Future programming language trends

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SKILLS NETWORK

EXECUTIVE SUMMARY

- Collecting demand of jobs open from various technology and locations

- Analyzing the data and identifying insights and trends
  - Top programming language
  - Top databases skills
  - Popular IDEs

- Bringing information together with a dashboard showing current skills, future trend skills, and demographics

INTRODUCTION

- To match the current technology programming in order to ensure that it is align with the current expertise in its specific fields (IT solutions and consultants)

- Focus problems:
  - What are the programming/database skills in the present?
  - What are the programming/database skills in the future?

METHODOLOGY

- Data Collection

- Data Wrangling

- Exploring Data Analysis

- Data Visualization

- Dashboard Creation

- Presenting of Findings

- Data source: Job postings (https://cf-courses-data.s3.us.cloud-object-storage.appdomain.cloud/IBM-DA0321EN-SkillsNetwork/LargeData/m1_survey_data.csv)
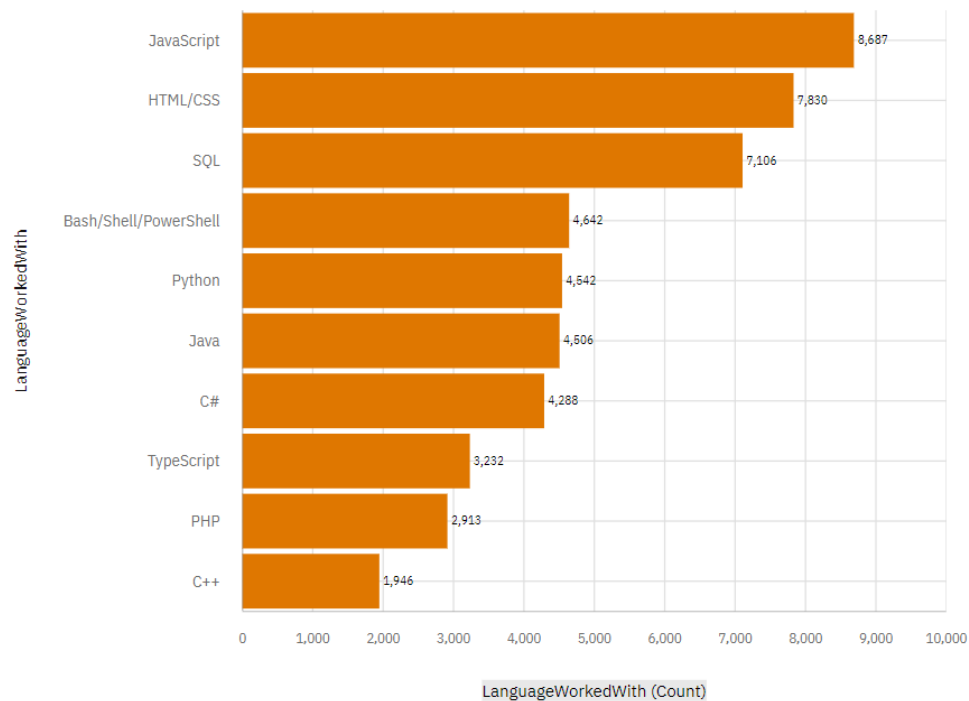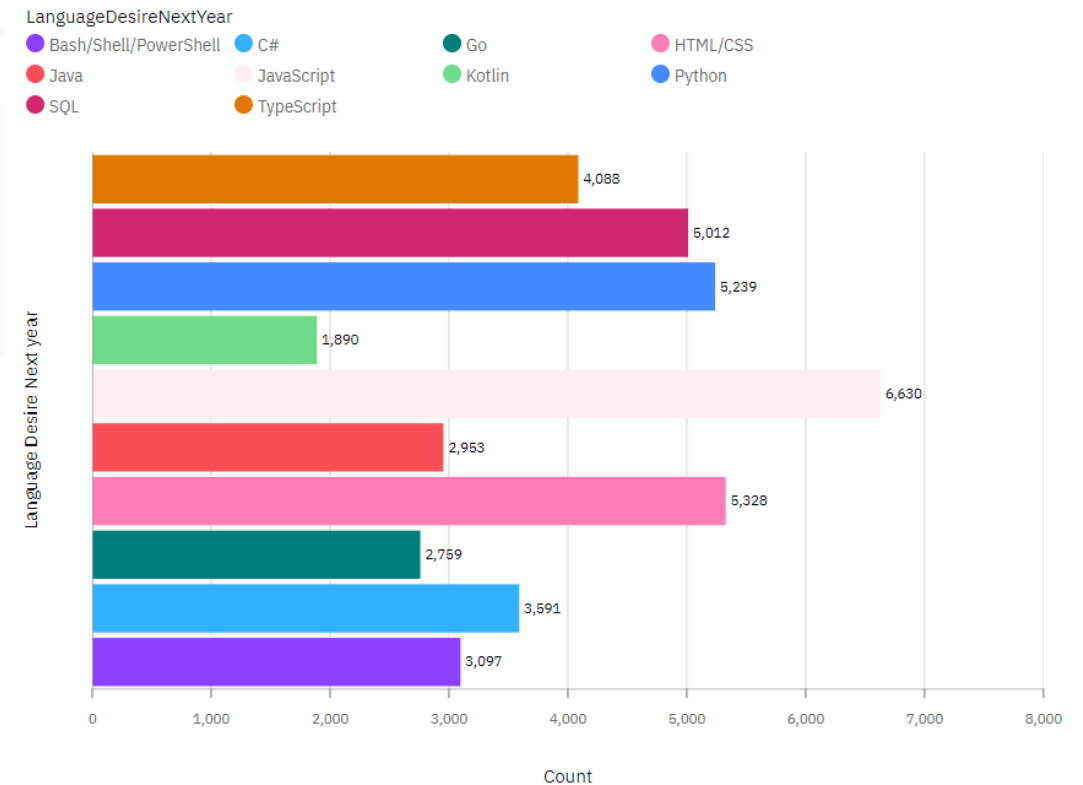
RESULTS

PROGRAMMING LANGUAGE TRENDS

Current Year

Top 10 Language Worked With

Next Year

Top 10 Language Desire Next Year

PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- Based on both findings, it is obvious that JavaScript is the highest number of people working, followed by HTML and CSS.
- The third most used language SQL has been replaced by Phyton on the future trend
- C++, which is the lowest number of users will be replaced with Koitlin language based on the future trends.
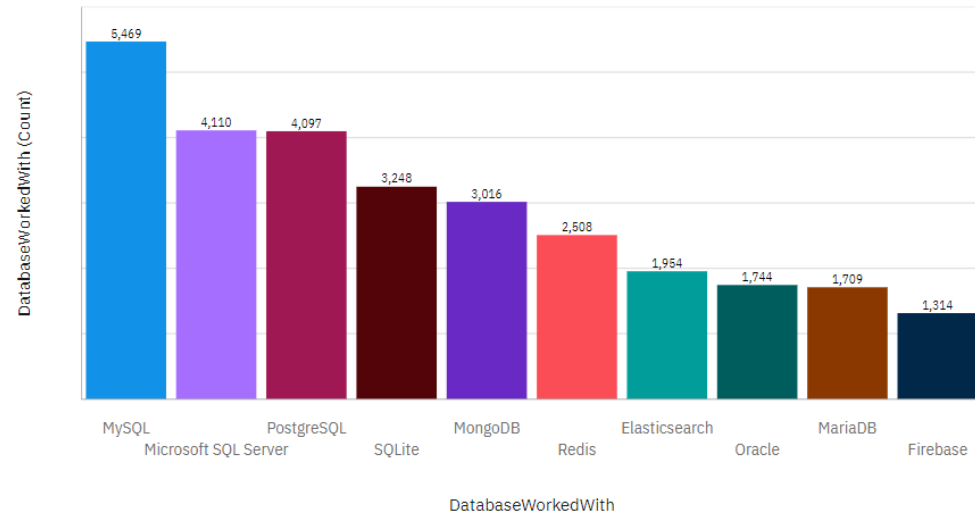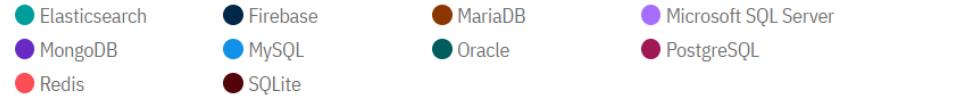
Implications

- There are no changes for the JavaScript and HTML and CSS trends.
- Phyton has been increasingly used as compared to Bash/Shell/PowerShell
- Though SQL has dropped in number, it still remains usable.

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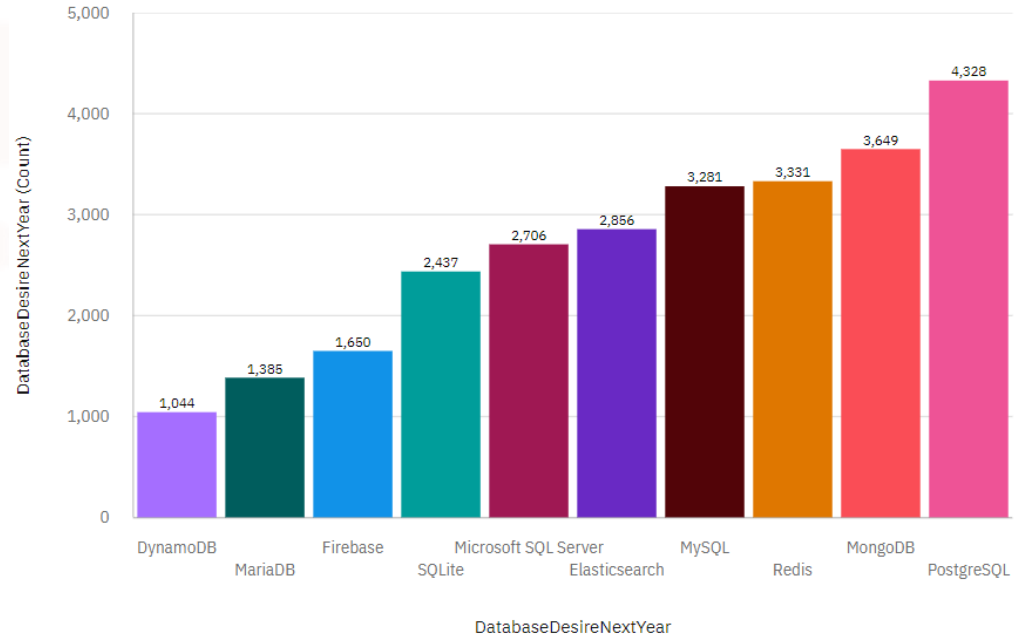SKILLS NETWORK

DATABASE TRENDS

Current Year

Top 10 Database Worked With

- Elasticsearch
- Firebase
- MariaDB
- Microsoft SQL Server
- MongoDB
- MySQL
- Oracle
- PostgreSQL
- Redis
- SQLite

Next Year

Top 10 Database Desire Next Year

DatabaseDesireNextYear
- DynamoDB
- Elasticsearch
- Firebase
- MariaDB
- Microsoft SQL Server
- MongoDB
- MySQL
- PostgreSQL
- Redis
- SQLite

DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- Based on both findings, it is obvious that MySQL, which is the highest number of database people use, will be replaced by PostgreSQL in the future.

- The MongoDB, the fifth highest in the current trend has increased to the second place in the future trend.

- The least used database, Firebase, had a slight increased to the seventh place in the future trend.

Implications

- SQL will still be the common database used in the future.

- MongoDB will be more popular in the future trends

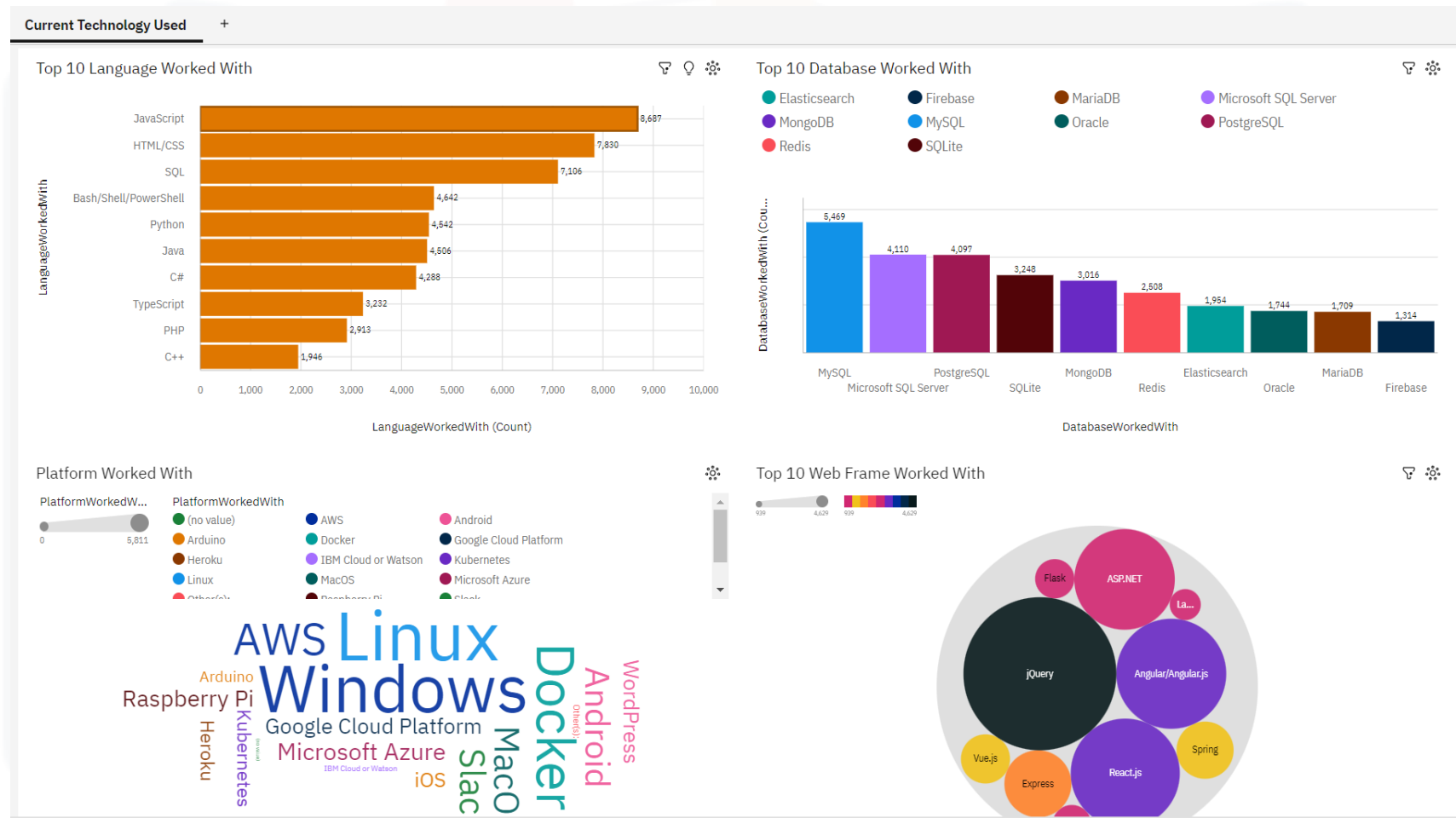- Firebase stays relevant in the database system.
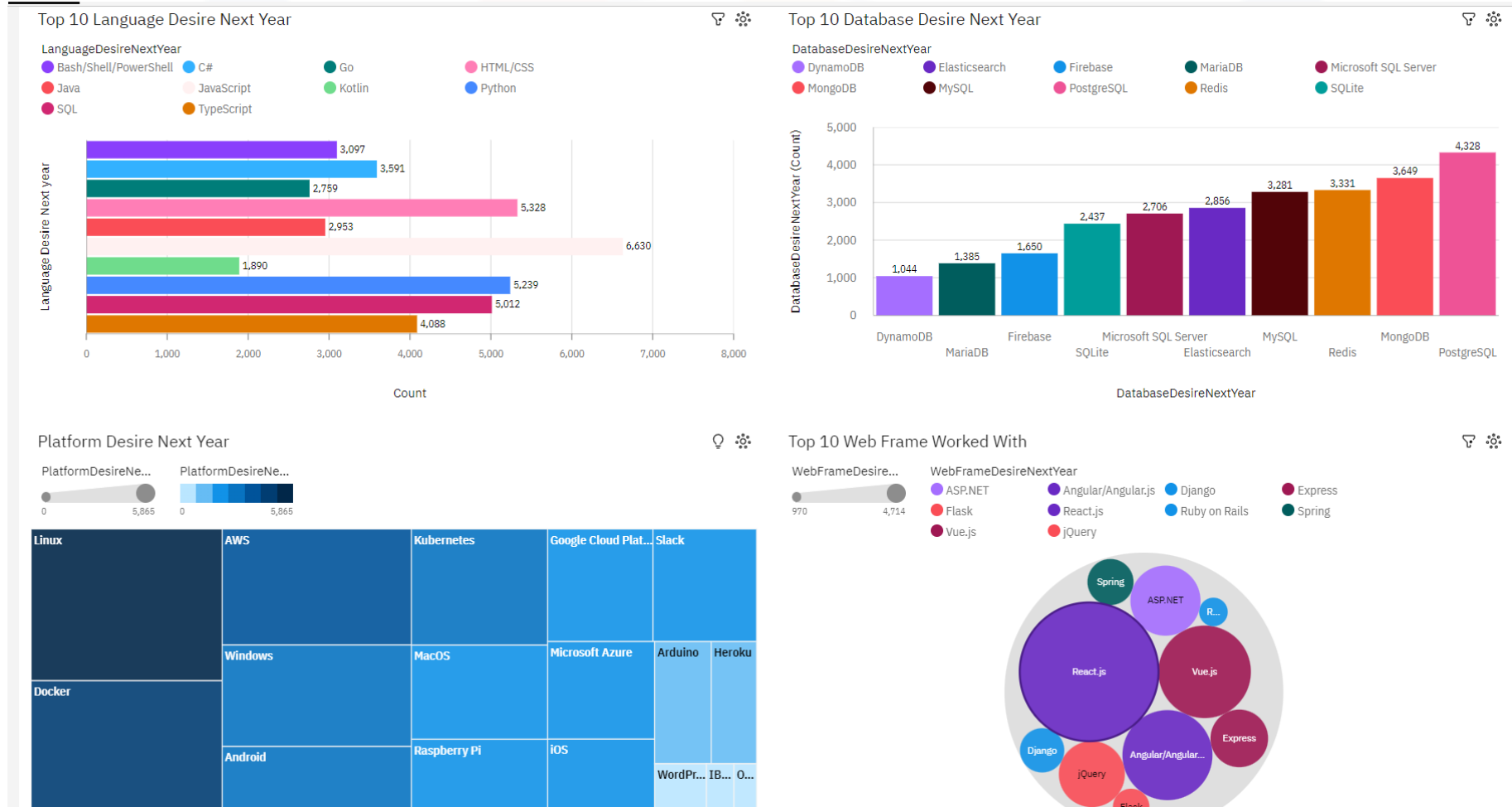
DASHBOARD

Current Technology Used

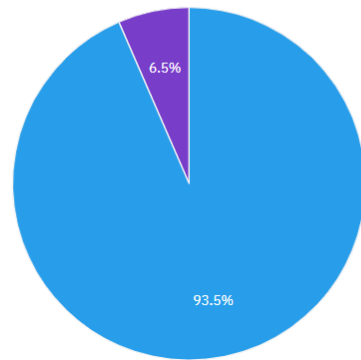Future Technology Trend

Demographics

DASHBOARD TAB 1

DASHBOARD TAB 2

DASHBOARD TAB 3
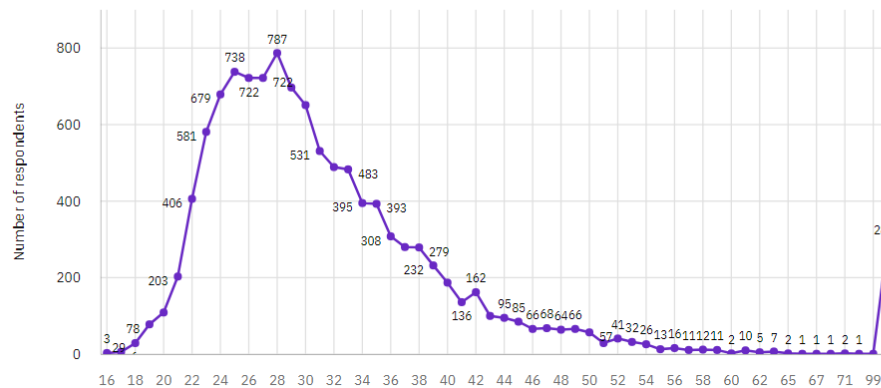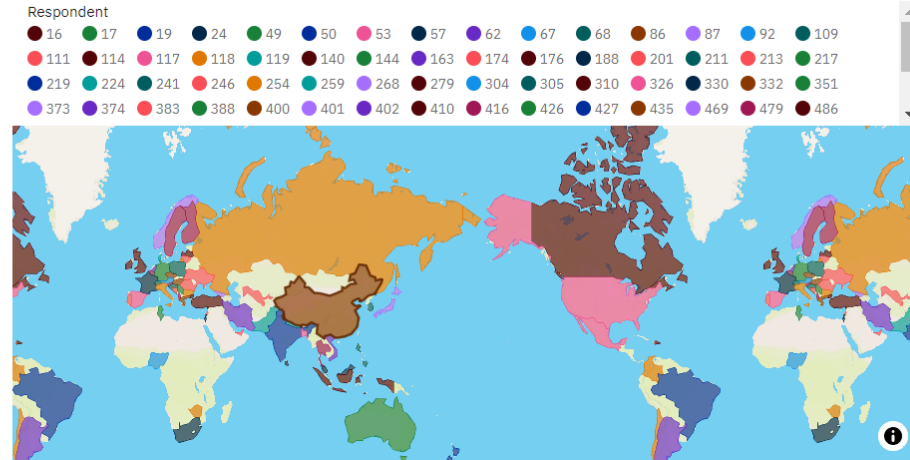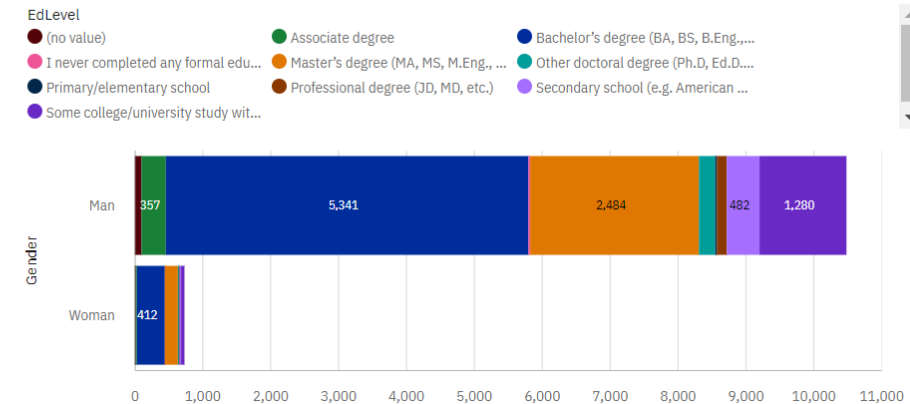
DISCUSSION

- Low number woman in tech.
- What is the key value of HTML/CSS to still be required?
- Why SQL still remain relevant throughout the trend?

OVERALL FINDINGS & IMPLICATIONS

Findings

- By gender, men have shown more participation in tech with the highest number of them having a bachelor's degree
- In the future, JavaScript and HTML/CSS will remain at the top of the list.
- PostgreSQL is presented to be in the first place instead of MySQL, compared to the disappearance of Microsoft SQL Server and SQLite

Implications

- Large number of men with bachelor's Degree tend to participate
- Javascript/ and HTML/CSS will continue to thrive along with time
- SQL servers will be required but the most popular database is expected to be PostgreSQL

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SKILLS NETWORK
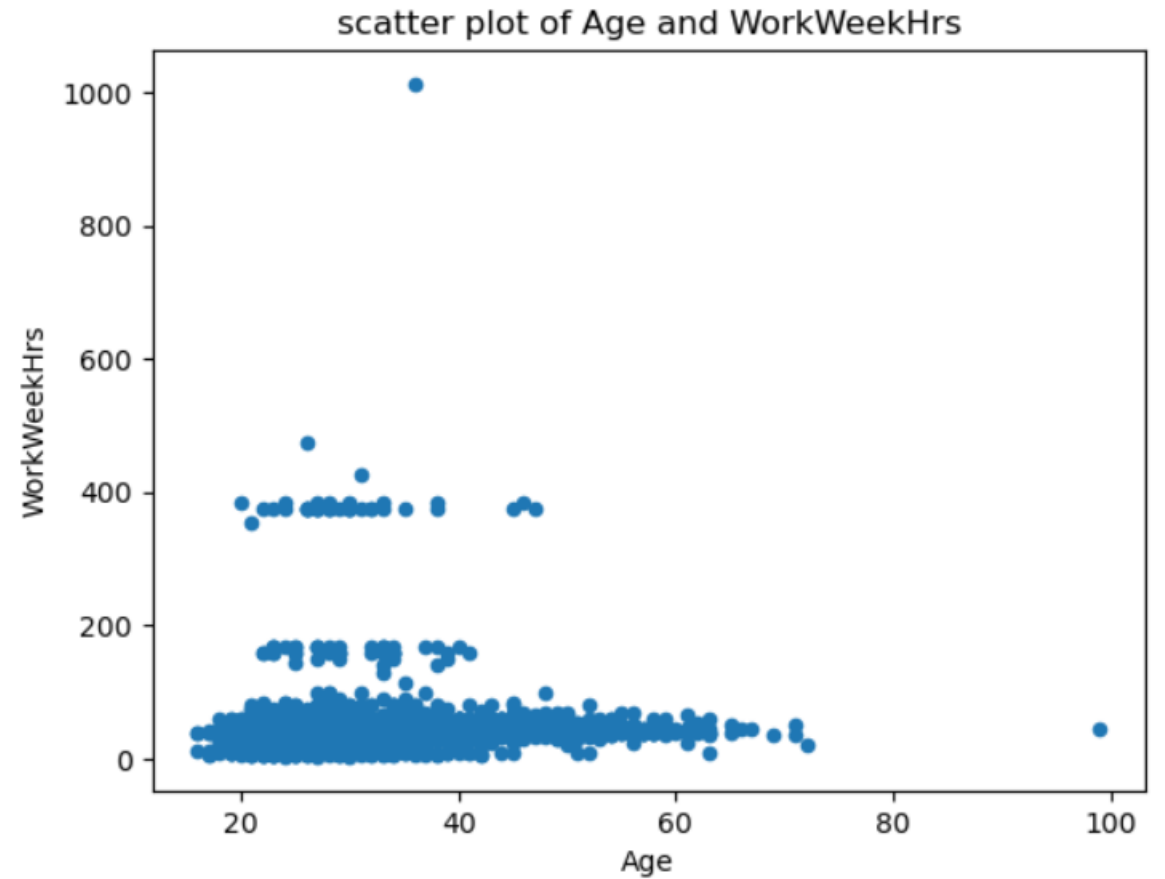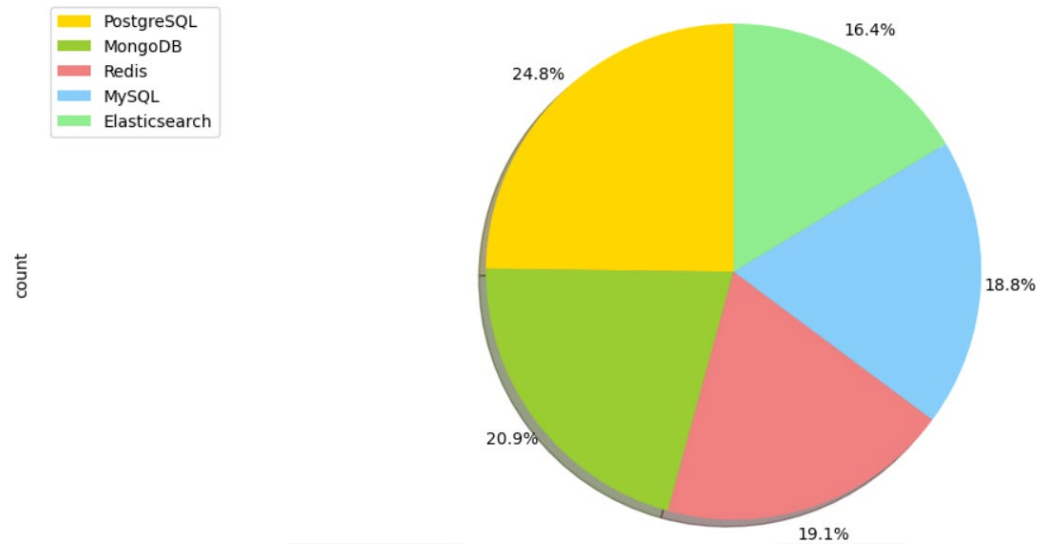
CONCLUSION

- HTML/CSS language is estimated to be popular as time goes by

- PostgreSQL database will also be popular among the databases

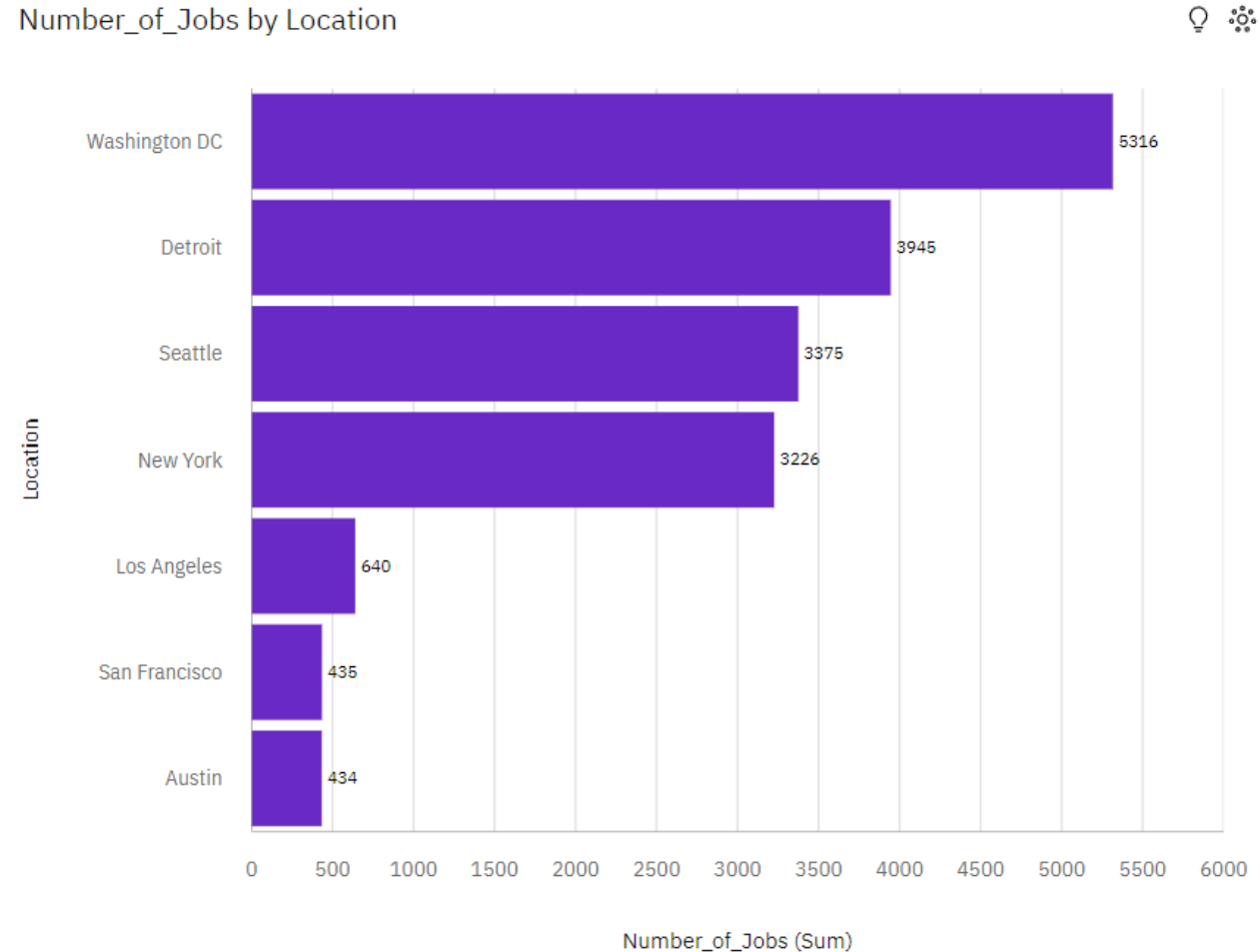- Men are more interested in IT skills more than women

APPENDIX

The top 5 databases that respondents wish to learn next year

- PostgreSQL
- MongoDB
- Redis
- MySQL
- Elasticsearch

24.8%
16.4%
18.8%
19.1%
20.9%

scatter plot of Age and WorkWeekHrs

JOB POSTINGS

In Module 1 you have collected the job posting data using Job API in a file named "job-postings.xlsx". Present that data using a bar chart here. Order the bar chart in the descending order of the number of job postings.

Number_of_Jobs by Location

Location	Number_of_Jobs (Sum)
Washington DC	5316
Detroit	3945
Seattle	3375
New York	3226
Los Angeles	640
San Francisco	435
Austin	434

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POPULAR LANGUAGES

In Module 1 you have collected the job postings data using web scraping in a file named "popular-languages.csv". Present that data using a bar chart here. Order the bar chart in the descending order of salary.

number_of_jobs by teachnology

teachnology	number_of_jobs (Sum)
C	13498
Java	2609
Python	1173
Oracle	784
JavaScript	355
C#	333
C++	305
SQL Server	250
MongoDB	174
Scala	33
PostgreSQL	10
MySQL Server	0

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