



IBM Data Analytics Capstone Project

AHMAD ALLUQMANI

GitHub: [IBM Data Analytics Capstone](#)

OUTLINE



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

EXECUTIVE SUMMARY



- ***Current Technology Usage***

Top 10 Languages Worked with

Top 10 Database Worked with

Platform worked with Word-Cloud

Top 10 Web-frame Worked with

- ***Future Technology Trend***

Top 10 Languages Desired Next Year

Top 10 Database Desired Next Year

Platform worked with Desired Next Year

Top 10 Web-frame Desired Next Year

- ***Demographics***

Respondents Classified by Gender

Respondent Count for Countries

Respondent Count by Age

Respondent Count by Gender by Formal Education Level

INTRODUCTION



- 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
 - Using – API.
 - Using – Web-scraping.
- Exploring Data
 - Finding Duplicates & Removing Duplicates.
 - Finding & Imputing Missing Value.
 - Normalizing Data.
 - Handling Outliers.
 - Correlation
- Visualization Data
 - Visualization Distribution, Relation, Composition & Comparison of data.
 - Building Dashboard.

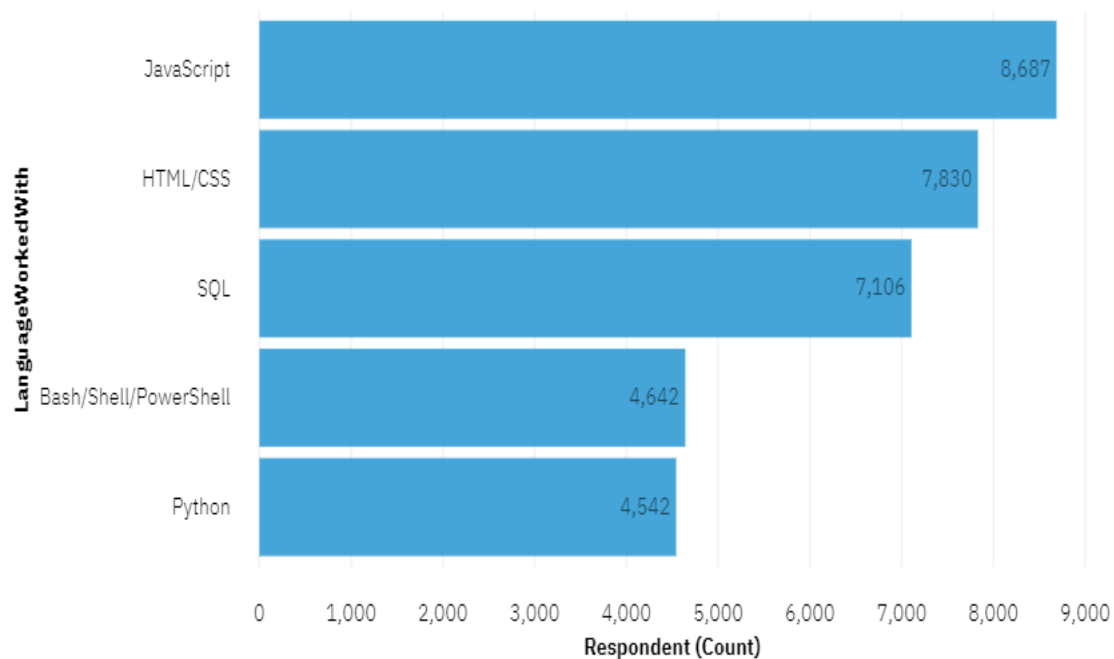
RESULTS



PROGRAMMING LANGUAGE TRENDS

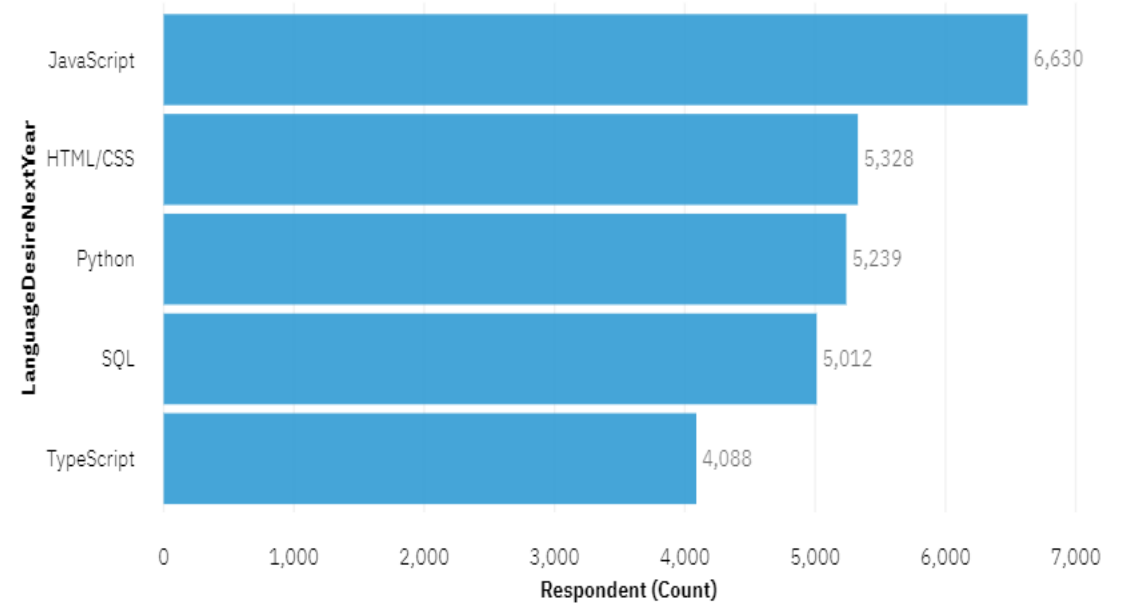
Current Year

Top 5 Languages Worked with



Next Year

Top 10 Language Desired Next Year



PROGRAMMING LANGUAGE TRENDS – FINDINGS & IMPLICATIONS

Findings

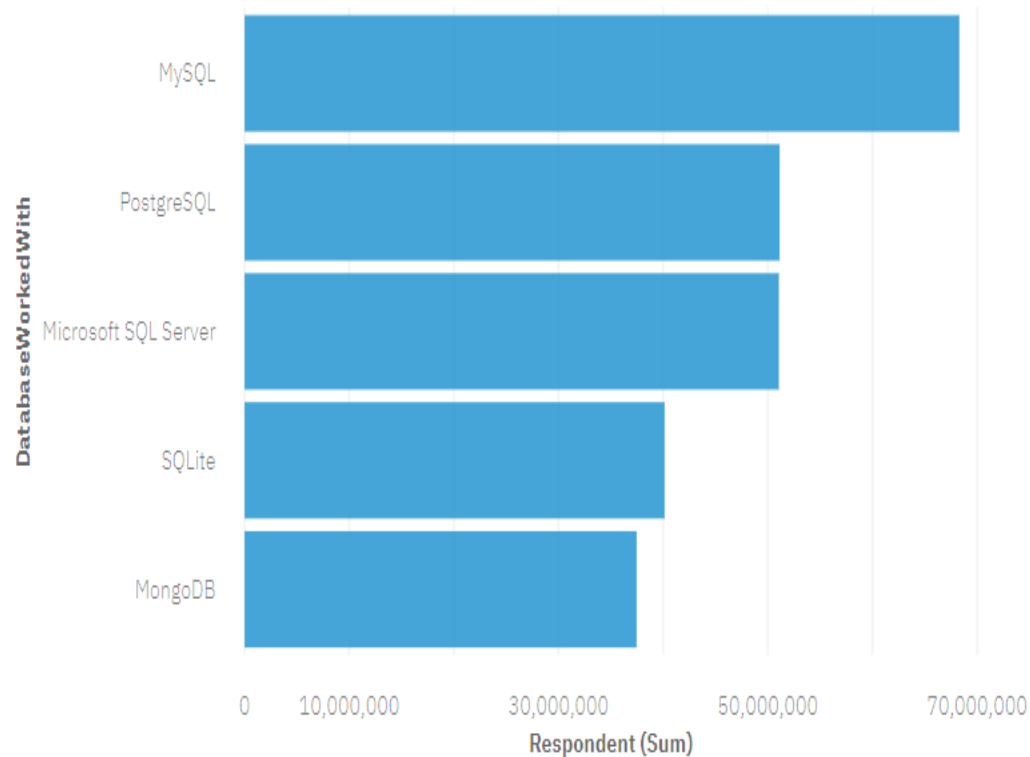
- Java-script appears to be popular choice for current as well future years.
- Web Assembly comes as least popular for current years and VBA appears least choice for next year
- Python and SQL appears to be evergreen mid popular choice for current and next year respectively

Implications

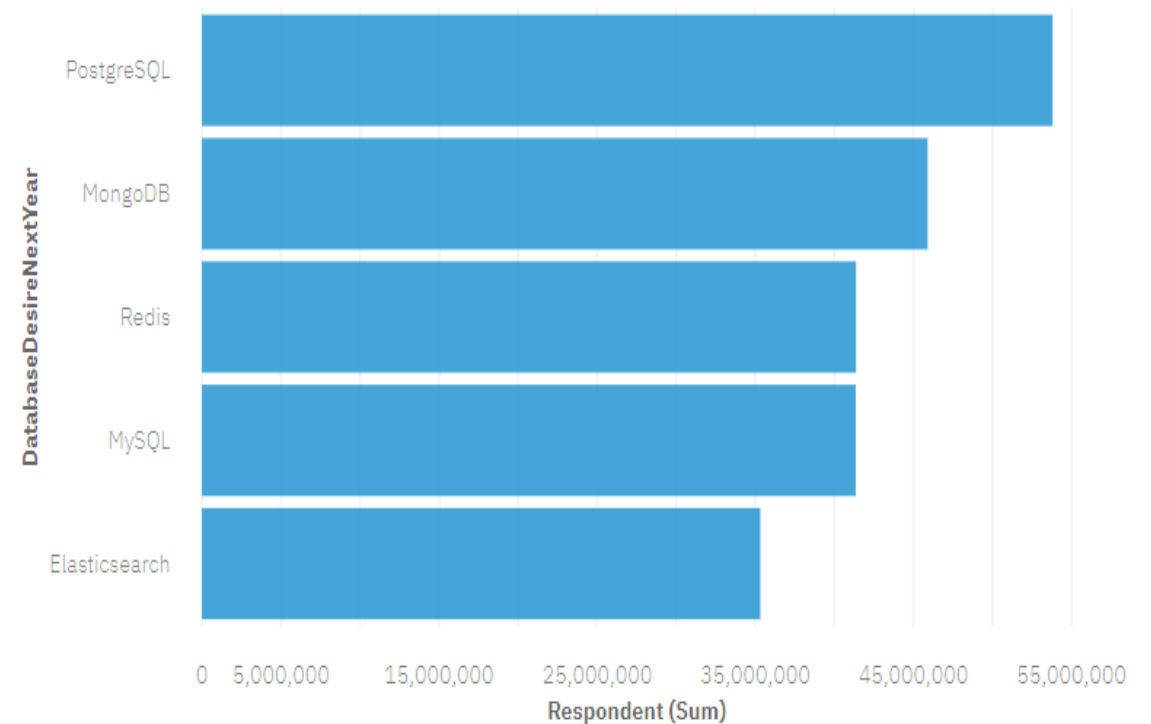
- Java-script is becoming the new upcoming popular demanding programming language among users.
- Web Assembly and VBA has been replaced by other programming languages at most places.
- Python and SQL appears to be evergreen demand Programming languages.

DATABASE TRENDS

Top 5 Database current Year



Top 5 Database Desired Next Year



DATABASE TRENDS – FINDINGS & IMPLICATIONS

Findings

- MySQL comes out to be popular choice for current whereas PostgreSQL overcomes every other in case of desired next year choice.
- Couchbase comes as least popular for current years as well as for next year as well.
- Elasticsearch, Redis & MongoDB comes out to show progressive trends in upcoming years whereas MySQL shows declining trend as compared to current-next years charts.

Implications

- PostgreSQL is becoming the new upcoming popular desired database skills among users replacing MySQL.
- Couchbase has been replaced by other programming languages at most places.
- Elasticsearch, Redis & MongoDB appears to be more popular desired choice as compared to MySQL.

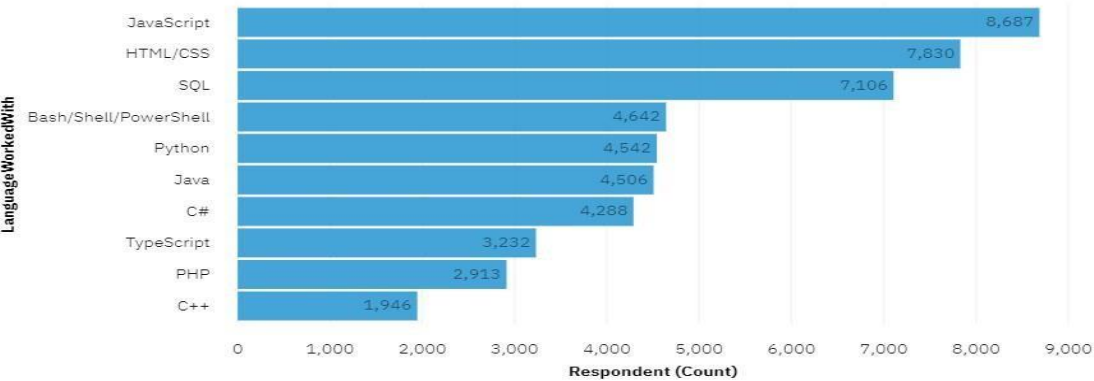
DASHBOARD TAB 1

Current Technology Usage

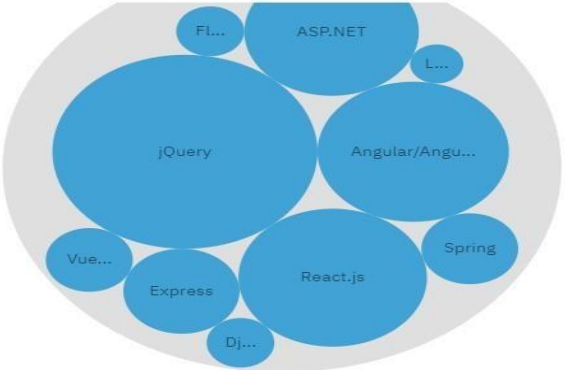
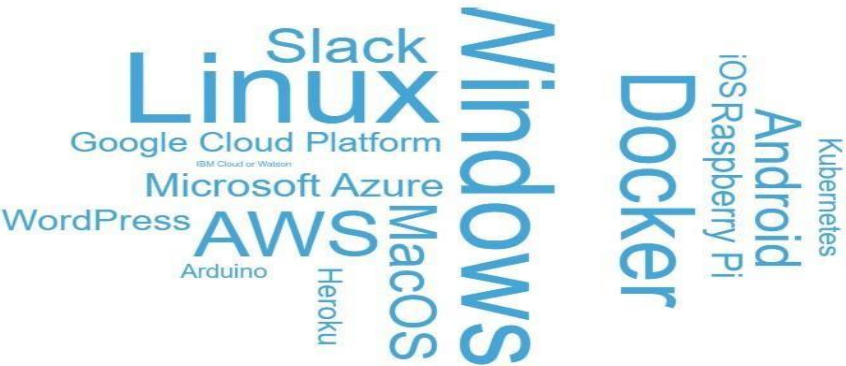
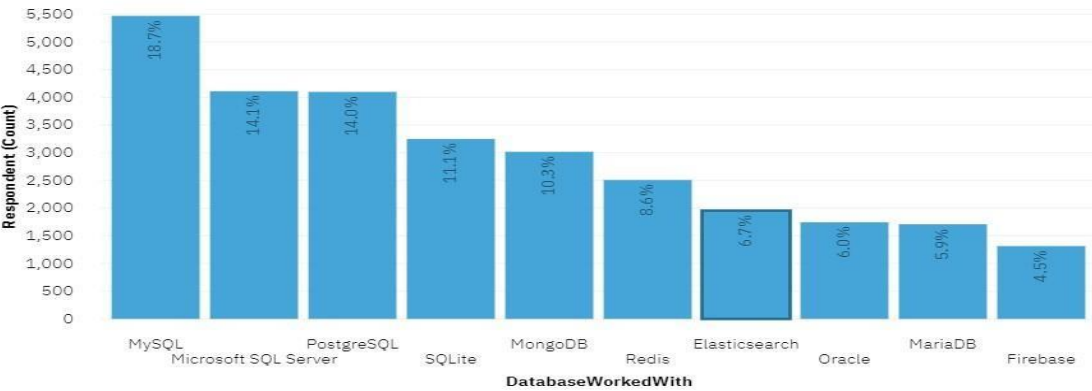
Future Technology Trend

Demographics

Top 10 Languages Worked with



Top 10 Database Worked with



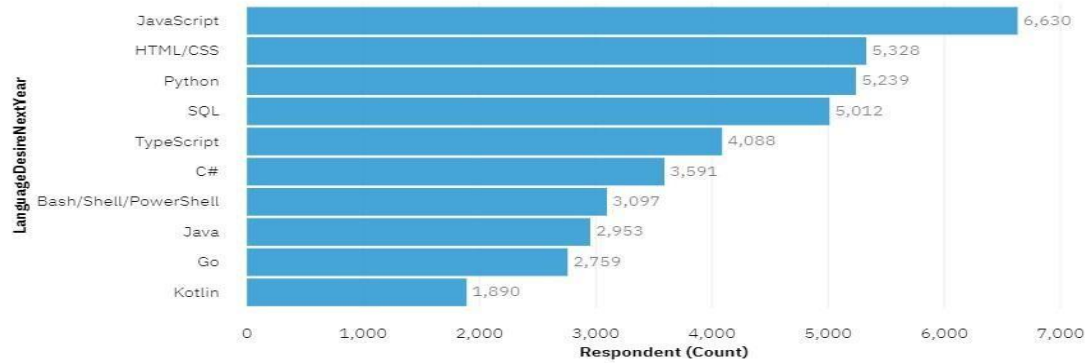
DASHBOARD TAB 2

Current Tecnology Usage

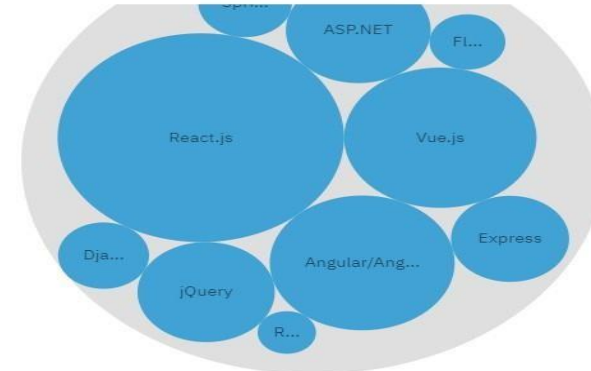
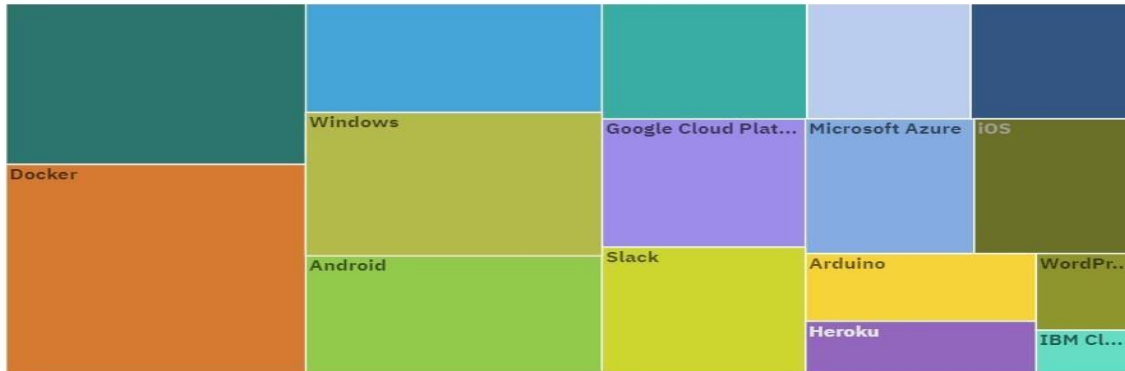
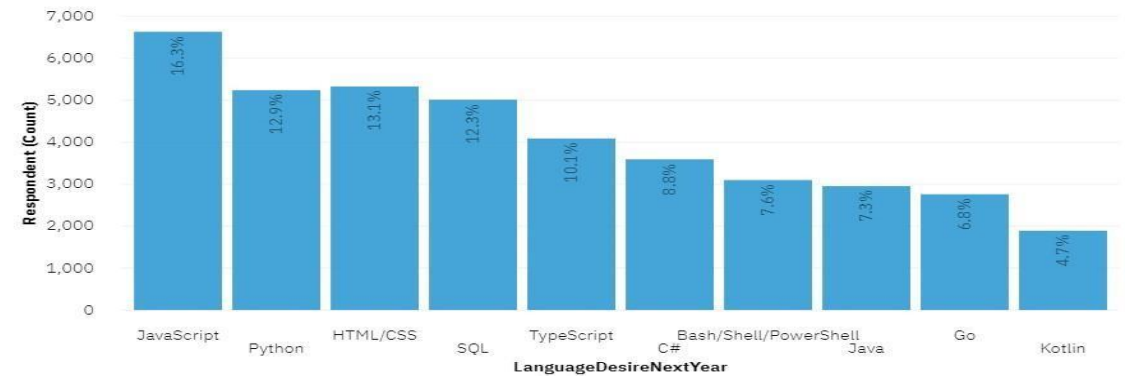
Future Technology Trend

Demographics

Top10 Language DesiredNextYear



Top 10 Language Desired Next Year



DASHBOARD TAB 3

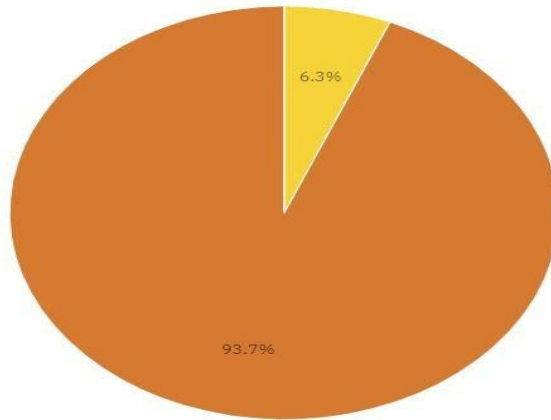
Current Technology Usage

Future Technology Trend

Demographics

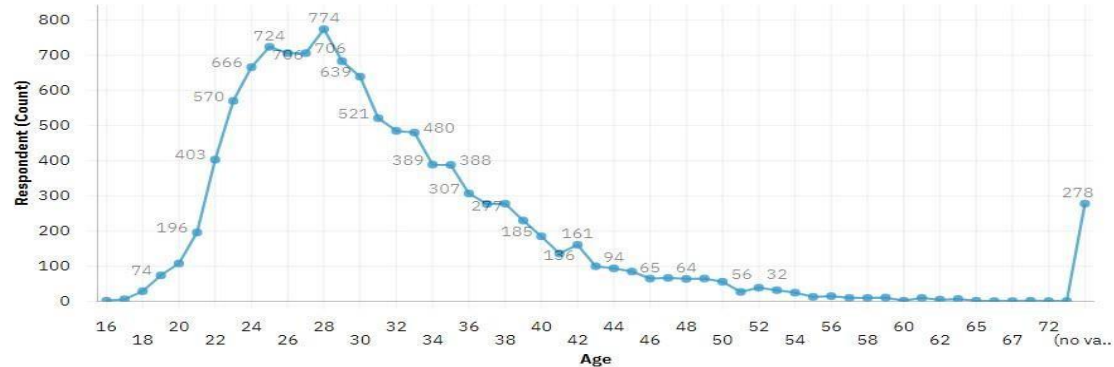
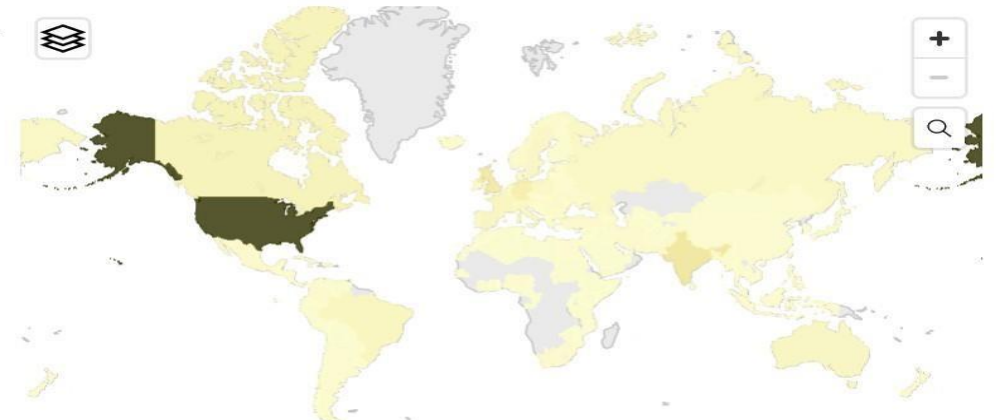
Respondents Classified by Gender

Gender
Woman
Man

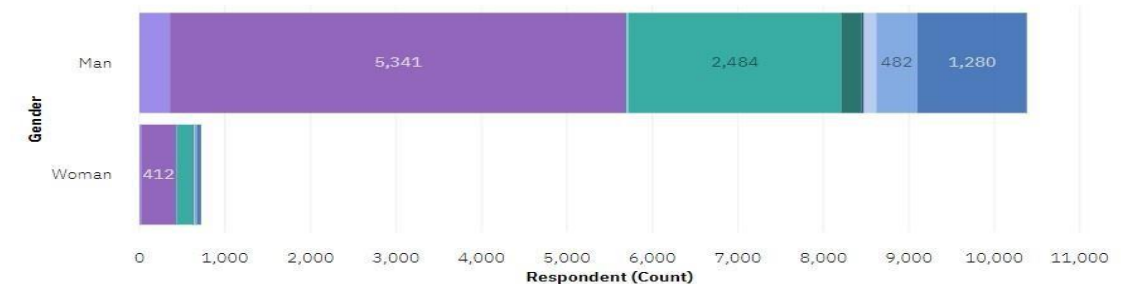


Respondent Count for Countries

Respondent (...)
3,058
1



Master's degree (MA, MS, M.E...
Other doctoral degree (Ph.D, E...
Primary/elementary school
Professional degree (JD, MD, e...
Secondary school (e.g. Americ...
Some college/university study ...



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

- The upcoming programming trend is for advanced programming languages.
- The upcoming trend for databases is non-relational databases mostly.

Implications

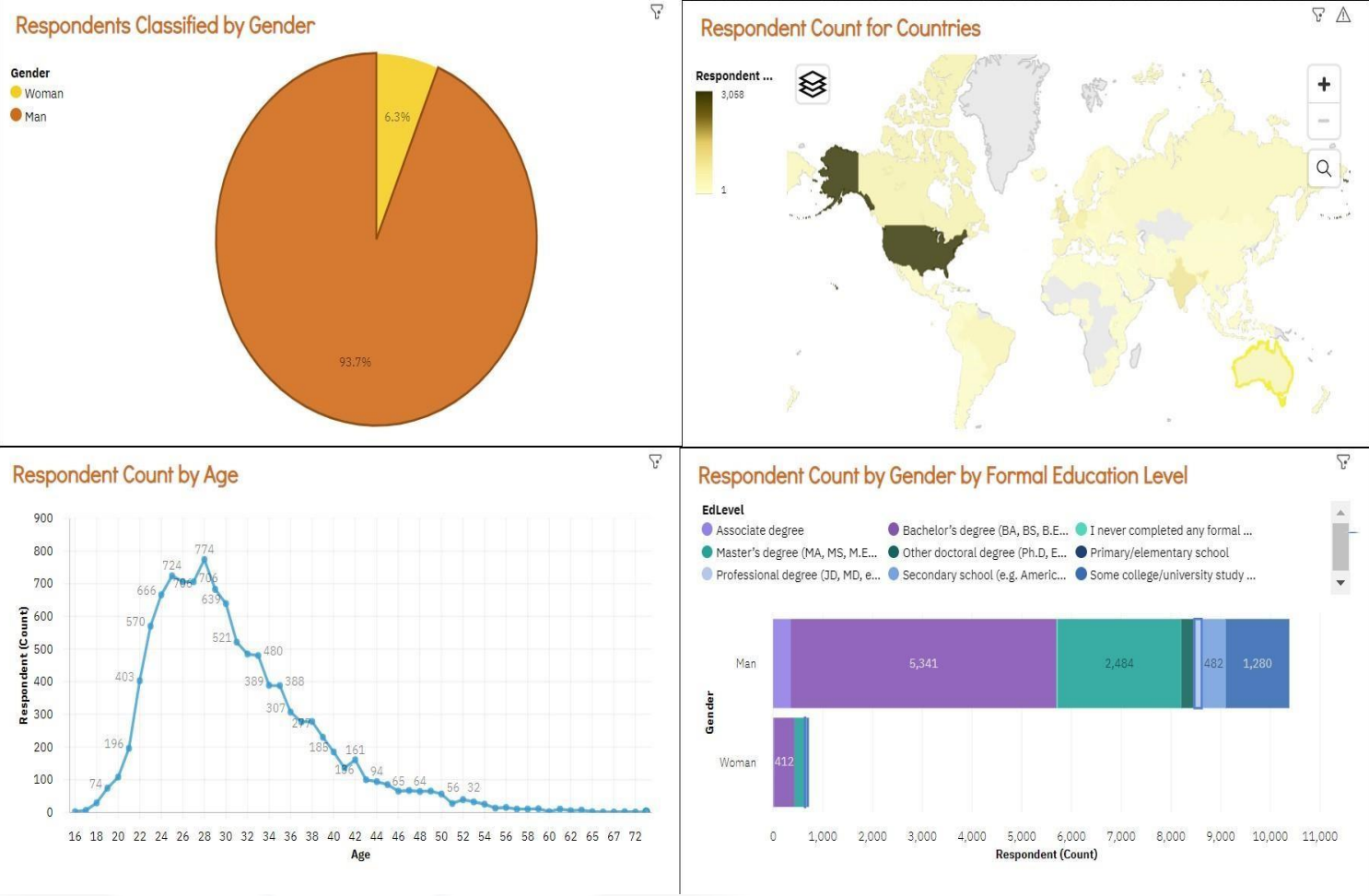
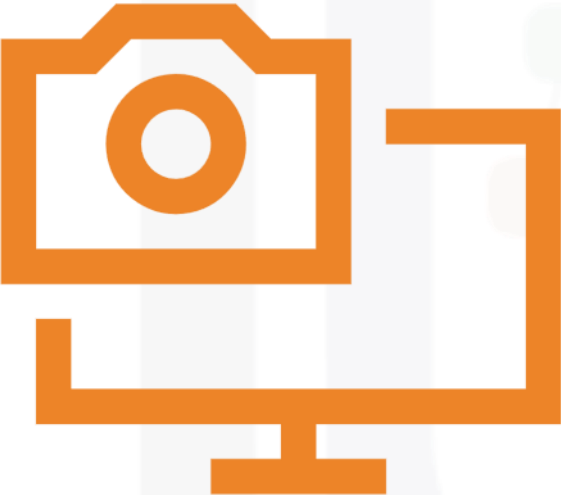
- People are looking for advanced programming languages with easy learning in focus.
- People are looking for big data because it seem to have great future.

CONCLUSION

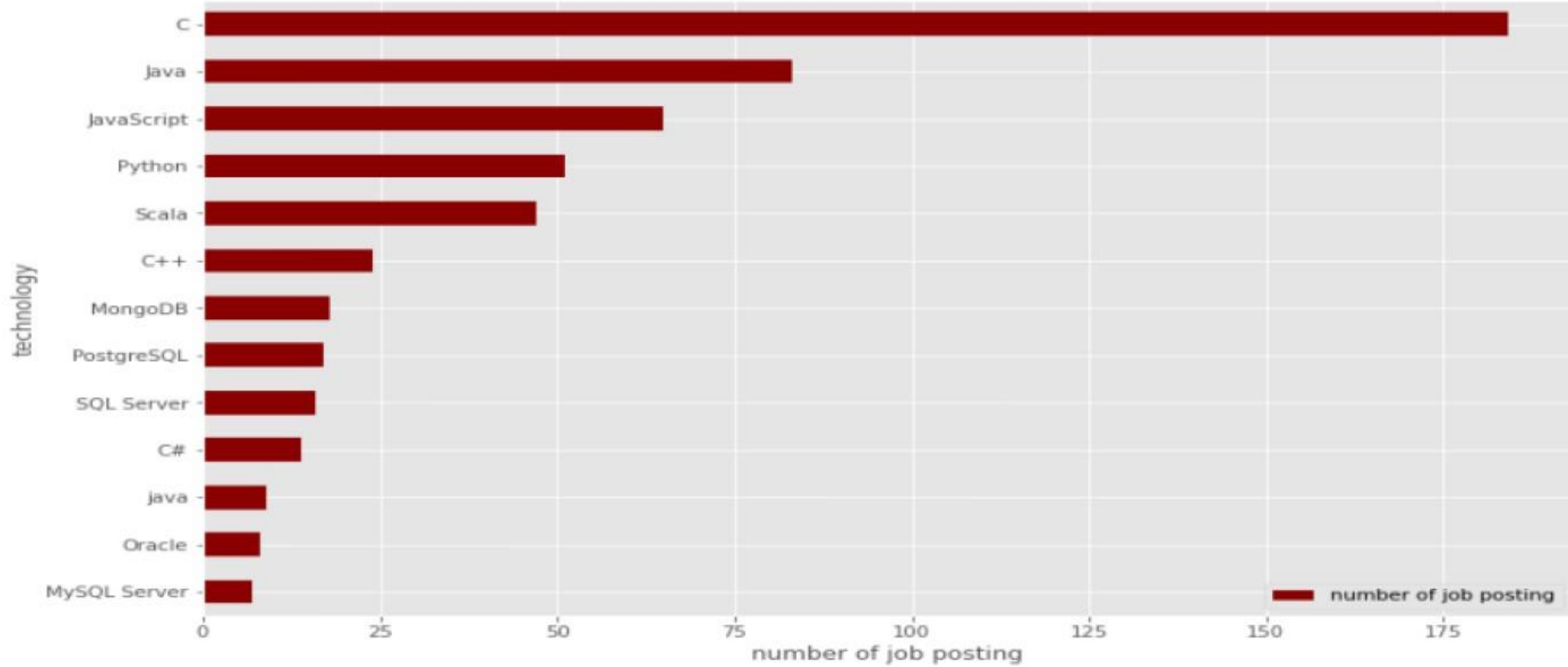


- The top programming language in demand
Present & Future- Java-script.
- The top database skills in demand
Present – MySQL ; Future – PostgreSQL.
- Popular Platform
Present – Windows ; Future – Linux Docker
- The top Web-frame in Demand
Present – jQuery ; Future – React.js

APPENDIX



horizontal bar of number of job postings



GITHUB JOB POSTINGS

IBM Developer

SKILLS NETWORK 

POPULAR LANGUAGES

