Future programming skill Trends

Mayur Dusane

2nd March 2023

OUTLINE

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

EXECUTIVE SUMMARY

- Collecting demand of jobs open from various technology and locations
- Analyzing the data and identify insights and trends
  - The top programming languages
  - The top databases skills
  - The popular IDEs
- Bringing the information together with dashboard showing current skills, future trend skills, and Demographics

INTRODUCTION

- To keep pace of changing technology programing is the significant to expertise in IT solutions and consultants.
- The focus problems is
  - What are the programing/database skills in the present?
  - What are the programing/database skills in the future?

METHODOLOGY

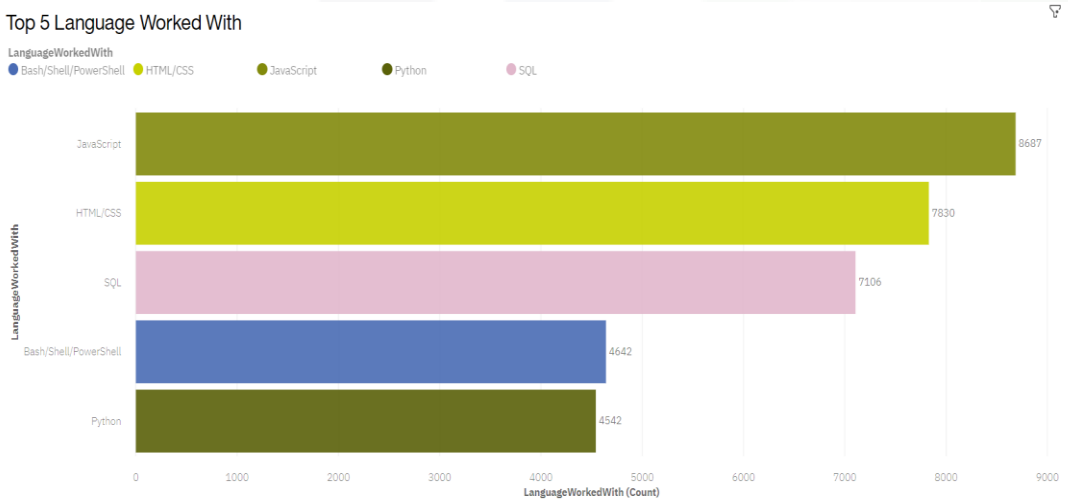
- Data Collection
- Data Wrangling
- Exploring Data Analysis
- Data Visualization
- Dashboard Creation
- Presenting of Findings
- Data Source : Job posting, Training portals and Surveys

RESULTS

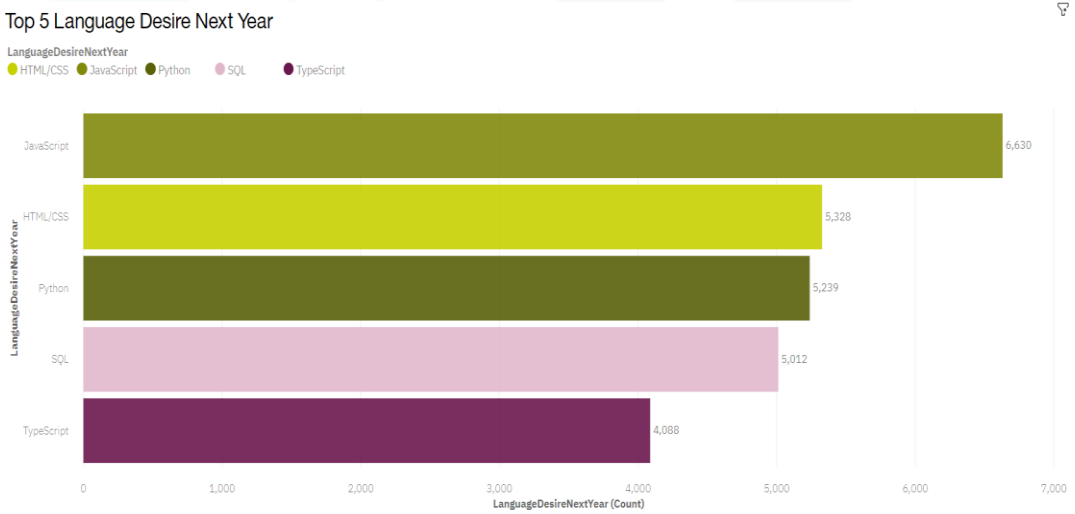
The collected data is transferred to cleaning data and then it is applied statistical techniques to analyze before concluded all information to make dashboards showing current and next year trends.

PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript is the most highest number of people working with, following by HTML/CSS for both
- The third is replaced by Python
- TypeScript is expected to be in the 5th place, while the Bash/Shell/PowerShell is out

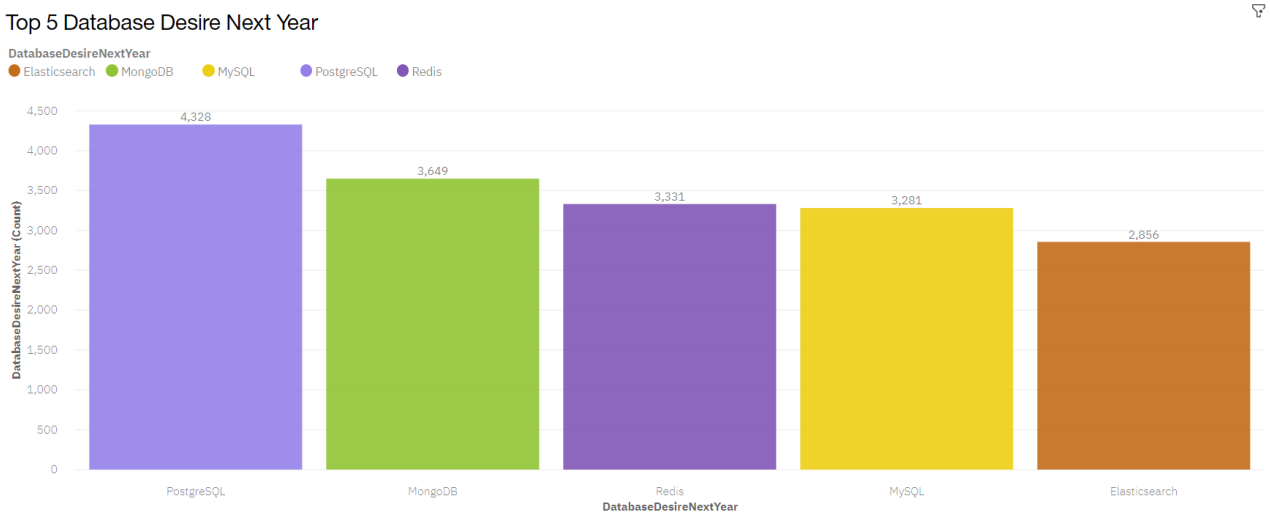
Implications

- 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

Next Year



IBM Developer

SKILLS NETWORK

DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- In next year, PostgreSQL is presented to be the 1st place instead MySQL
- MangoDB is changed from 5th to 2 nd place
- Microsoft SQL Server and SQLite is estimated to be replaced by Radish and Elasticsearch

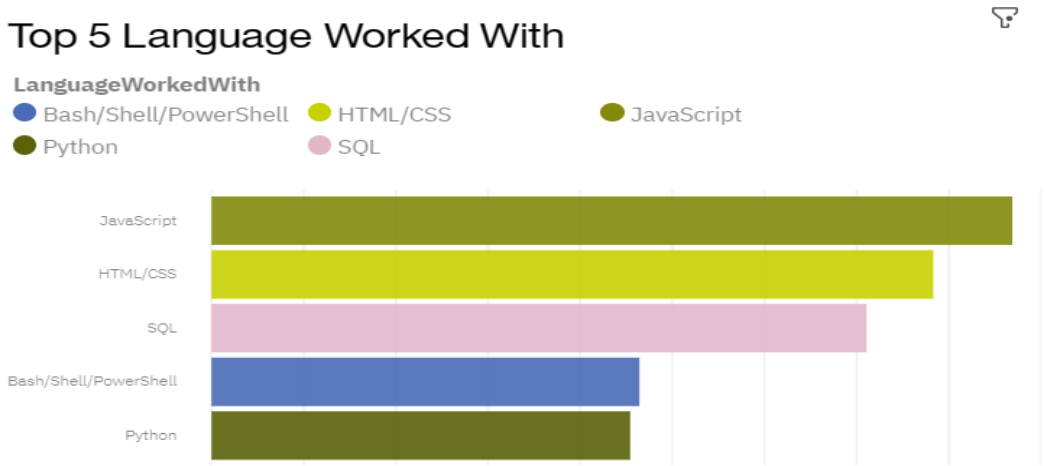
Implications

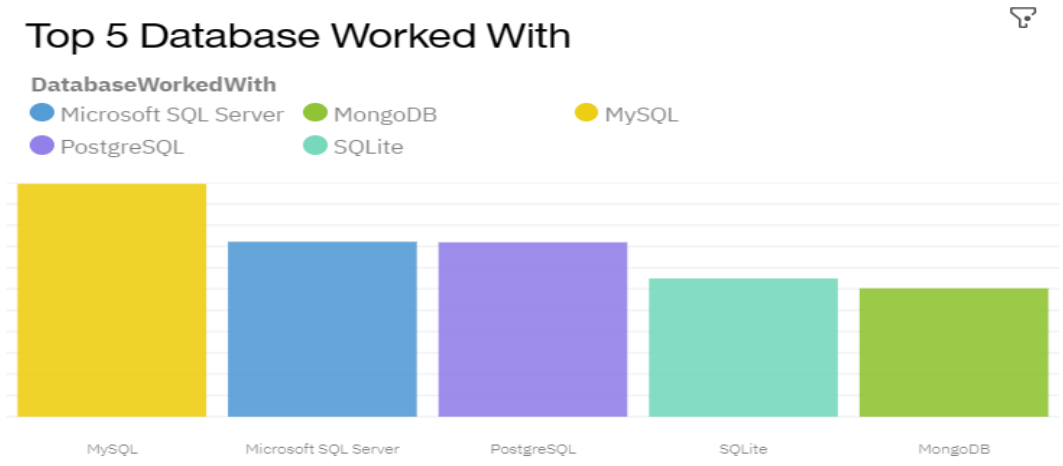
- MySQL will be the most requirement to use
- MangoDB will be much more popular
- Radish and Elasticsearch will be used in the top 5th used databases

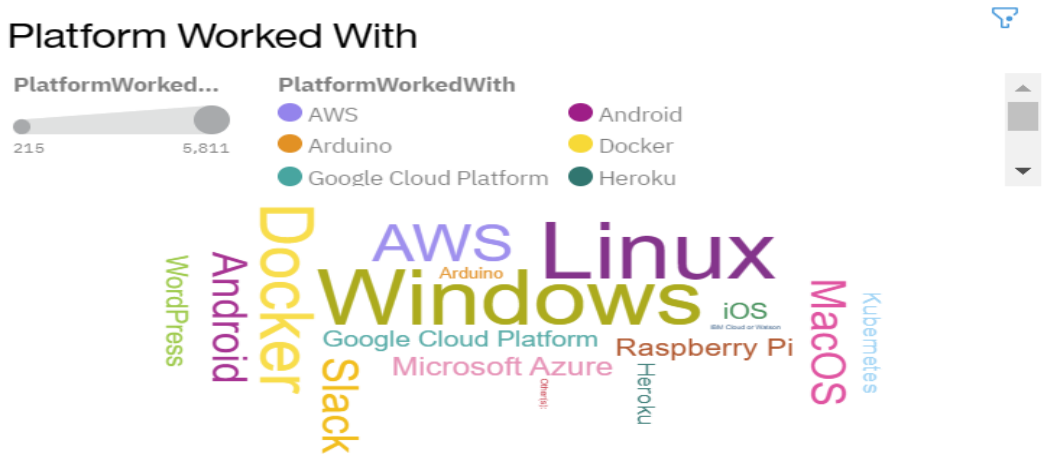
DASHBOARD

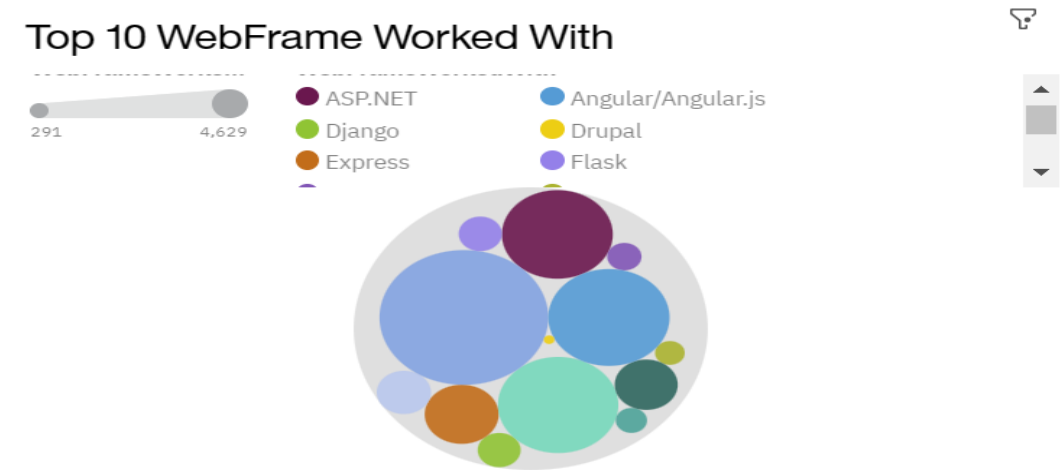
IBM Cognos Dashboard Link

DASHBOARD TAB 1

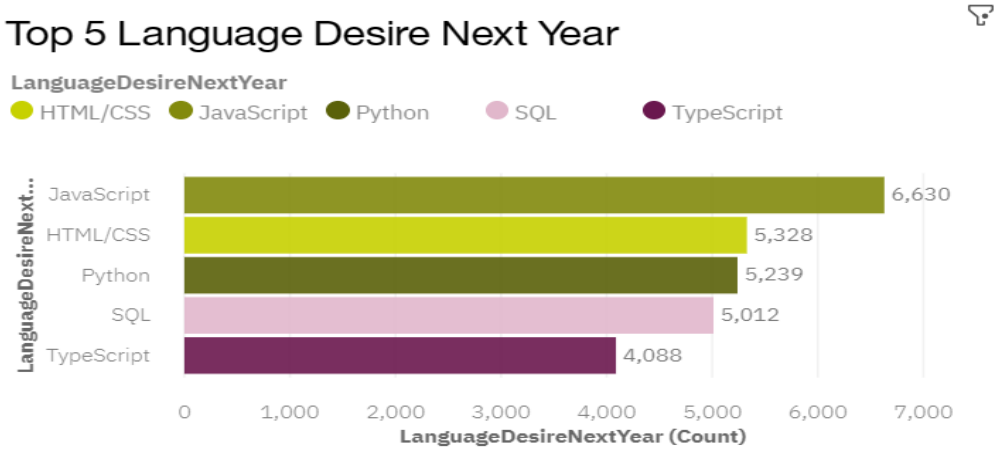


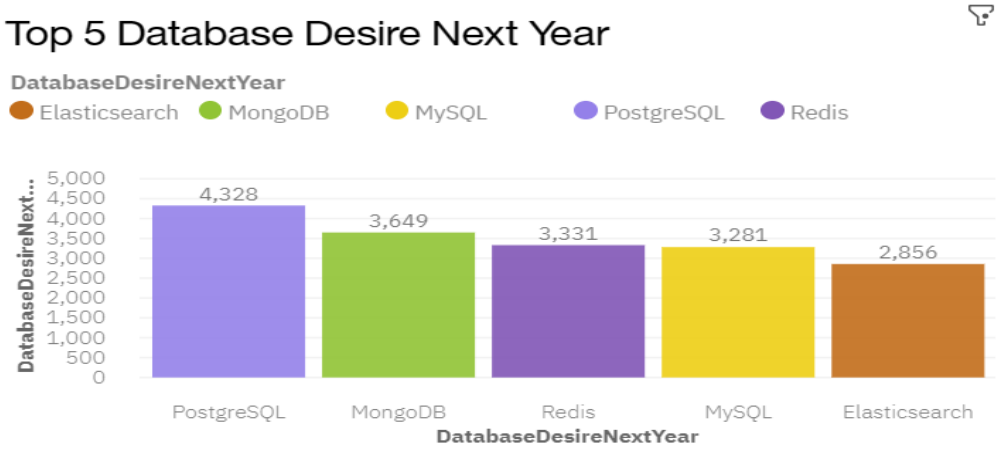


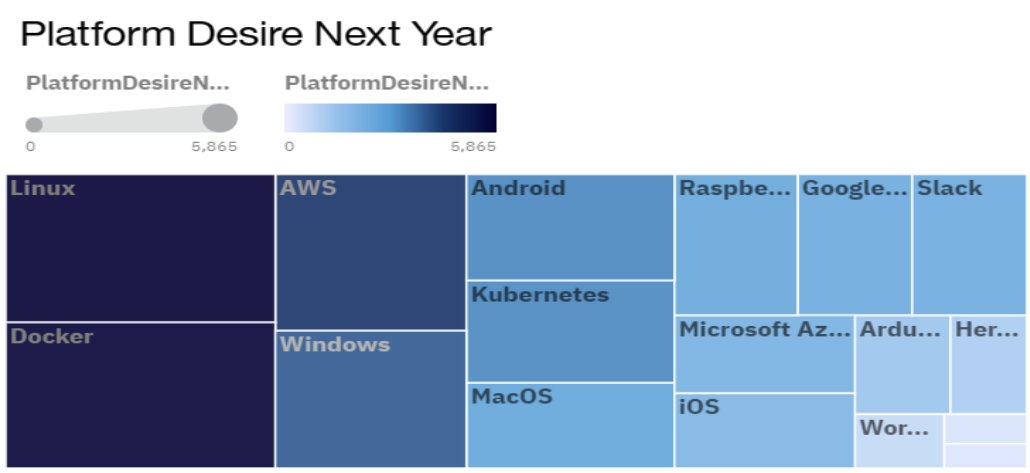


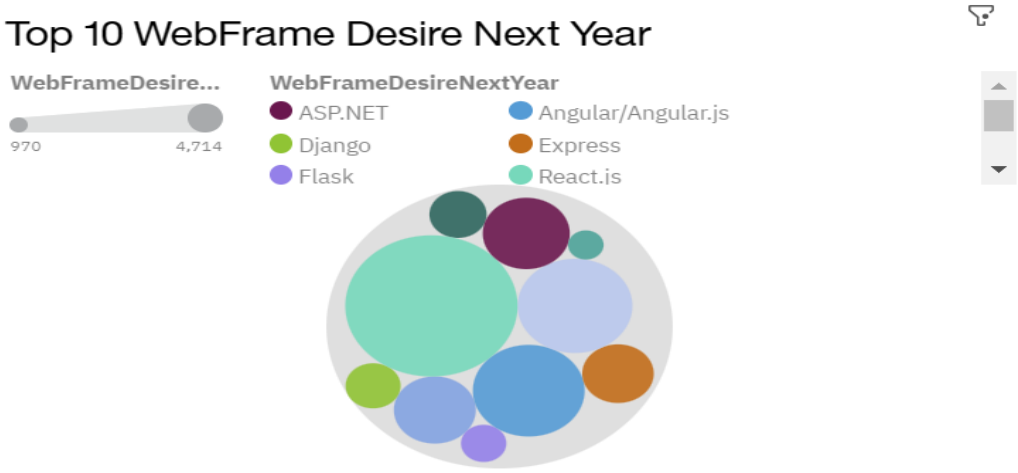


DASHBOARD TAB 2







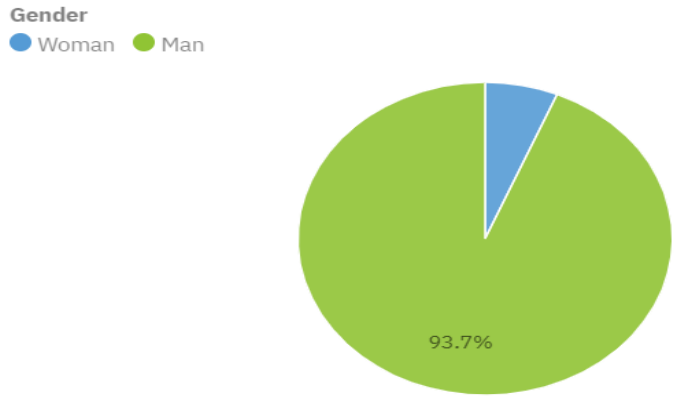


IBM Developer

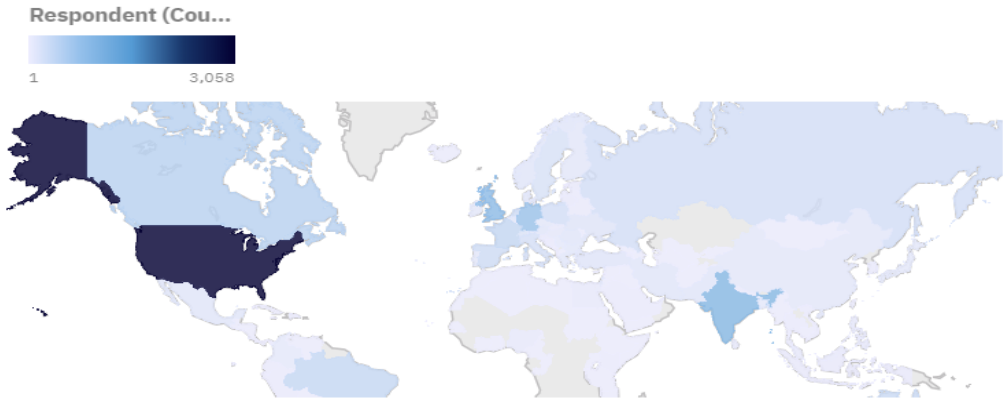
SKILLS NETWORK

DASHBOARD TAB 3

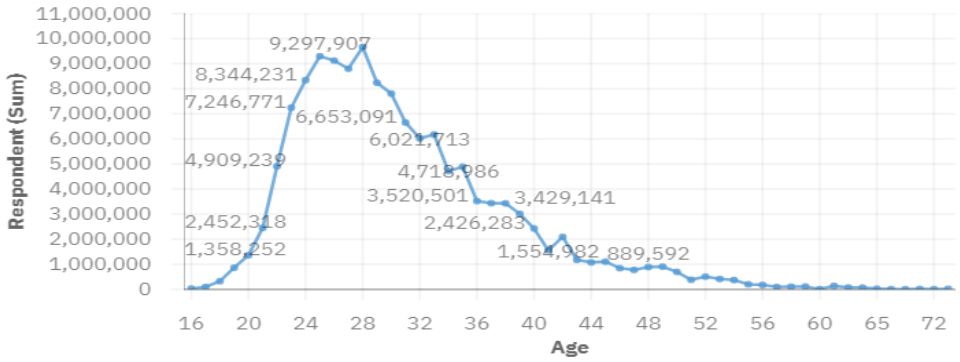
Respondent classified by Gender



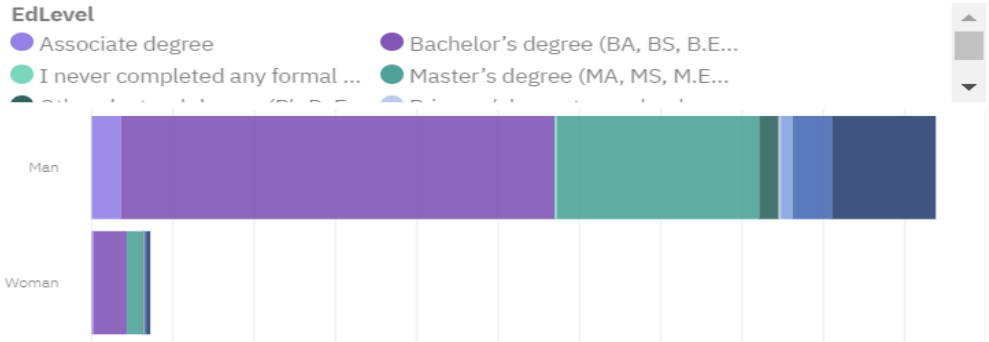
Respondent Count for Countries



Respondent Count by Age



Respondent Count by Gender, classified by Formal Education Level



DISCUSSION

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

OVERALL FINDINGS & IMPLICATIONS

Findings

- By next year, JavaScript and HTML/CSS will be remained in the top 1st and 2nd
- While SQL is going to be surpassed by Python, Bash/Shell/PowerShell are not shown in the next year
- PostgreSQL is presented to be the 1st place instead MySQL, compared with disappearing of Microsoft SQL Server and SQLite
- Platform Linux is the largest proportion, while windows will be replaced by Docker
- By gender, men is shown respondence more than women which the most number presented in Russia Federation and age around 28 who have Bachelor's degree

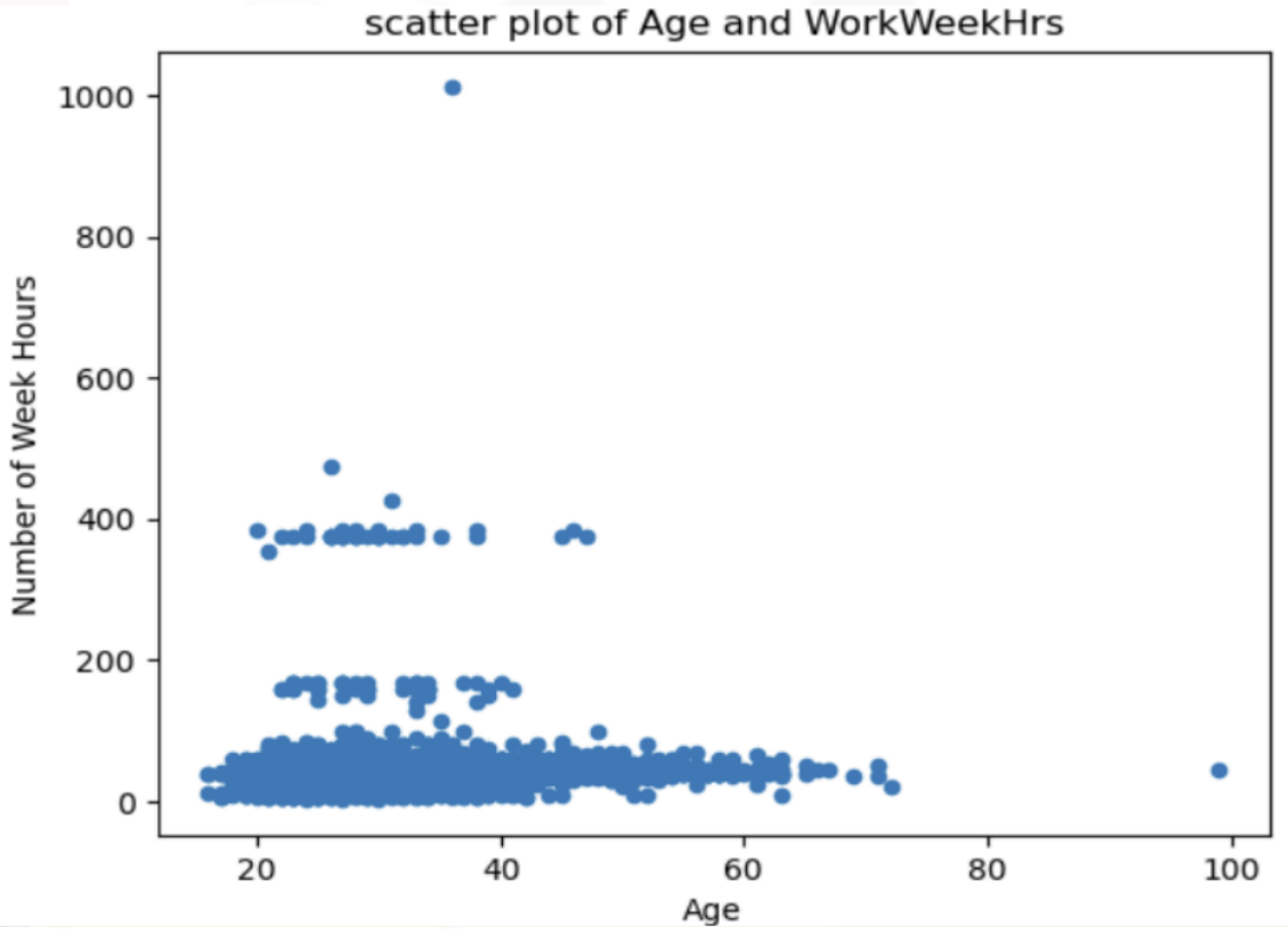
Implications

- JavaScript and HTML/CSS will be continue popular
- 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
- It is assumed that The large number of young russian men who have Bachelor's degree tend to response in the analysis

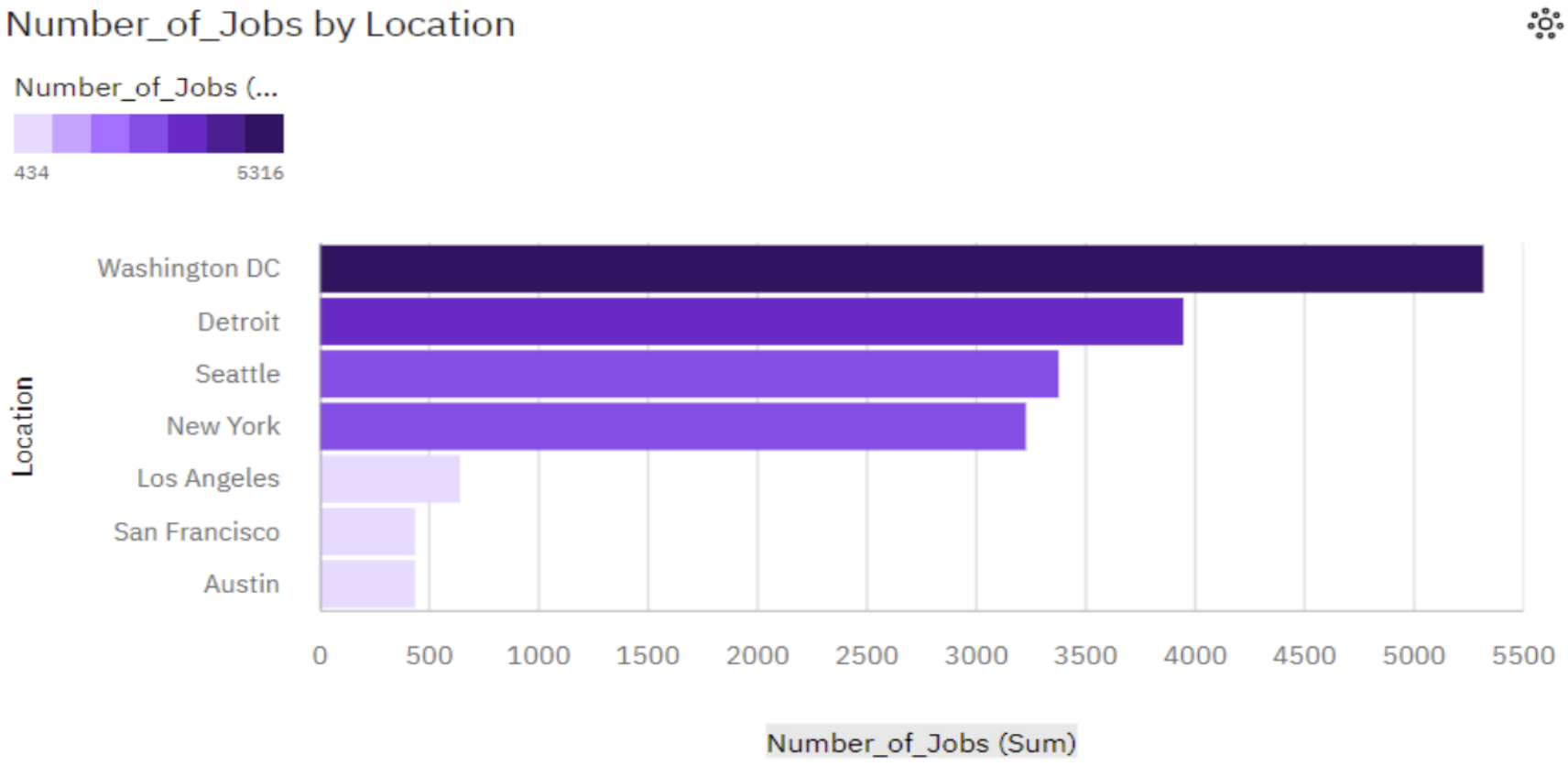
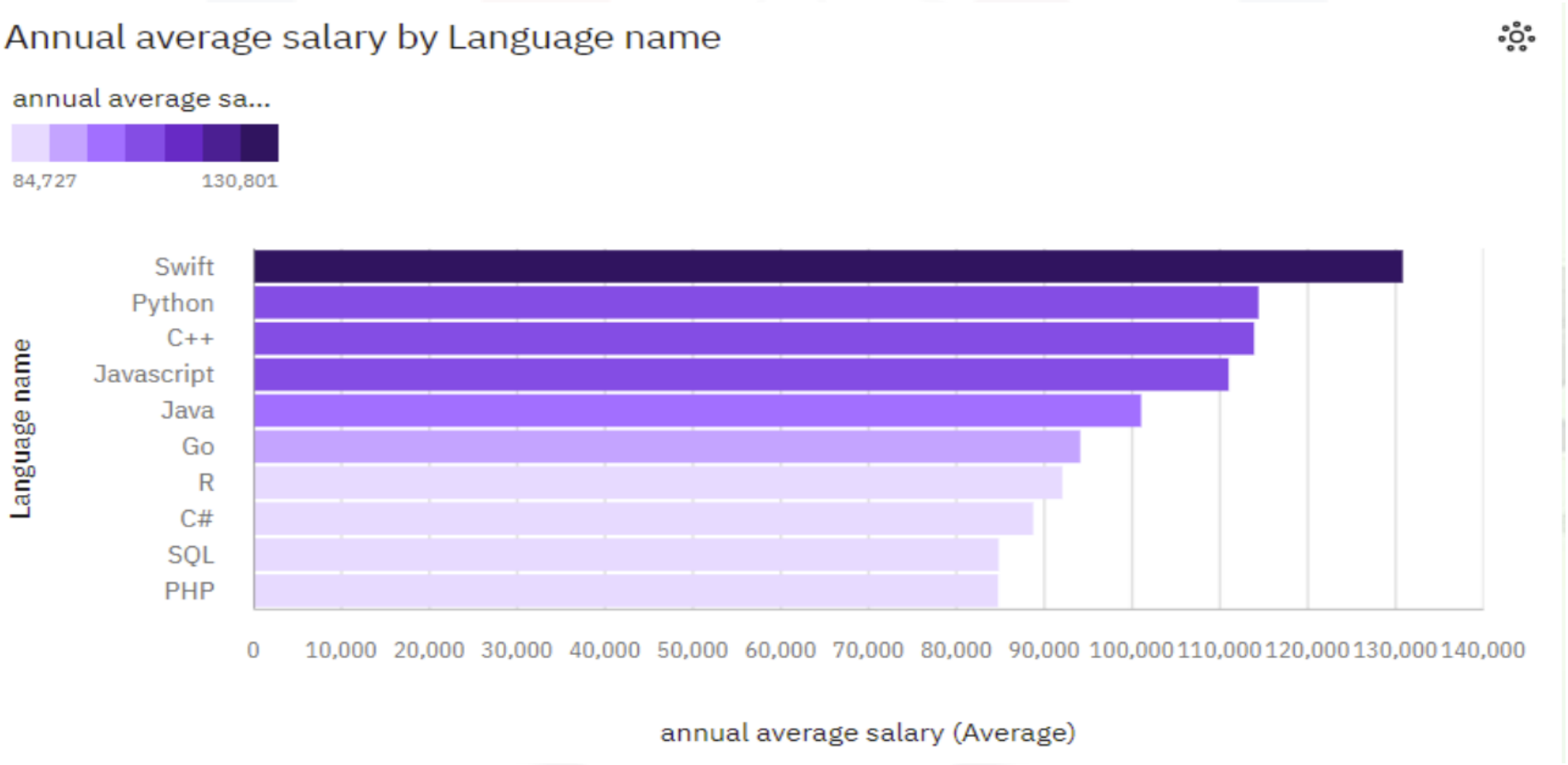
CONCLUSION

- HTML/CSS is estimated to stay popular the same in the next year
- PostgreSQL will be the most demand of database
- Linux platform is predicted to stay the same at 1st requirement
- The most percentage of Web Frame will be occupied by React.js
- Men are interested in IT skills more than women

APPENDIX


scatter plot of Age and WorkWeekHrs
Number of Week Hours
1000
800
600
400
200
0
20
40
60
80
100
Age

JOB POSTINGS



POPULAR LANGUAGES