DATA ANALYSIS FOR IDENTIFICATION OF PRESENT AND EMERGING INFORMATION TECHNOLOGY SKILLS

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18TH APRIL, 2021

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EXECUTIVE SUMMARY

- This project involves analysis of data to identify future skills required in providing IT solutions.

- Data used in this analysis are top programming skills collected from respondents through job postings, training portals and surveys.

- The project gives insight into the top programming skills and top database skills.

INTRODUCTION

- In the world of Information Technology, new skills and technologies are always emerging which makes existing ones obsolete. It is important for players in this field to keep pace with changing technologies and remain productive and competitive.

- The aim of this project is to identify trend of emerging skills by analysis of data collected from various sources.

- Data were collected from programmers through surveys, training portals and job postings

METHODOLOGY

- Top programming skills in high demand were collected from job postings, training portals and surveys.
  - This was done by scraping internet web sites and accessing APIs to collect data in various formats like .csv files, excel sheets, and databases.

- Collected data were prepared for analysis using various data wrangling techniques

- Data were explored, analyzed and visualized

- Statistical techniques were also used to analyze data

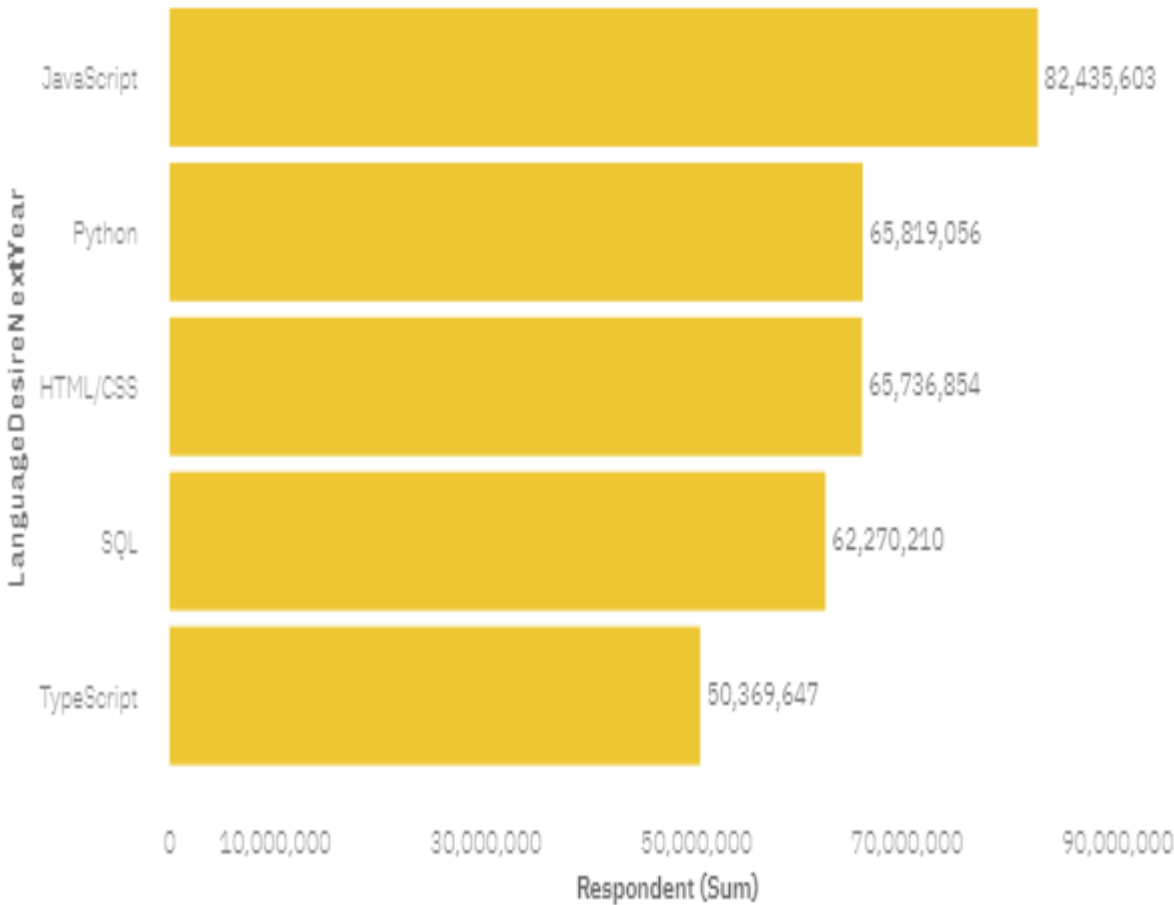- All the findings were displayed on a dashboard using IBM Cognos Analytics

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SKILLS NETWORK

RESULTS

PROGRAMMING LANGUAGE TRENDS

Current Year
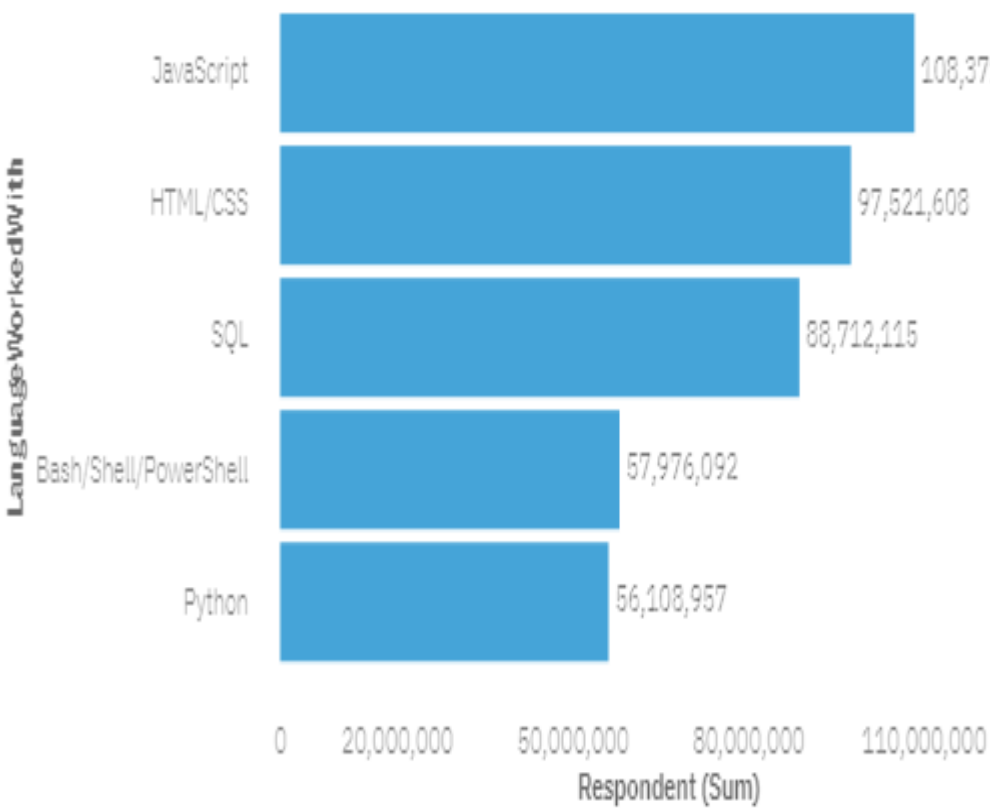
Next Year

PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript remains the top programming language this year and the next

- Python is the 5th language in current year but the 2nd most desired in the next year

- Typescript is out of the top 5 languages used in the current year but among the top 5 desired for next year
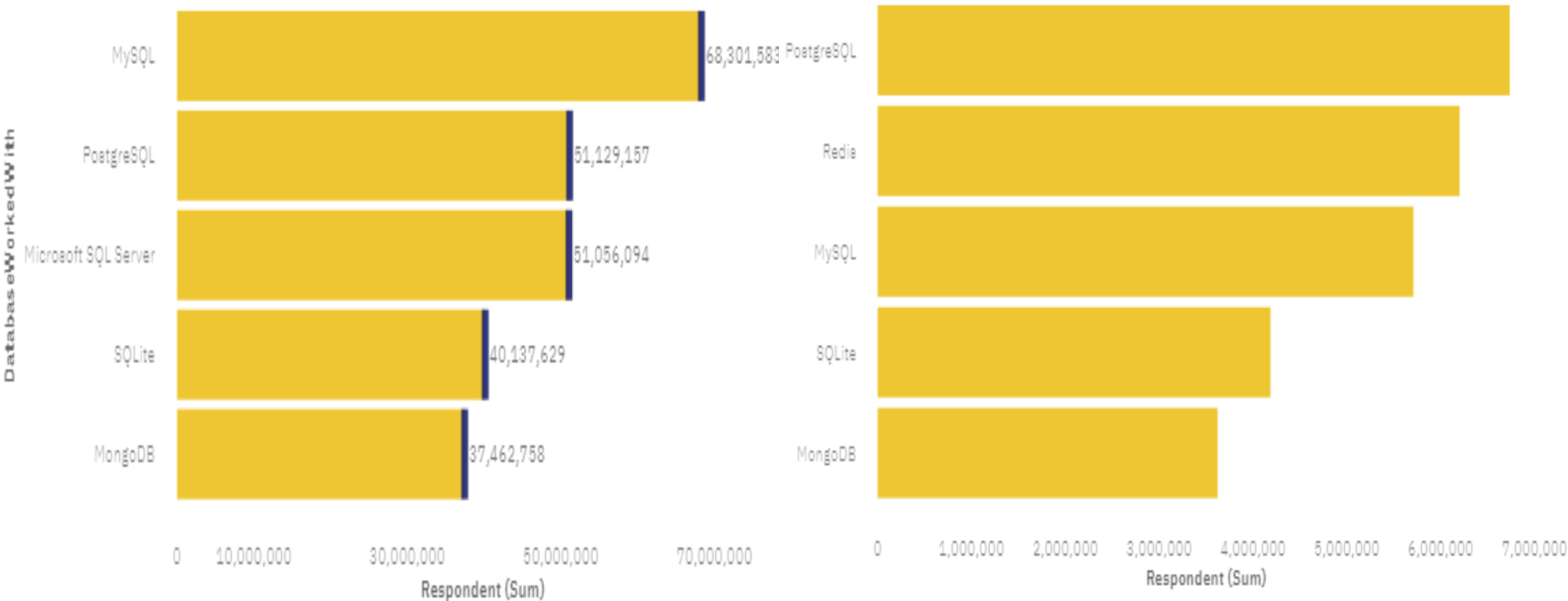
Implications

- JavaScript is in high demand

- Most respondents want to upskill with Python next year

- Typescript likely to gain more popularity next year

DATABASE TRENDS

Current Year

Next Year

DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL is the most widely used database

- PostgreSQL will be the most in-demand database for next year

- Redia is not among the top 5 database used currently butwill be among the top 5 for next year

Implications

- MySQL has the highest demand currently

- PostgreSQL will be the most sought after next year
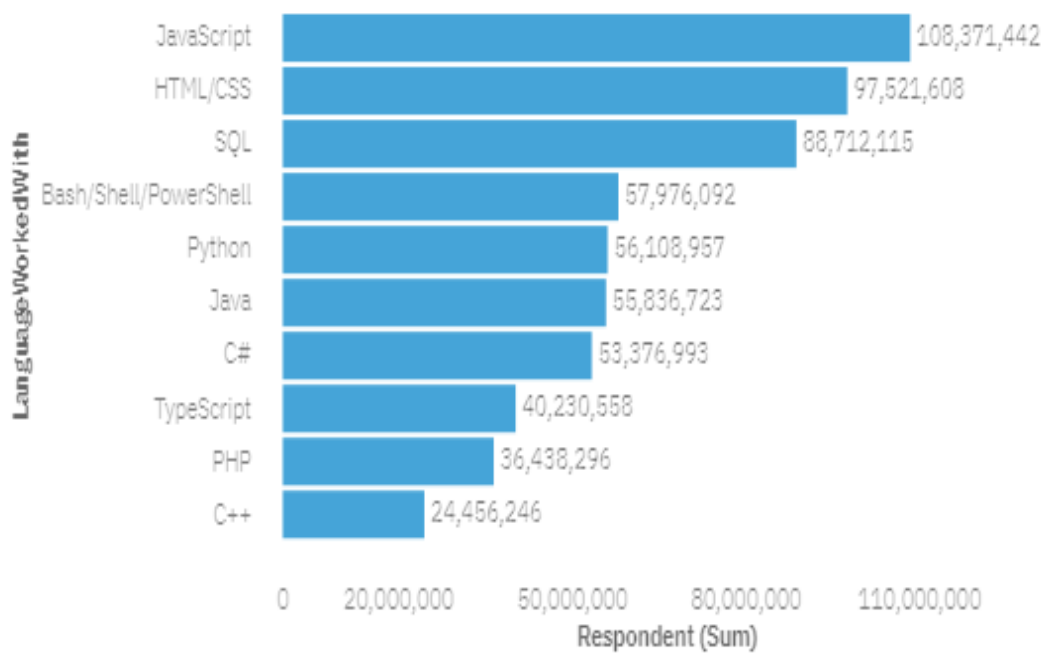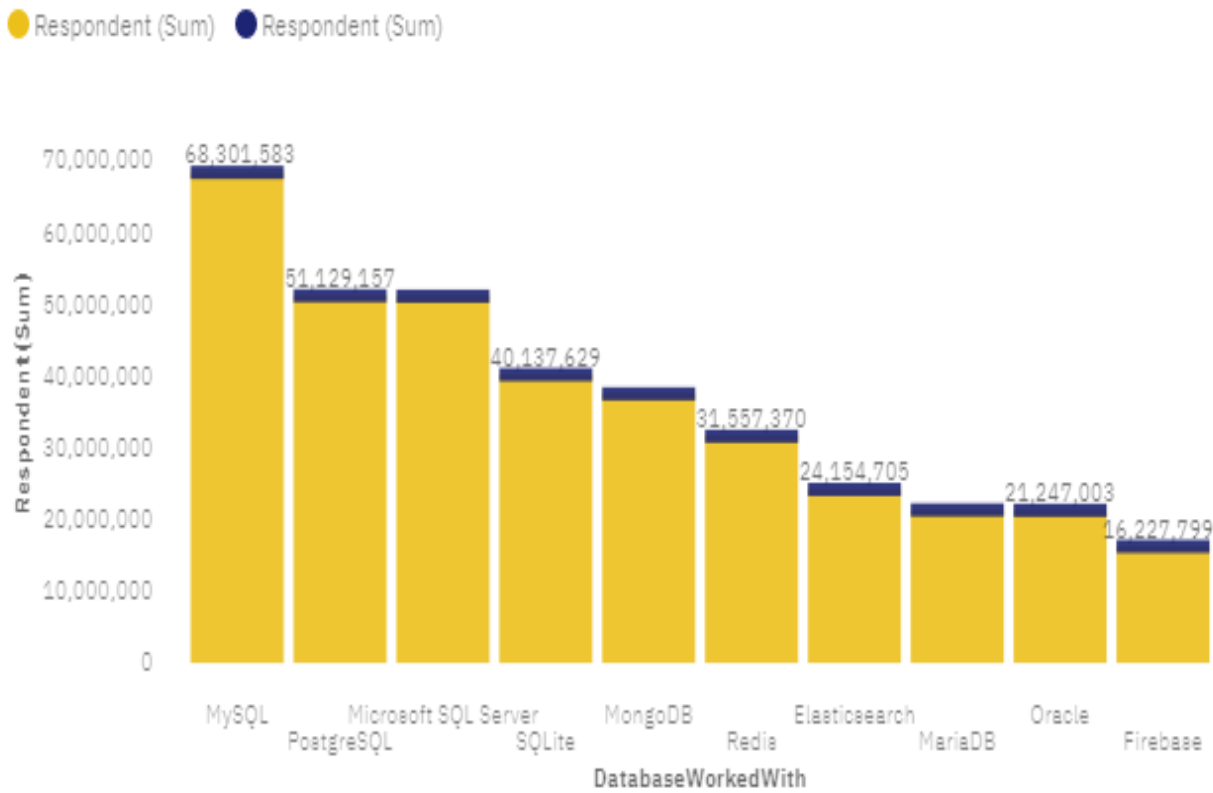
- Redia will be among the most popular database next year

DASHBOARD
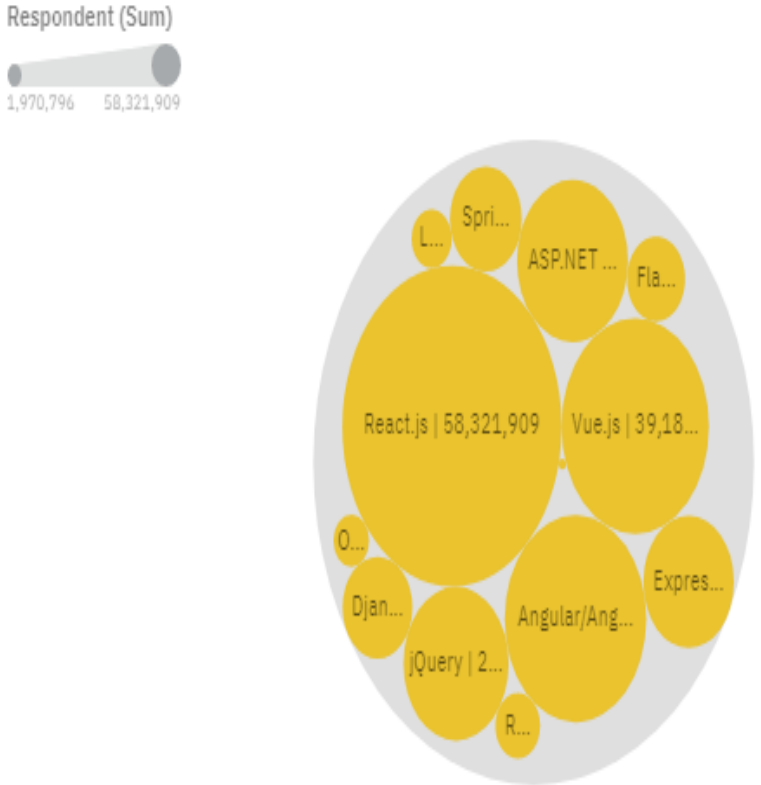
https://dataplatform.cloud.ibm.com/dashboards/d961b749-8f36-40c1-8876-fb88b527f352/view/7020c47c619016f06ac0c8e4079d240e7e3f2c5ab7bb8055d6d47b490e607697a93a4594c82a1e0cdb110d36a7ee465cc8

DASHBOARD TAB 1
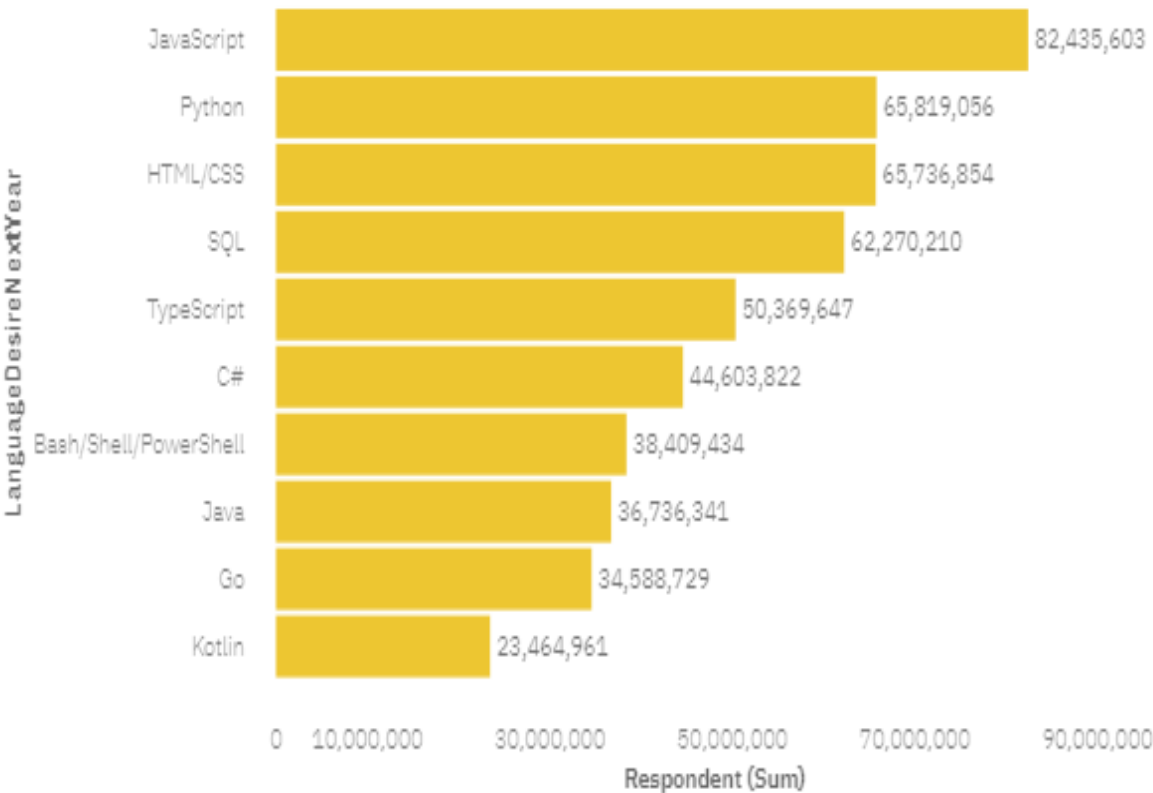

Top 10 Languages Used by Respondents
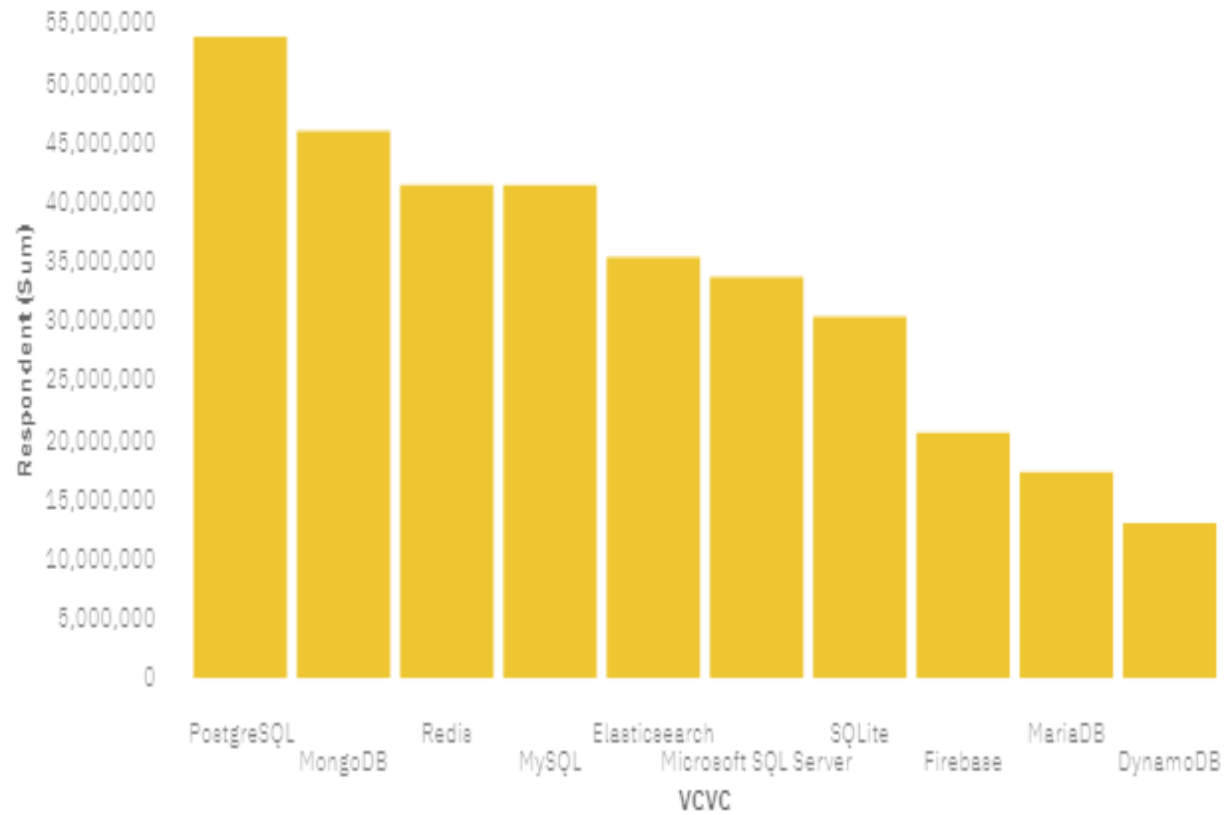
Top 10 Database Used by Respondents

DASHBOARD TAB 2a

DASHBOARD TAB 2b

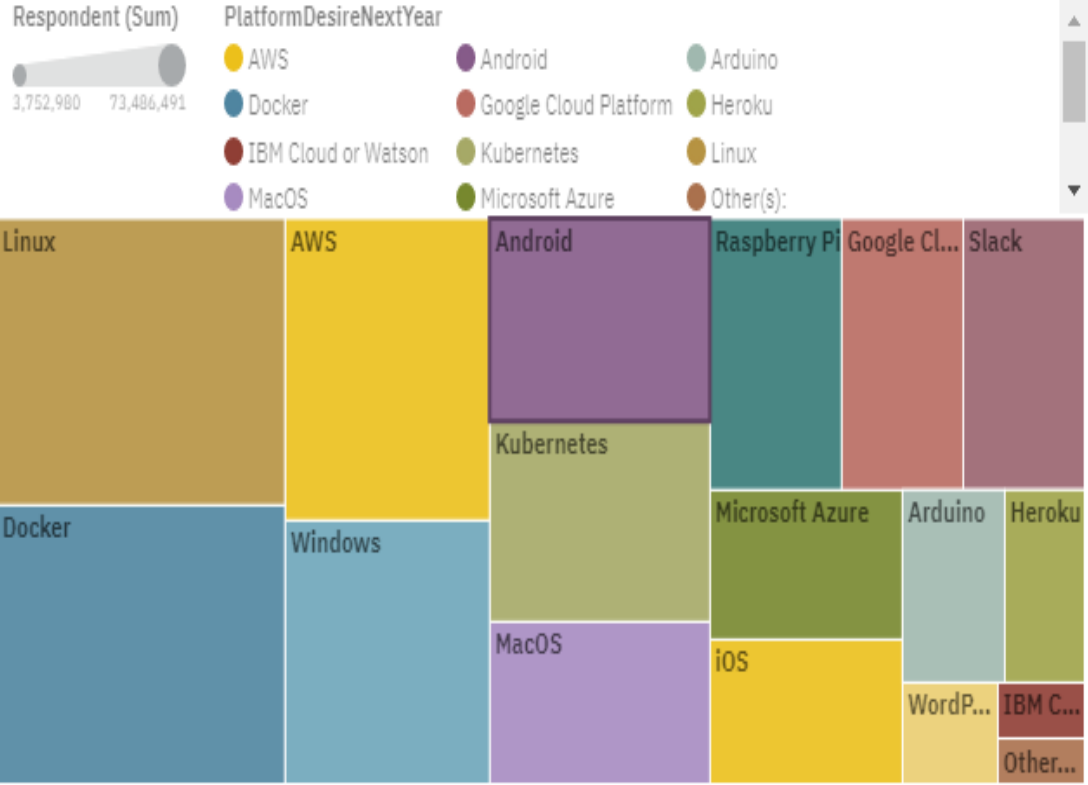# DASHBOARD TAB 3
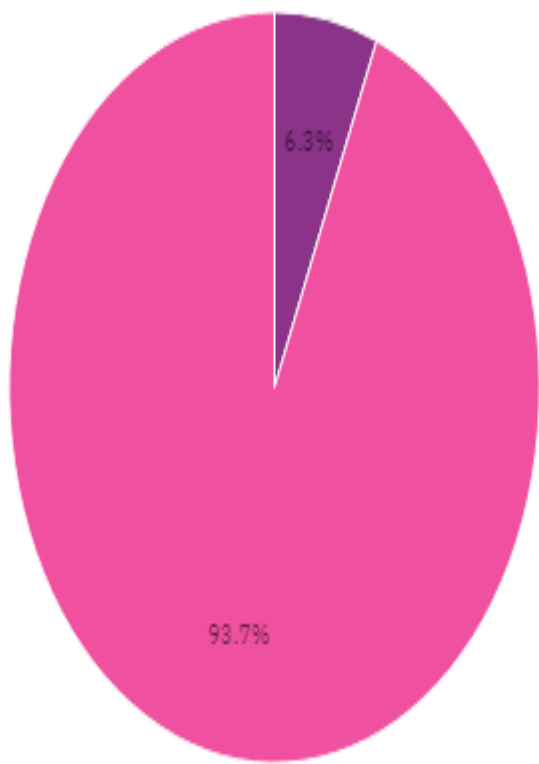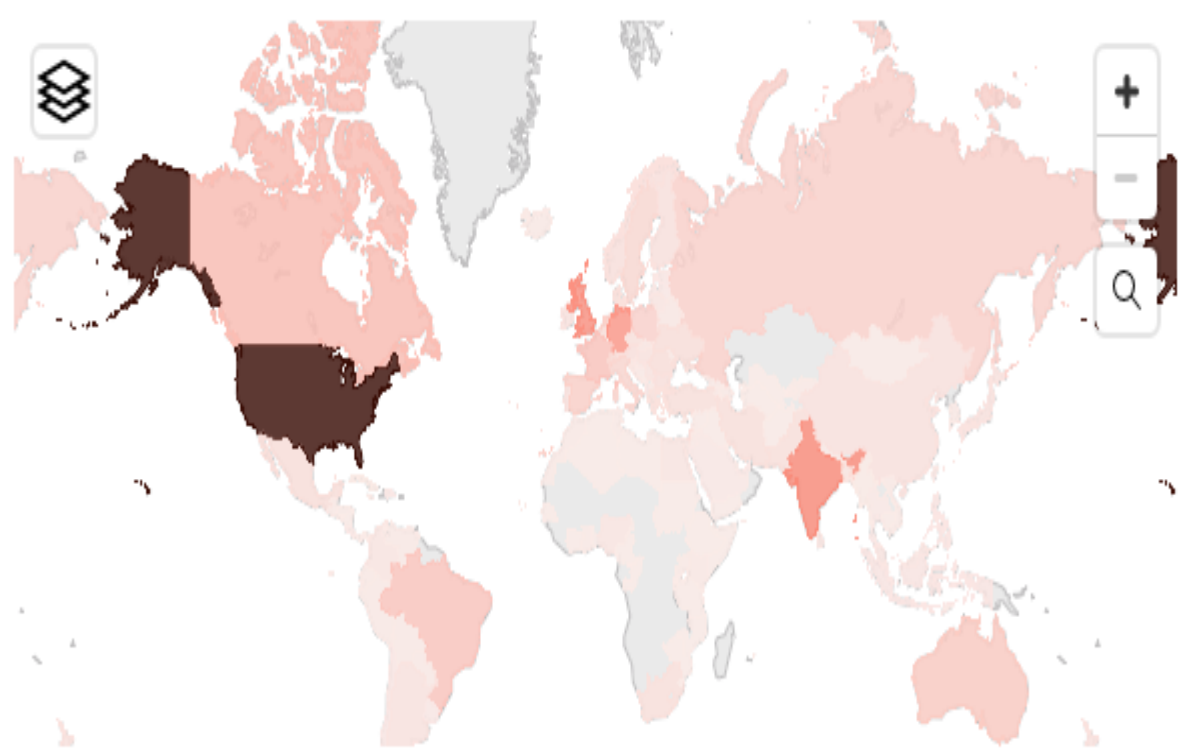
DISCUSSION

- The results has shown that JavaScript will always be a relevant programming language. Python and Typescript will be high in demand the next year.

- MySQL is the most widely used database, PostgreSQL will be the most in demand next year.

- Elasticsearch is poised to gain more relevance in the coming year

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OVERALL FINDINGS & IMPLICATIONS

Findings

- The most widely used programming language is and the most desired language next year is

- The most widely used database is MySQL and the most desired database next year is PostgreSQL

- The platform that will be in high demand for next year is Linux

Implications

- JavaScript remains the most relevant language currently and in the future

- PostgreSQL is set to overtake MySQL as the highest in demand database

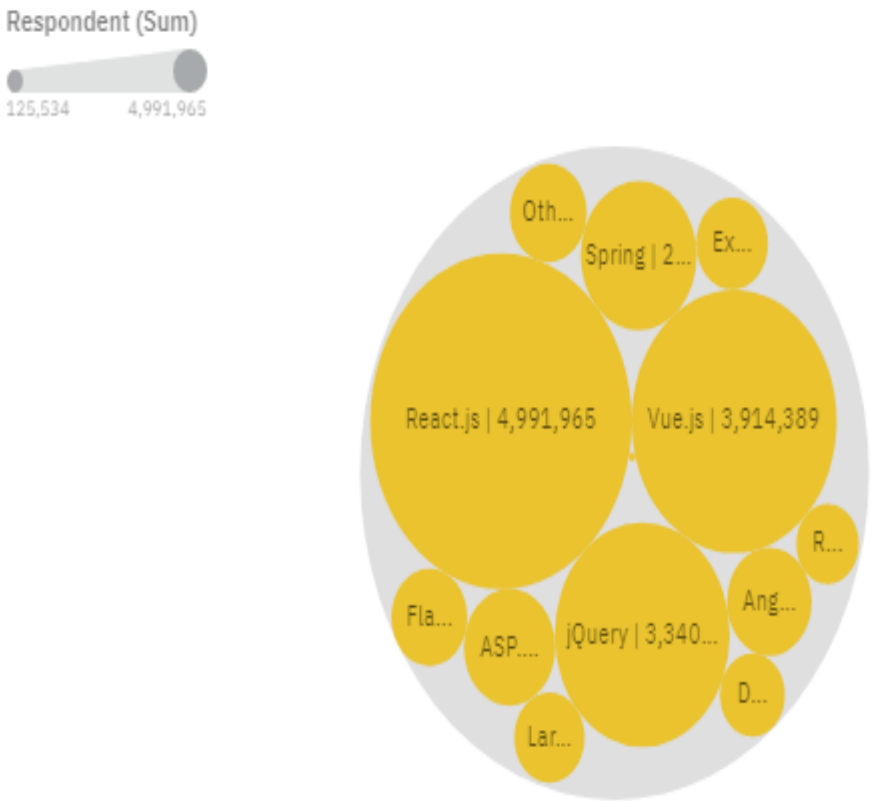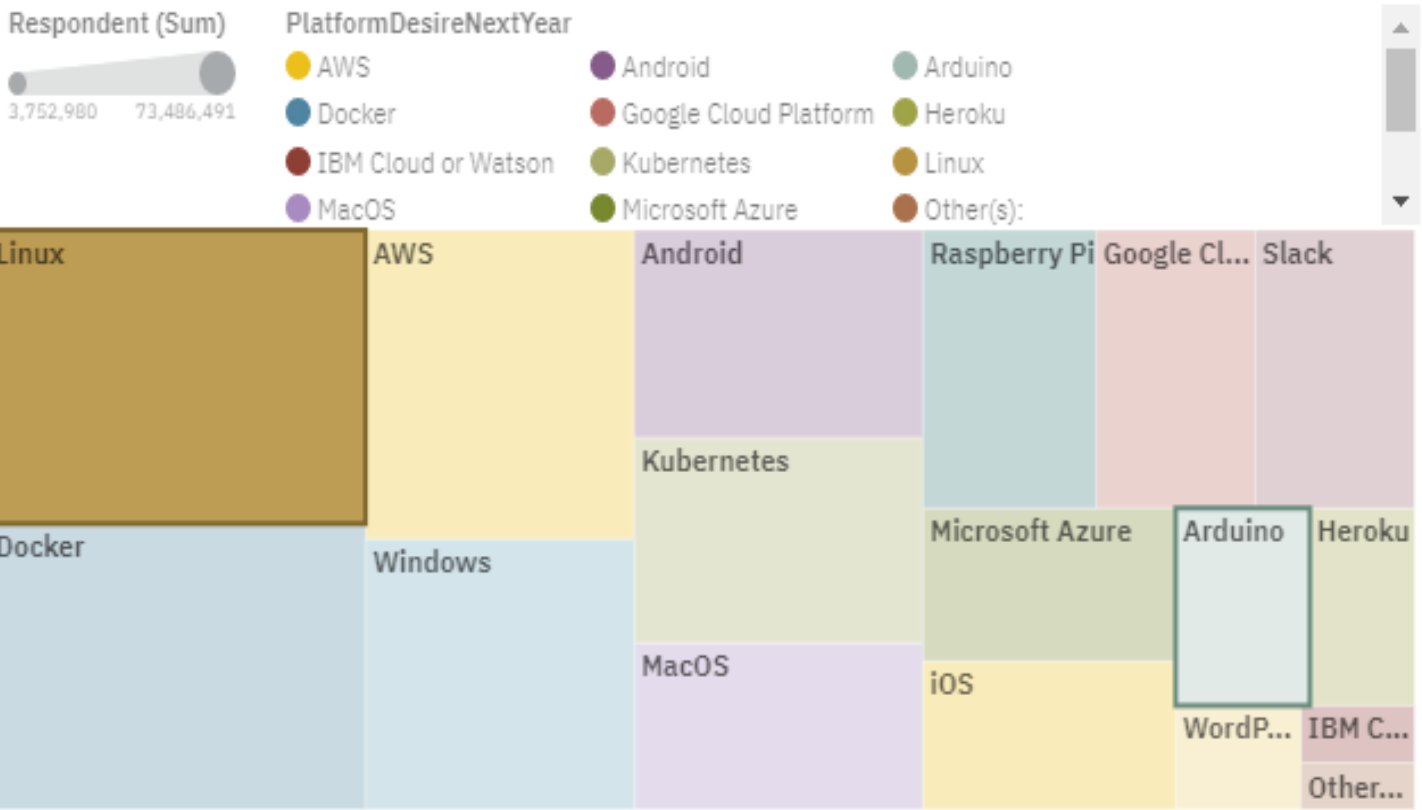IBM **Developer**

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CONCLUSION

- JavaScript remains the most relevant programming language presently and in the future

- The emerging database technology is PostgreSQL, hence there is a need for upskill
  - Redia will gain more popularity next year

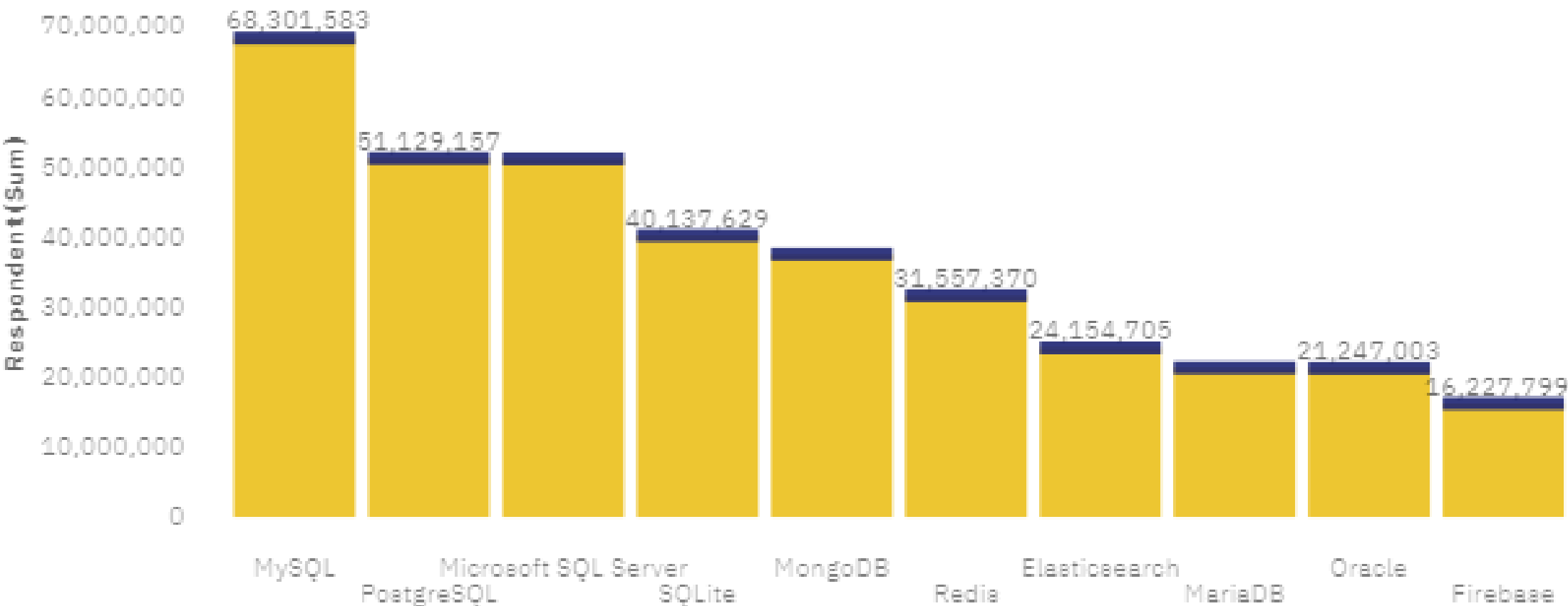- The emerging web frame is React.js

- The emerging platform is Linux

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APPENDIX

GITHUB JOB POSTINGS

POPULAR LANGUAGES