Project Report

Stack Overflow Developer Survey - 2019

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IBM Developer

SKILLS NETWORK

OUTLINE

- Executive Summary
- Introduction
- Methodology
- Results
  - Visualization – Charts
  - Dashboard
- Discussion
  - Findings & Implications
- Conclusion
- Appendix

EXECUTIVE SUMMARY

- The most popular technologies are web-based one such as are Javascript, HTML.
- Among all the web-based frame works, the hottest areas are React.js and Jquery.
- Windows and Linux still dominating all the developing platforms.
- In mobile platform android is the winner by no contest.
- Coming to the databases MySQL is still the most used database, MongoDB and PostgreSQL shows increasing trend of applying in the future.

INTRODUCTION

- The technology market changes quickly every year.
- It is important to adapt the latest technology in each field.
- The comparison between current & next year technology trend will provide great inside into the market.
- The study consist of 4 main parts:
  - The top 10 Programming Languages in demand
  - The top 10 database skills in demand.
  - The top Platformed utilization.
  - The top 10 Web frame platform in demand

METHODOLOGY

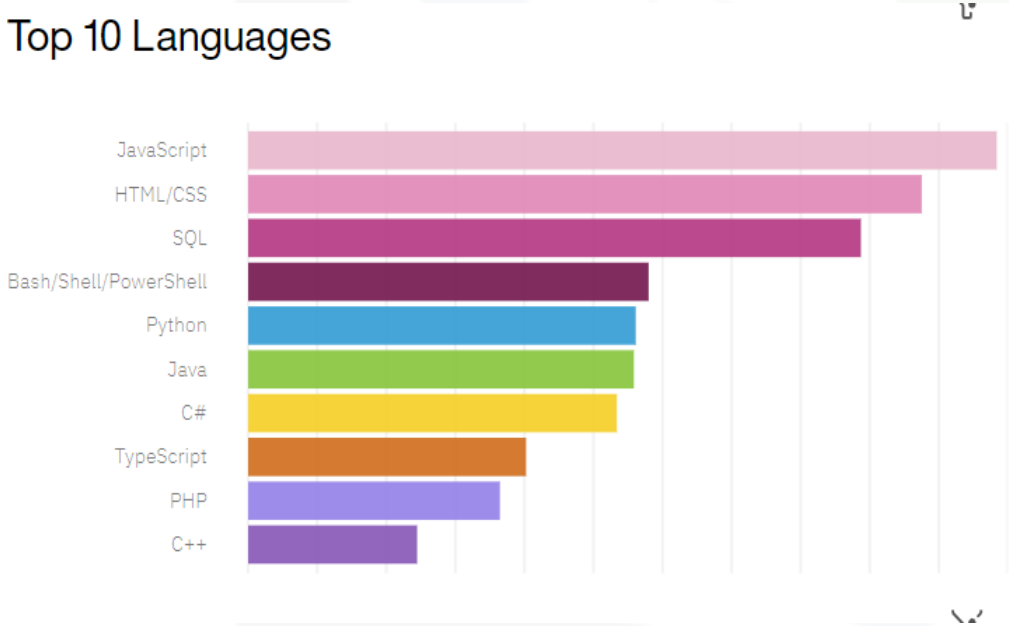
- Collecting data – Stack overflow developer survey
  - (i) Using - API
  - (ii) Using – Web scrapping
- Exploring data
  - (i) Finding Duplicates & Removing Duplicates.
  - (ii) Finding & Imputing Missing Value.
  - (iii) Normalizing Data.
  - (iv) Handling Outliers.
  - (v) Correlation.
- Data Visualization
  - (i) Distribution, Relation, Composition & Comparison of data.
  - (ii) Building Dashboard.

RESULTS

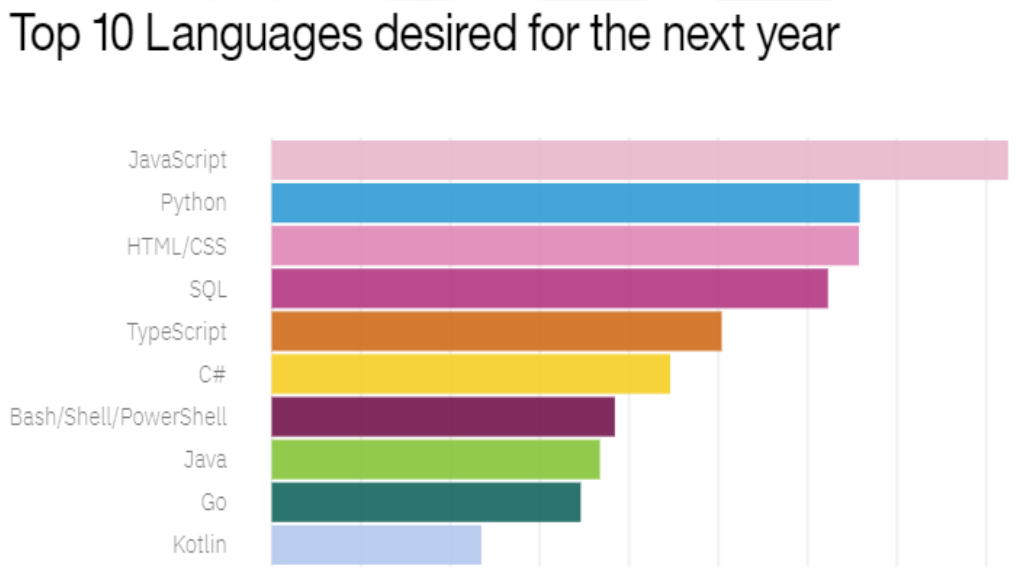
- The result explained into 4 main parts:
  - Programming language trend
  - Database trend
  - Platform trend
  - Web frame trend

PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

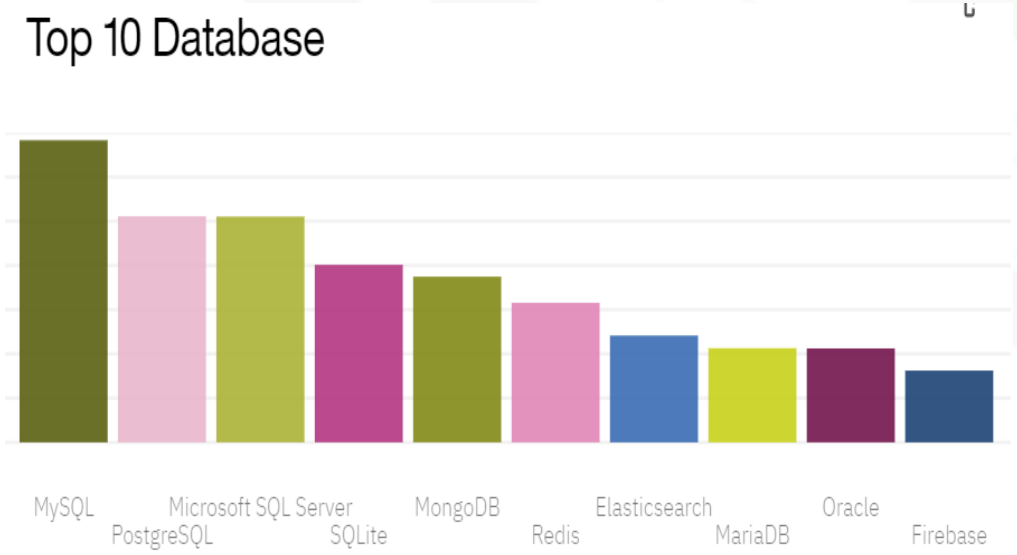
- Java script appears to be popular choice for current as well future years.
- Python moves from 5th position to 3rd position in top 10.
- C++ and PHP area disappearing from top 10.

Implications

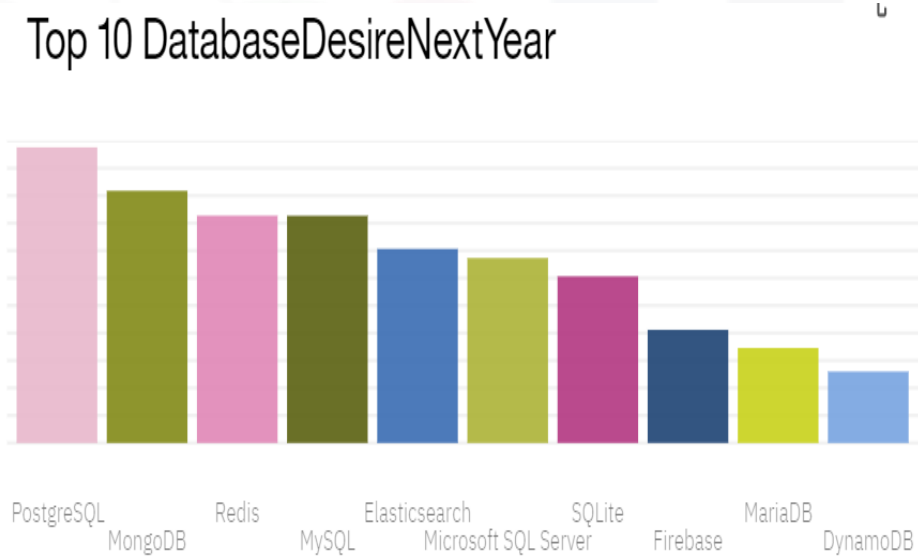
- Web programming languages still stay dominance in near future.
- Python & data science is becoming more and more important.
- Legacy language such as C++, PHP … are gradually falling out of interest.

DATABASE TRENDS

Current Year



Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MongoDB & Redis quickly moves up to No.2 and No.3
- PostgreSQL moves from No.3 to No.1
- MS SQL server drops from No.2 to No.5
- Oracle disappear from top.

Implications

- Open source database becomes more and more popular compared with commercial one.
- Non-relational database see increasingly usage in the future.
- Relational database still takes a leading position in the near future.

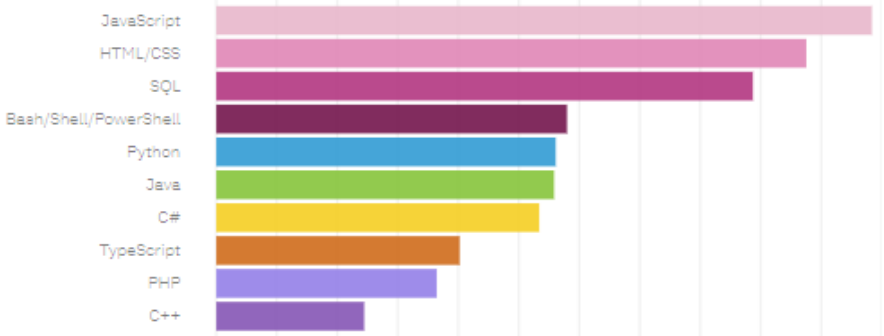
DASHBOARD

<https://dataplatform.cloud.ibm.com/dashboards/4f68db77-ee42-45e1-be79-718e85be0268?project_id=705b56b0-1568-4b87-9619-0a7837df96cb&userfs=false&context=cpdaas&mode=consumption>

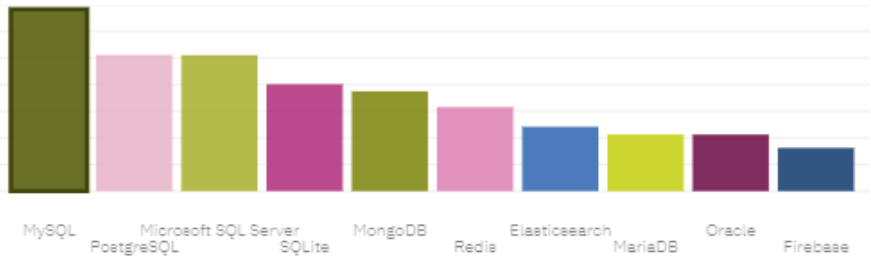
DASHBOARD TAB 1

Current Technology Usage | Future Technology Trends | Demography

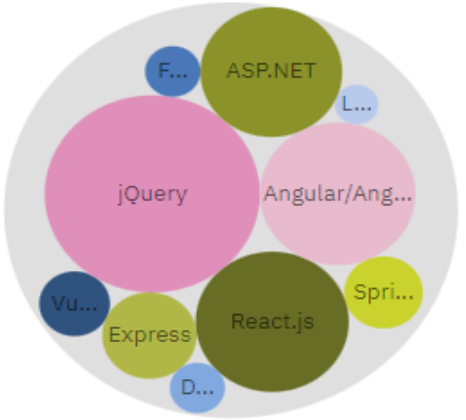
Top 10 Languages



Top 10 Database



Top 10 Web Frames

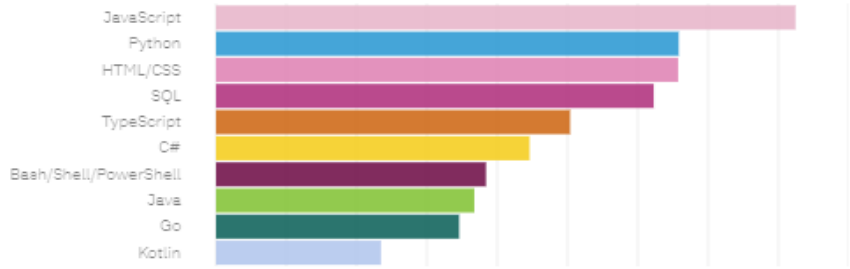


Platforms

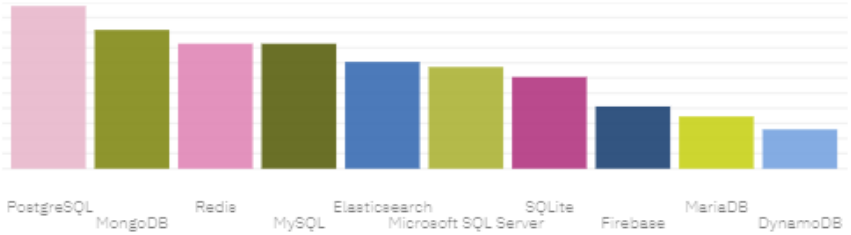
DASHBOARD TAB 2

Current Technology Usage | Future Technology Trends | Demography

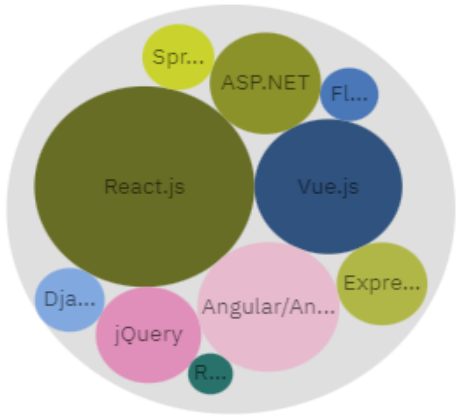
Top 10 Languages desired for the next year



Top 10 DatabaseDesireNextYear



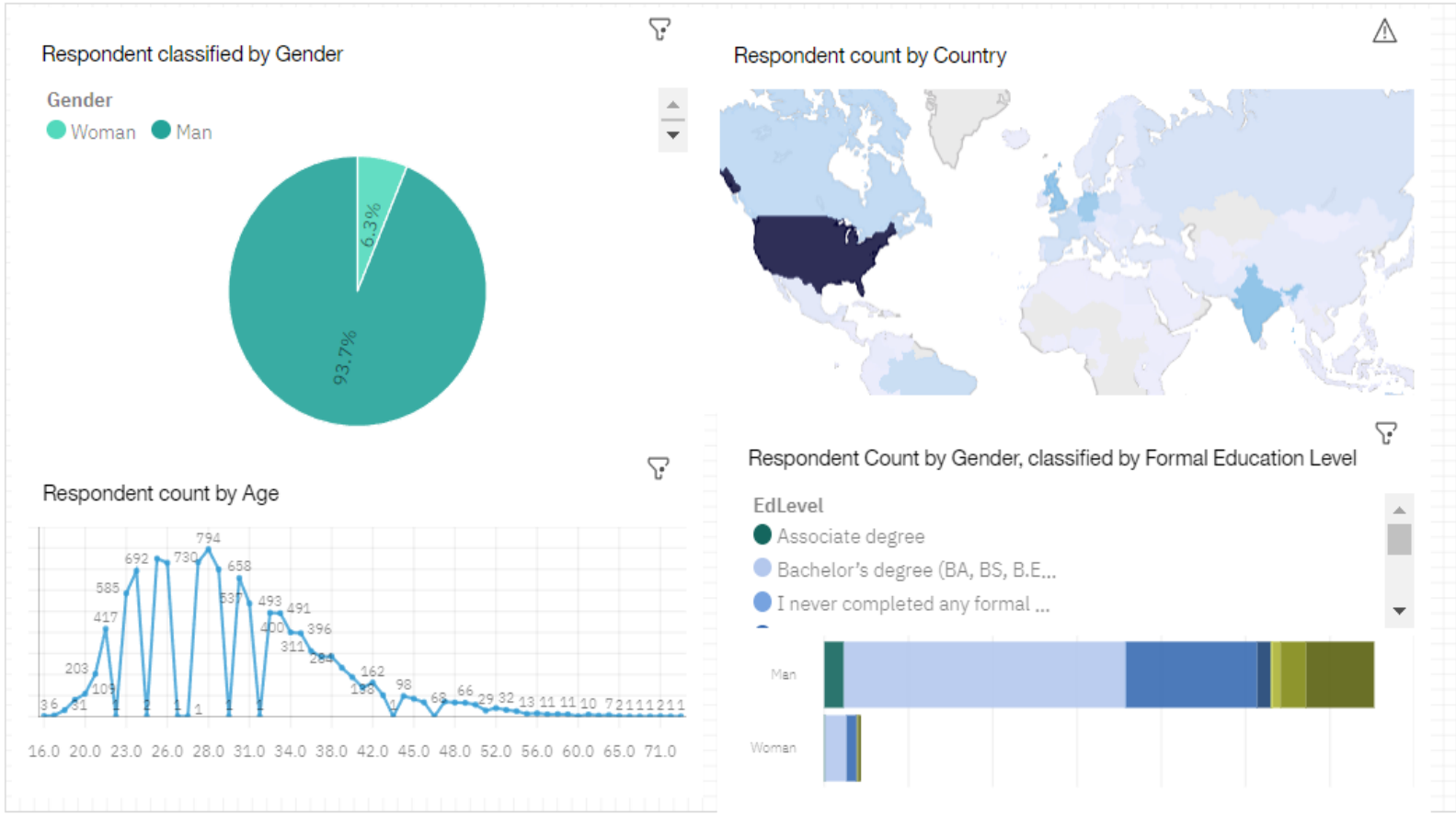
Top 10 WebFrameDesireNextYear.



Desired platforms for the next year

DASHBOARD TAB 3

Current Technology Usage | Future Technology Trends | Demography



DISCUSSION

- All age used for survey
- All gender considered for survey.
- People from different countries were asked for survey.
- Various education level people were included as well.

OVERALL FINDINGS & IMPLICATIONS

Findings

- Web based language stays at No.1
- Cloud-based platform moves to No.1
- The upcoming trend for databases is non-relational databases mostly.

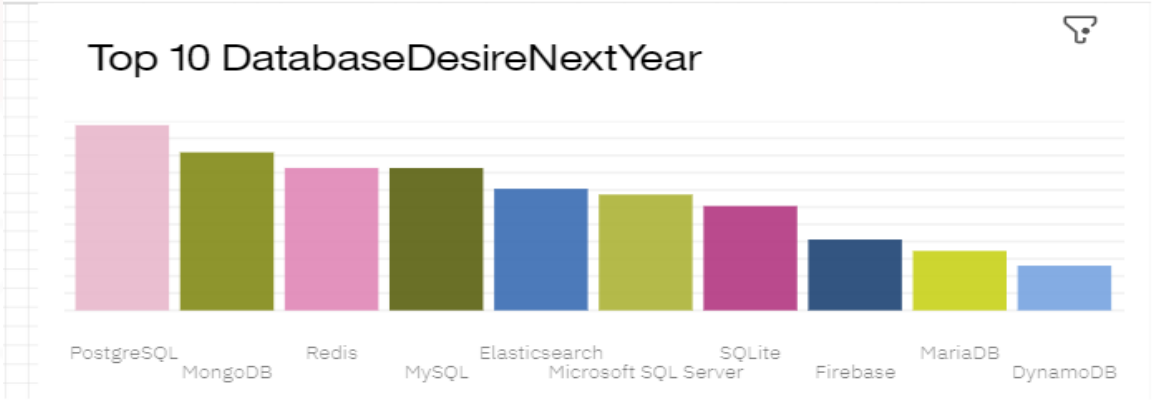
Implications

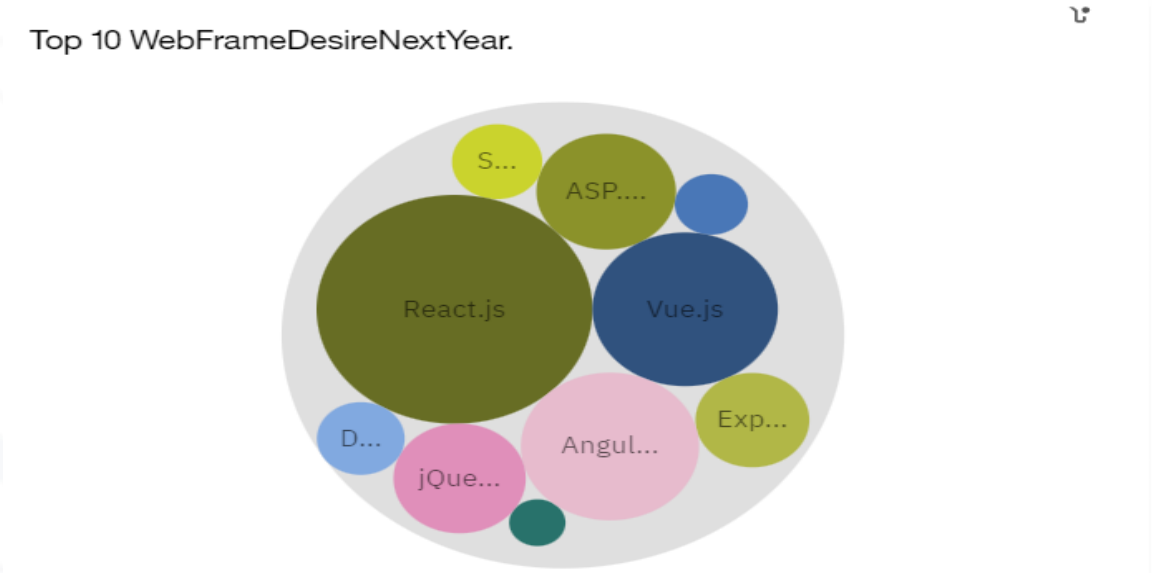
- Web based application is taking over the traditional application.
- Cloud-based services become top-choice for platform development.
- People are looking for big data because it seem to have great future.

CONCLUSION

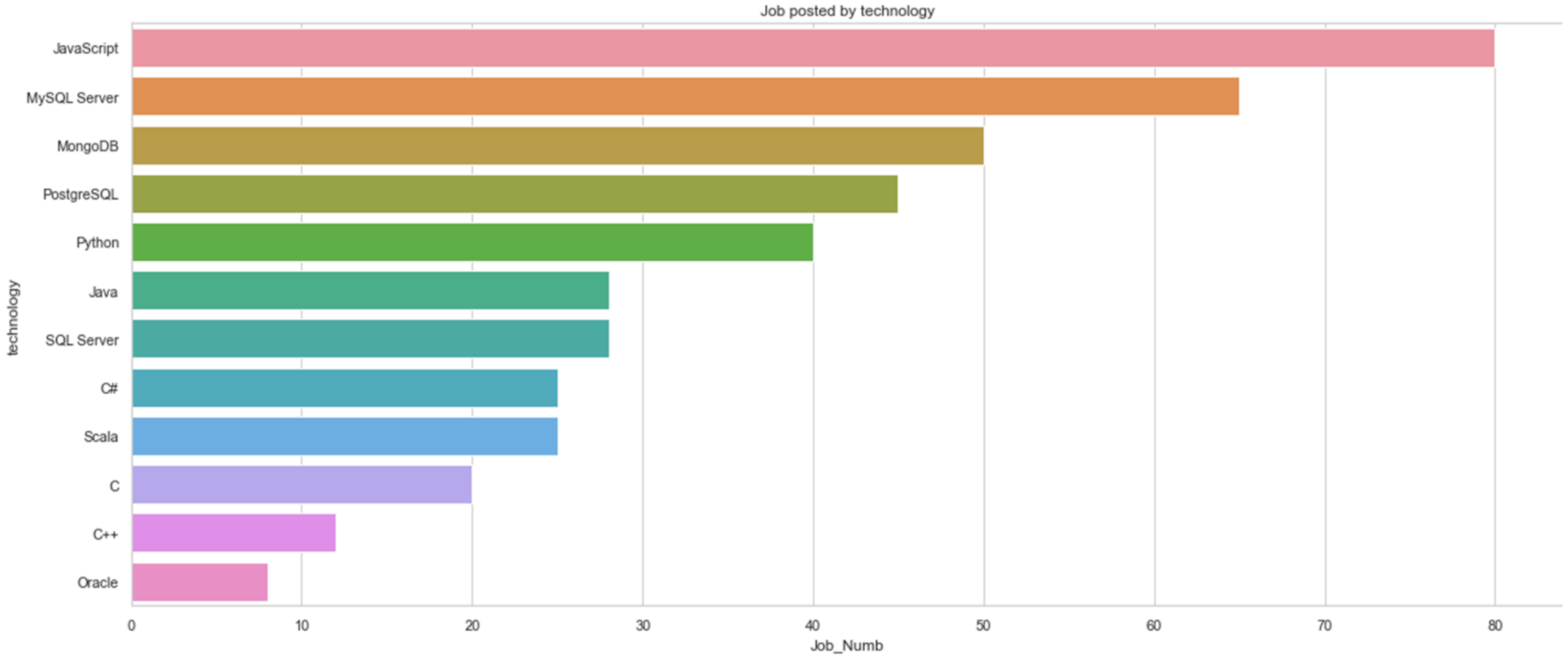
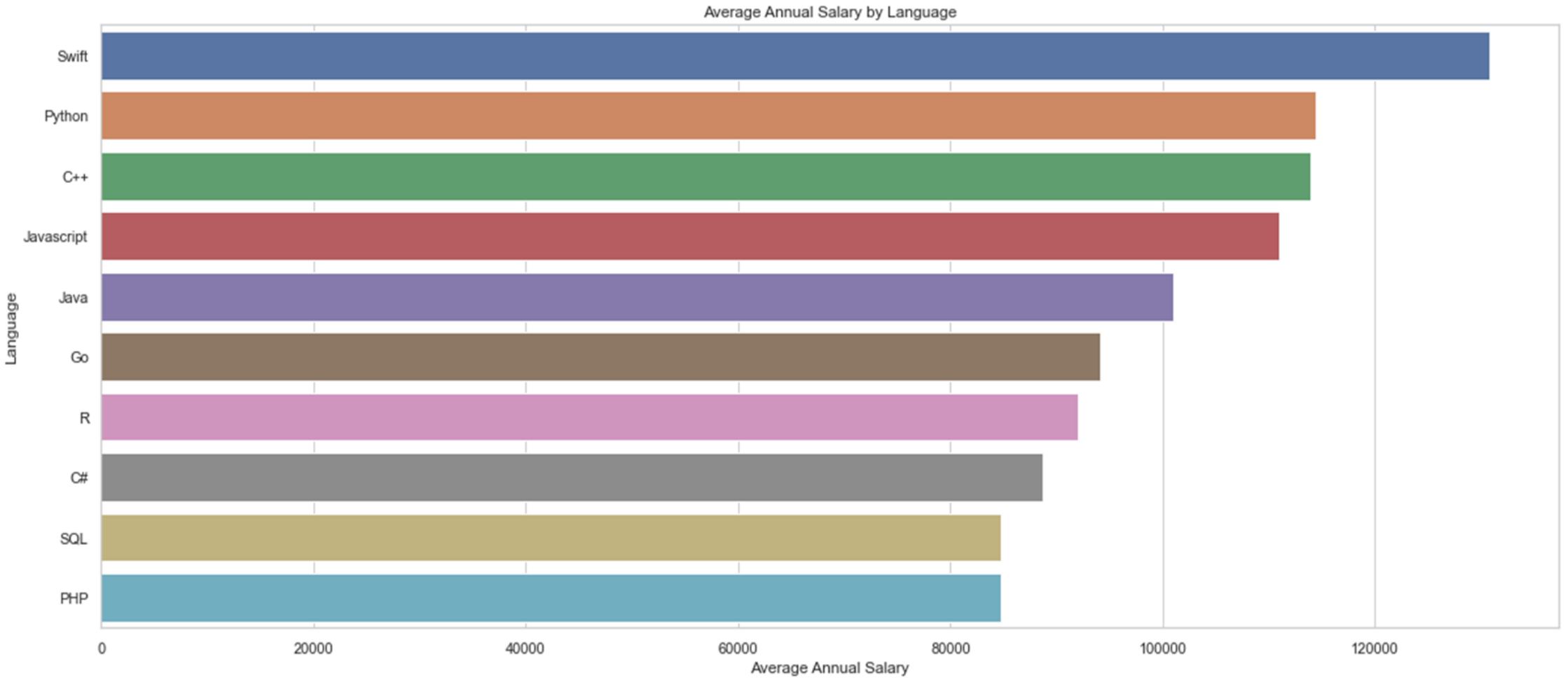
- To stay relevant in the technology field, it's important to learn web-based language & non-relational database.
- Among web framework, React.js is the best to learn for your future.
- Cloud-based service is the right direction for IT investment.

APPENDIX


Top 10 DatabaseDesireNextYear
PostgreSQL
MongoDB
Redis
MySQL
Elasticsearch
Microsoft SQL Server
SQLite
Firebase
MariaDB
DynamoDB


Top 10 WebFrameDesireNextYear.
S...
ASP....
React.js
Vue.js
Exp...
D...
Angul...
jQue...

JOB POSTINGS



POPULAR LANGUAGES