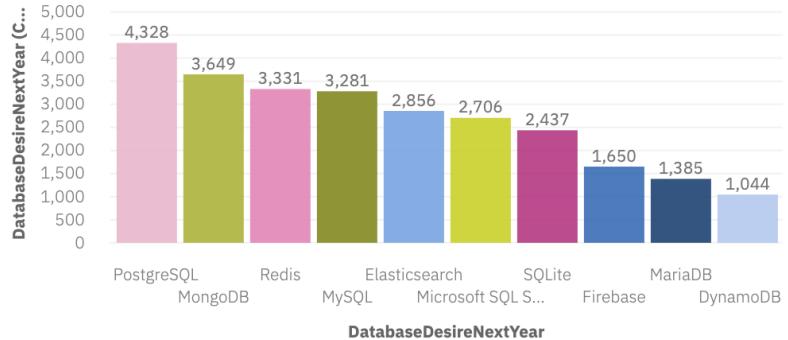
Future Technology Trend

Demographics

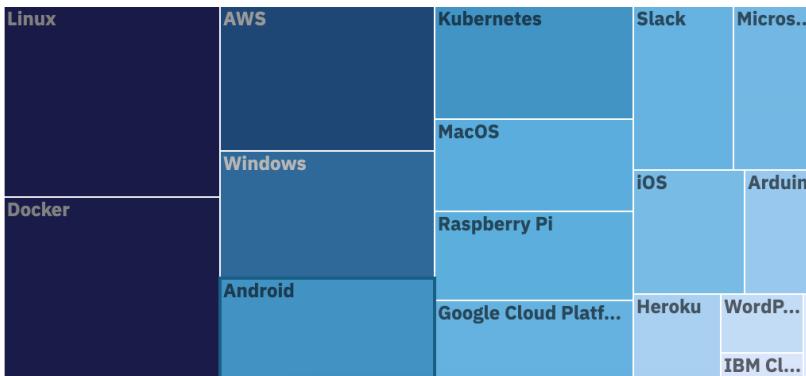
Top 10 LanguageDesireNextYear



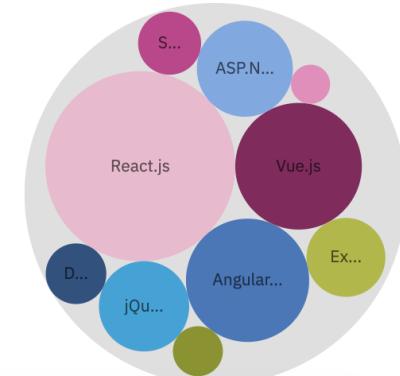
Top 10 DatabaseDesireNextYear



PlatformDesireNextYear



Top 10 WebFrameDesireNextYear



# DASHBOARD TAB 3

Filters 1

All tabs

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Gender  
Man, Woman 2

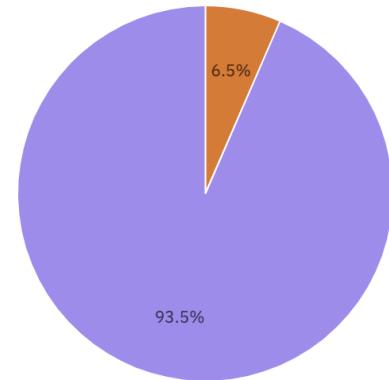
Current Technology Usage

Future Technology Trend

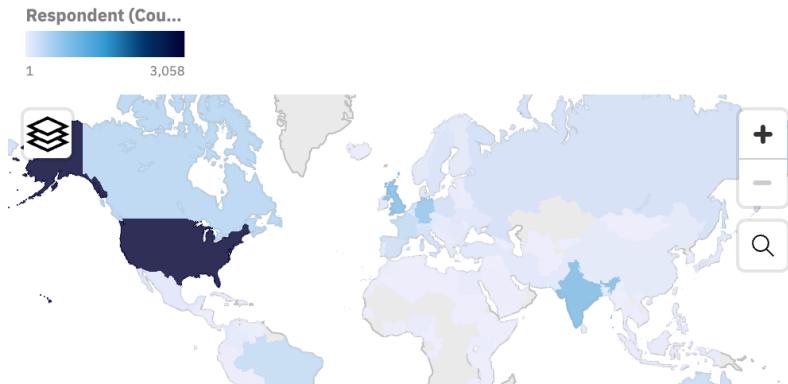
Demographics

Gender  
Woman  
Man

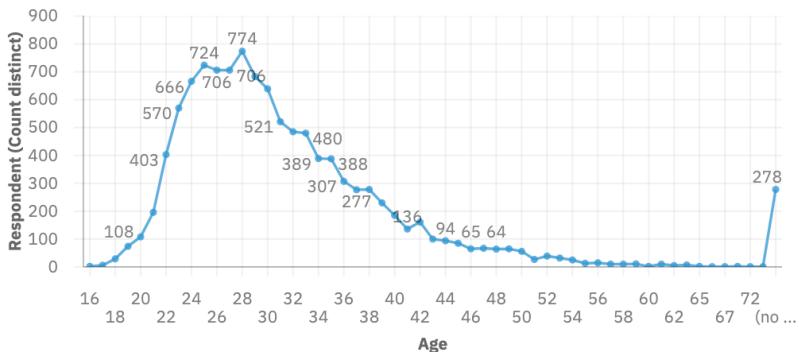
Respondent classified by Gender



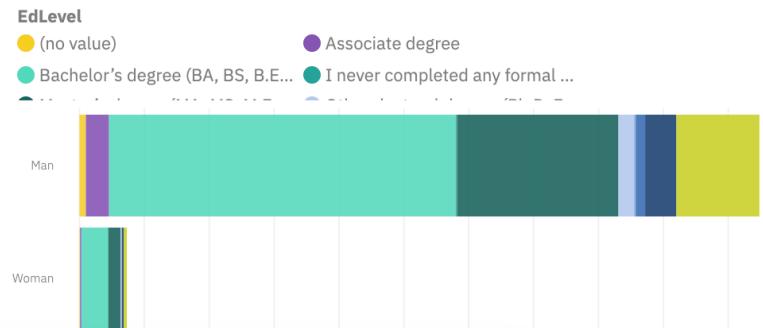
Respondent Count for Countries



Respondent Count by Age



Respondent Count by Gender, classified by Formal Education Level



# DISCUSSION

- Women places in global IT areas
- Why are the SQL servers remaining the most interest in the future?
- What is the key value of HTML/CSS to be still required?

# OVERALL FINDINGS & IMPLICATIONS

## Findings

- JavaScript and HTML/CSS will be remained in the top 1<sup>st</sup> and 2<sup>nd</sup> place as popular languages.
- SQL is going to be surpassed by Python.
- Bash/Shell/PowerShell are surpassed by other languages.
- PostgreSQL will be the 1st place instead MySQL in future, with falling of Microsoft SQL Server and SQLite
- Platform Linux is the most popular, while windows will be replaced by Docker
- React.js is predicted to be the highest preference of Web Frame in the future instead of jQuery

## Implications

- JavaScript and HTML/CSS will be continued as popular languages.
- Python is going to be more interested
- SQL servers will be required but the most popular database is expected to be PostgreSQL
- Docker is more preferred as much as Linux
- The demand of jQuery is decreasing

# CONCLUSION



HTML/CSS is estimated to stay popular the same in the future



PostgreSQL will be the most popular of database

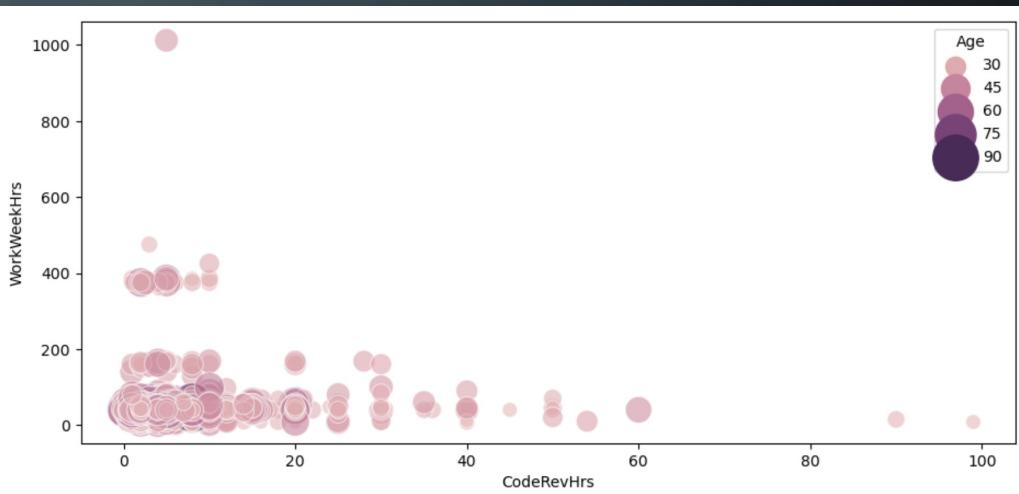
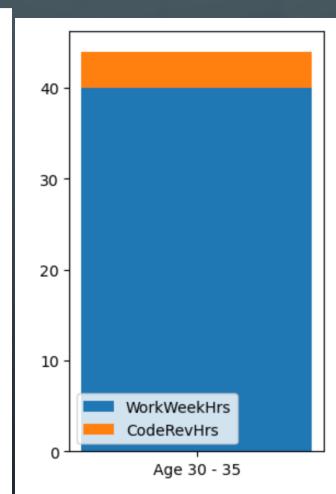
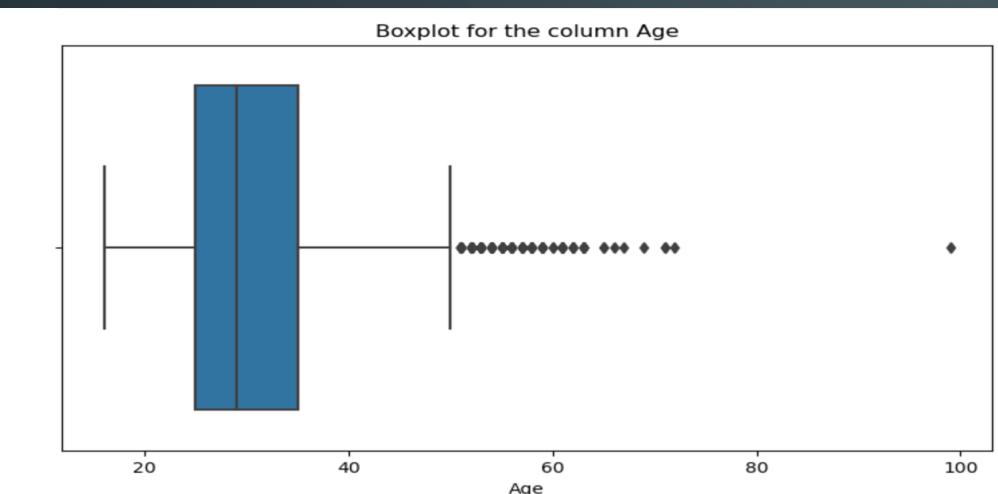
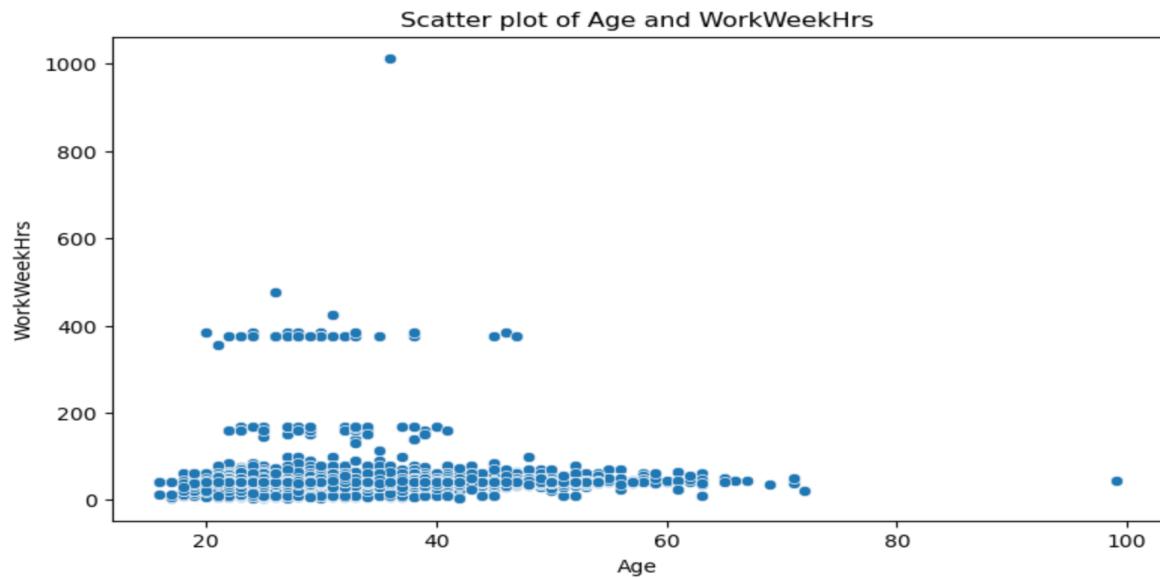
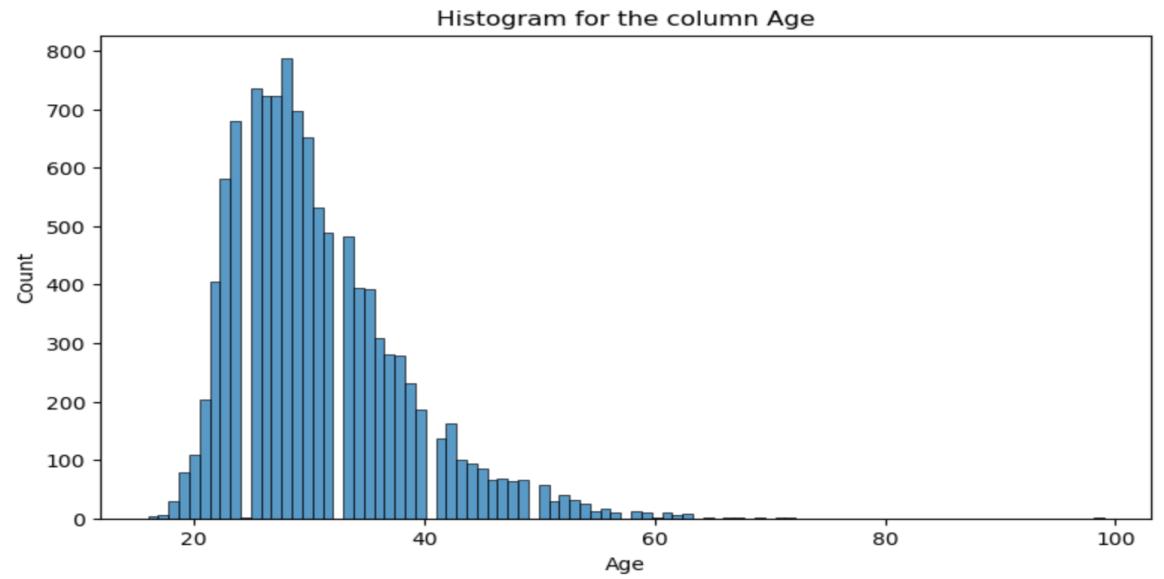


Linux platform is predicted to stay the same as 1st requirement

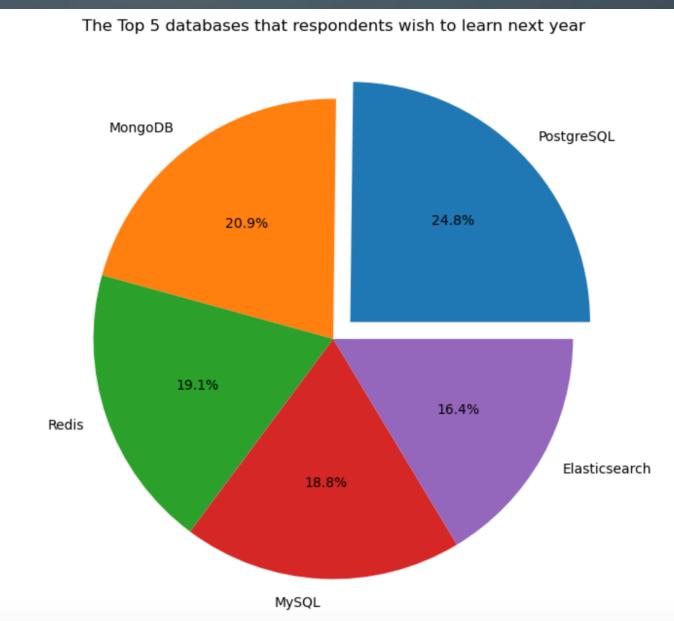
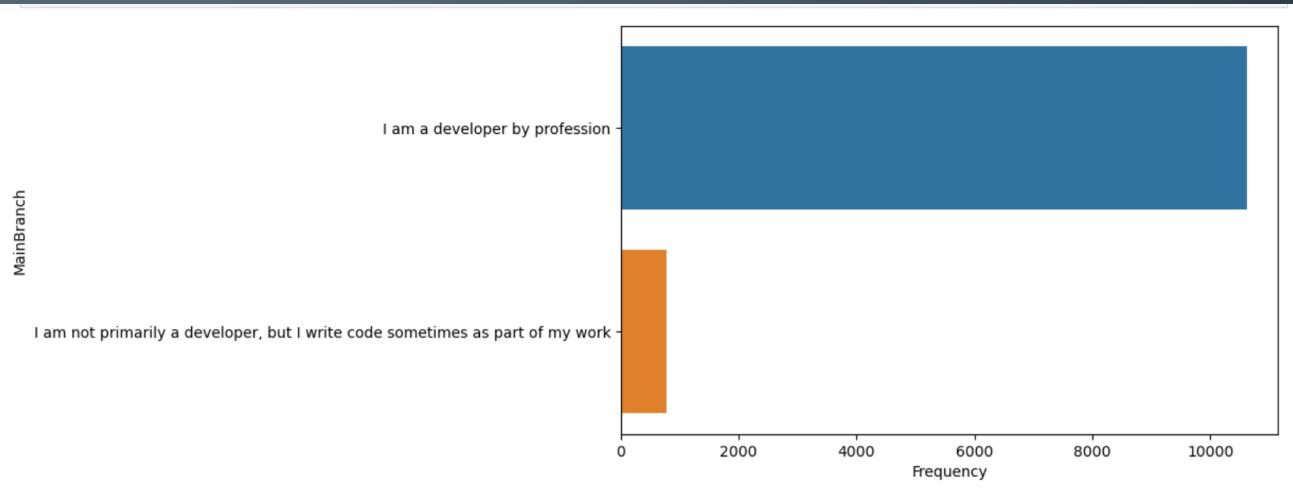
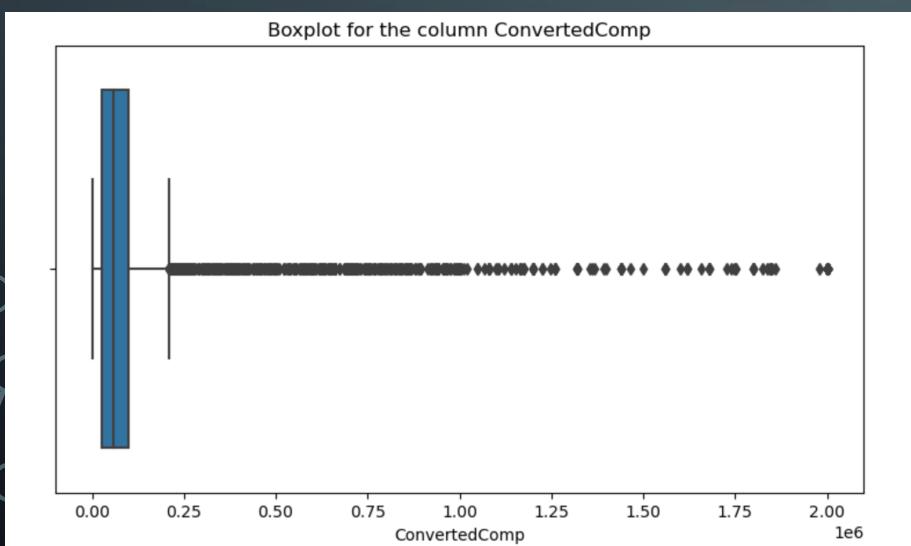
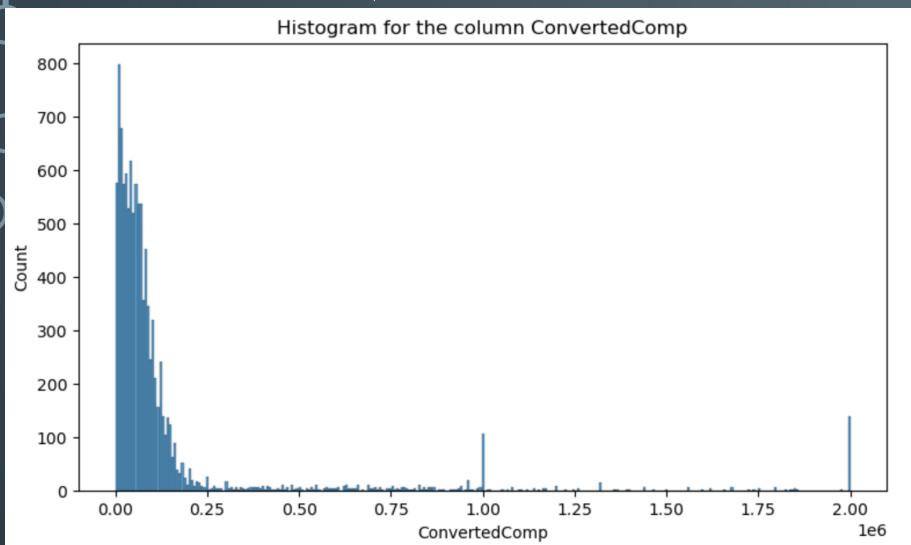


The most percentage of Web Frame will be occupied by React.js

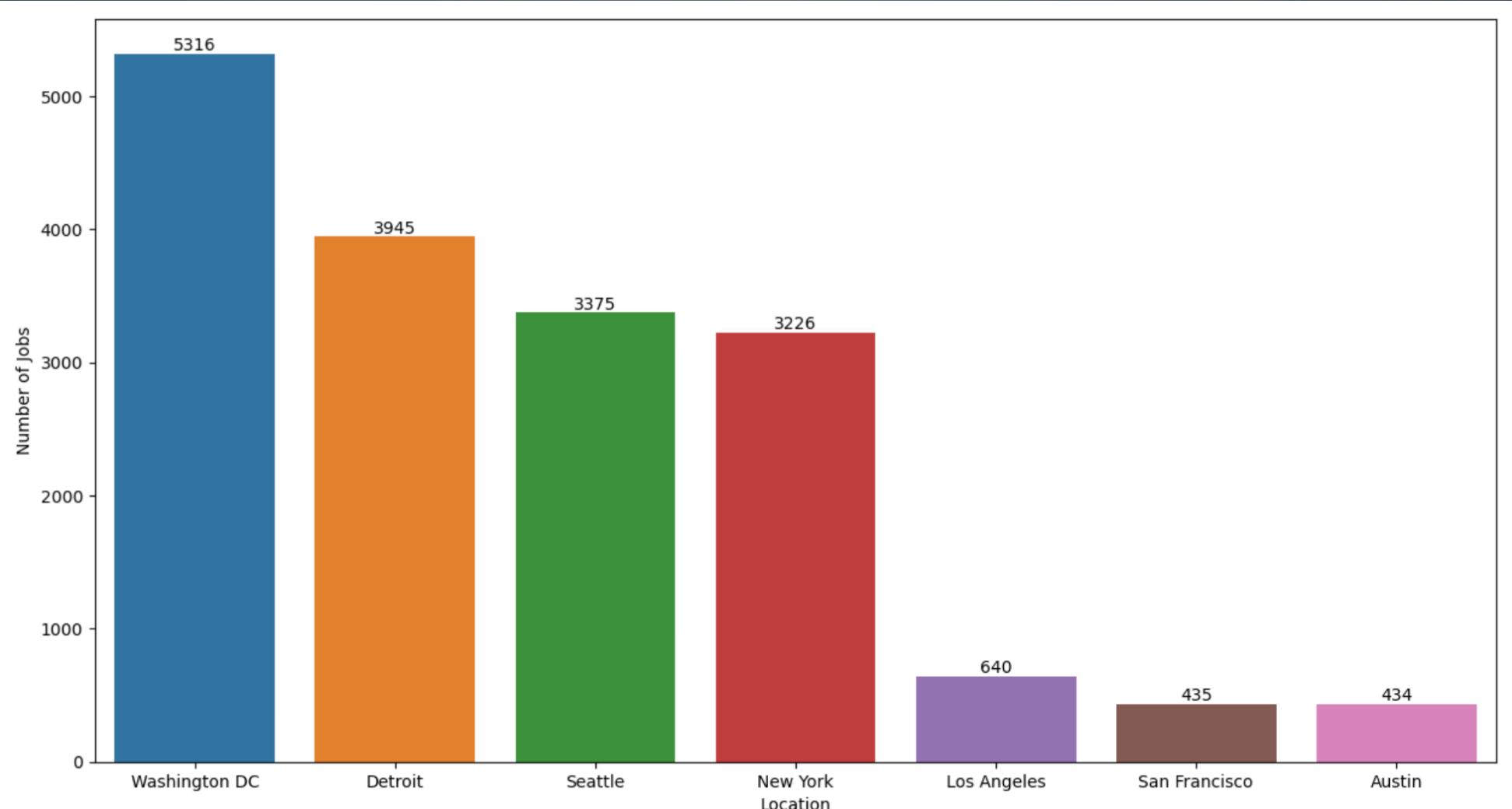
# APPENDIX



# APPENDIX



# JOB POSTINGS



# POPULAR LANGUAGES

