

Data Analyst Capstone Project

Hari Priya Bollam
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OUTLINE



- Executive Summary
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 - Dashboard
- Discussion
 - Findings & Implications
- Conclusion
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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



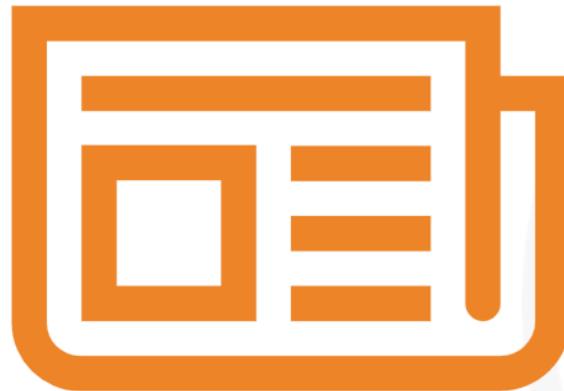
INTRODUCTION



- 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
- "https://cf-courses-data.s3.us.cloud-object-storage.appdomain.cloud/ibm-da0321en-skillsnetwork/largedata/m2_survey_data.csv"



RESULTS

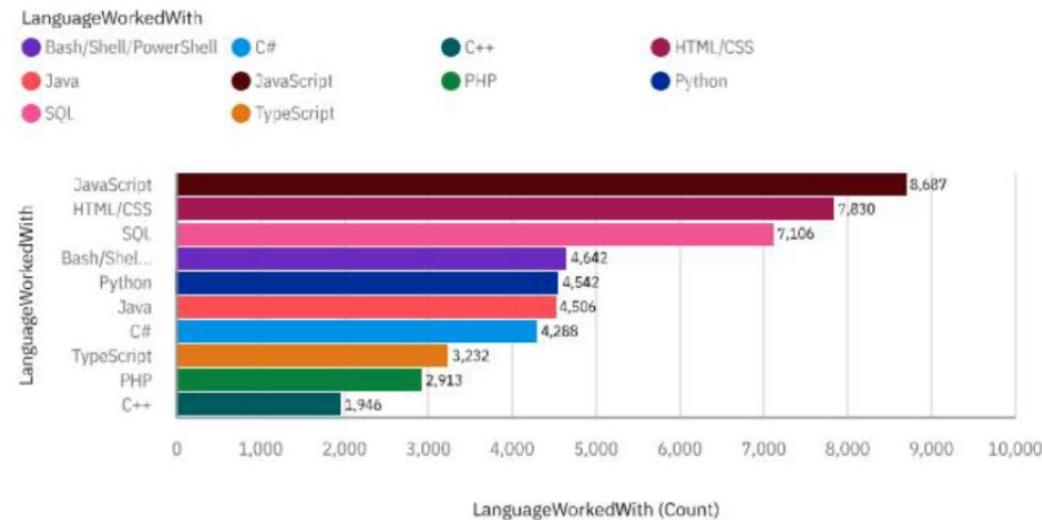
The collected data is transferred to cleaning data and then it is applied statistical techniques to analyze before concluded all information to make dashboards showing current and next year trends.



PROGRAMMING LANGUAGE TRENDS

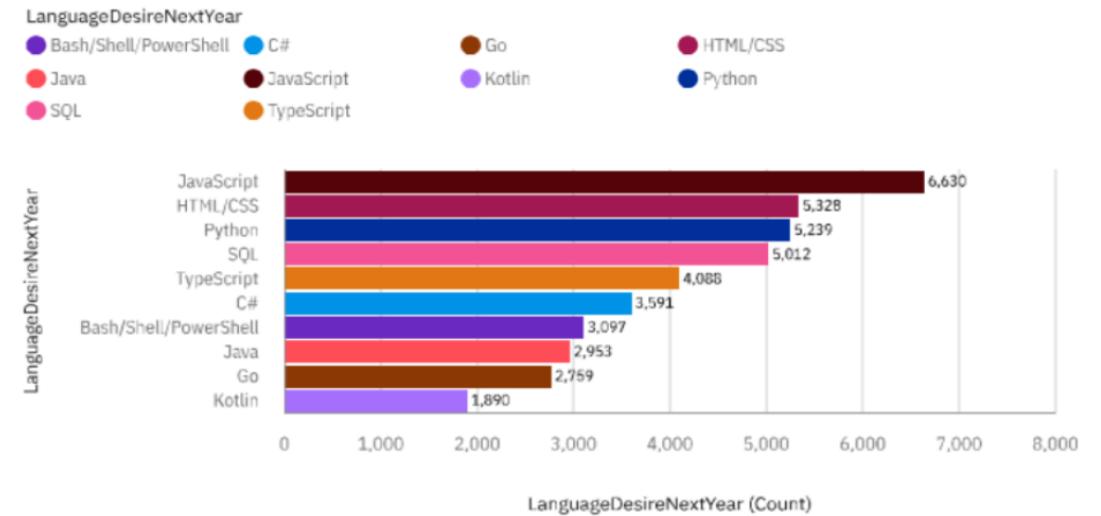
Current Year

Top 10 Language Worked With



Next Year

Top 10 Language Desire 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

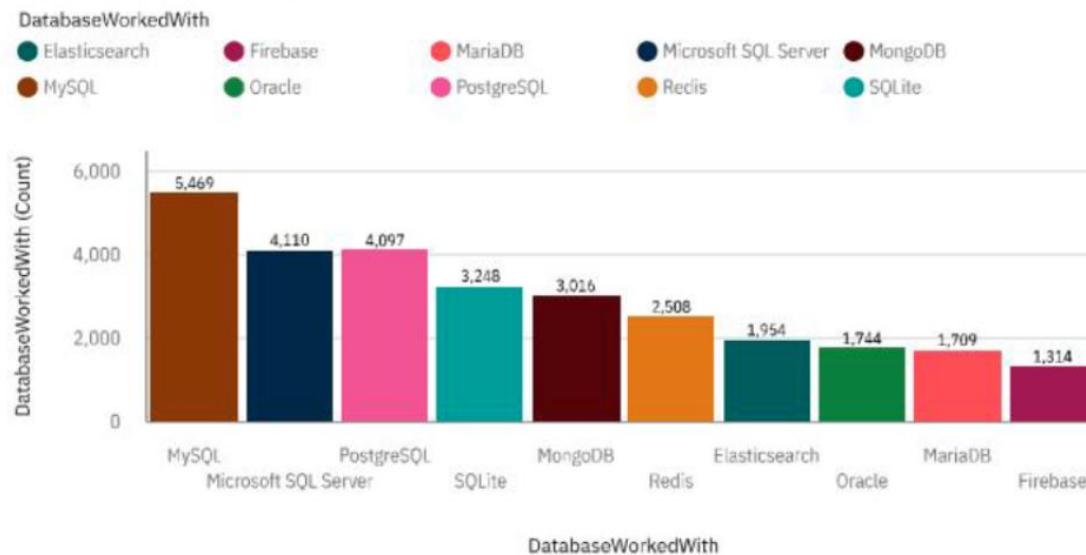
- JavaScript and HTML/CSS will be still in the trends
- People are more interested in Python
- SQL will be still preferable



DATABASE TRENDS

Current Year

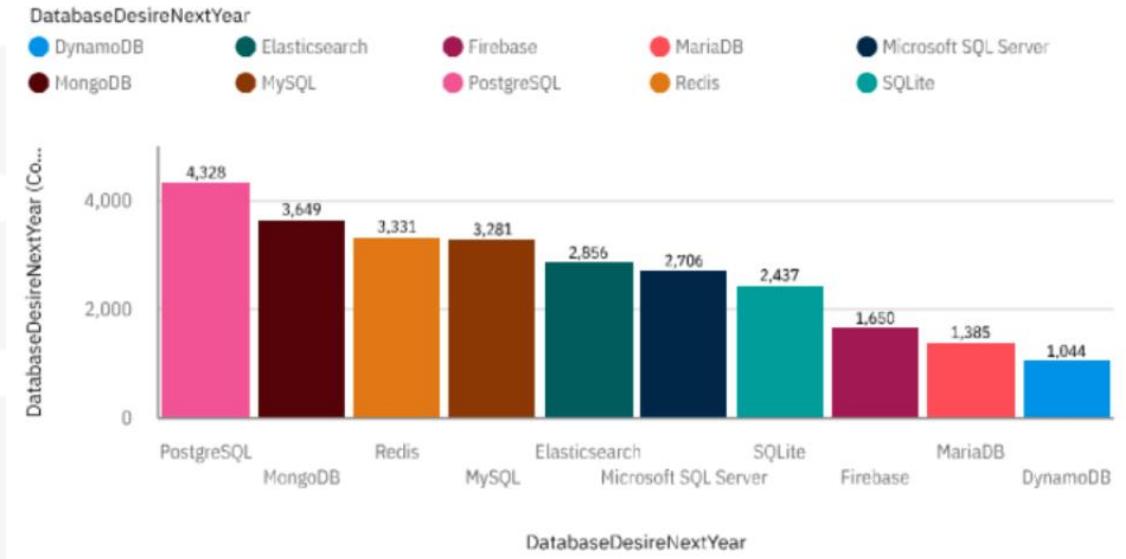
Top 10 Database Worked With



Next Year

2

Top 10 Database Desire Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

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

Implications

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



DASHBOARD



[Dashboard link](#)

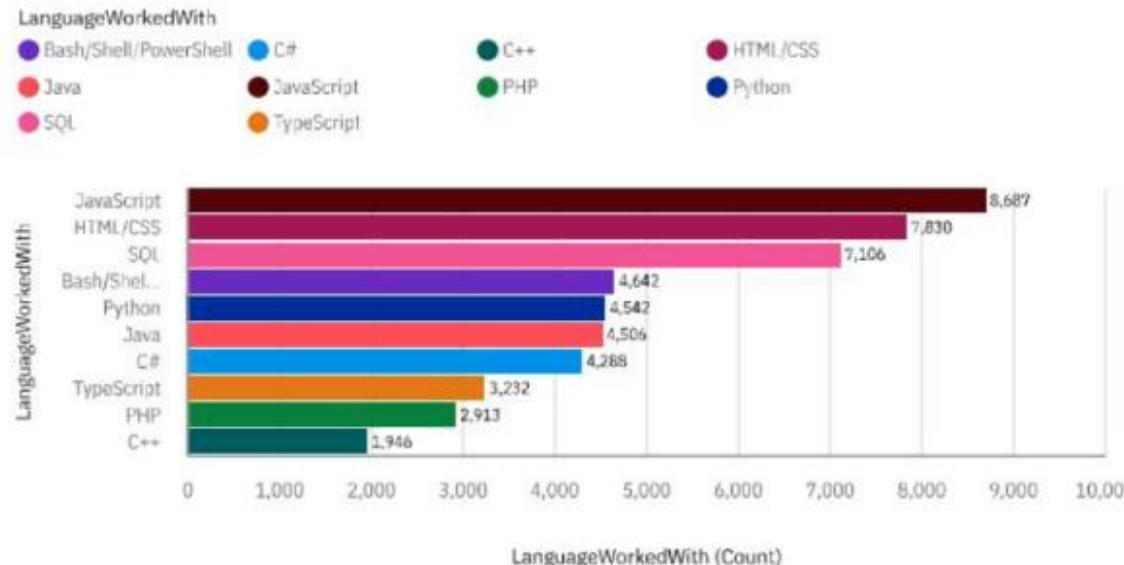


Skills Network

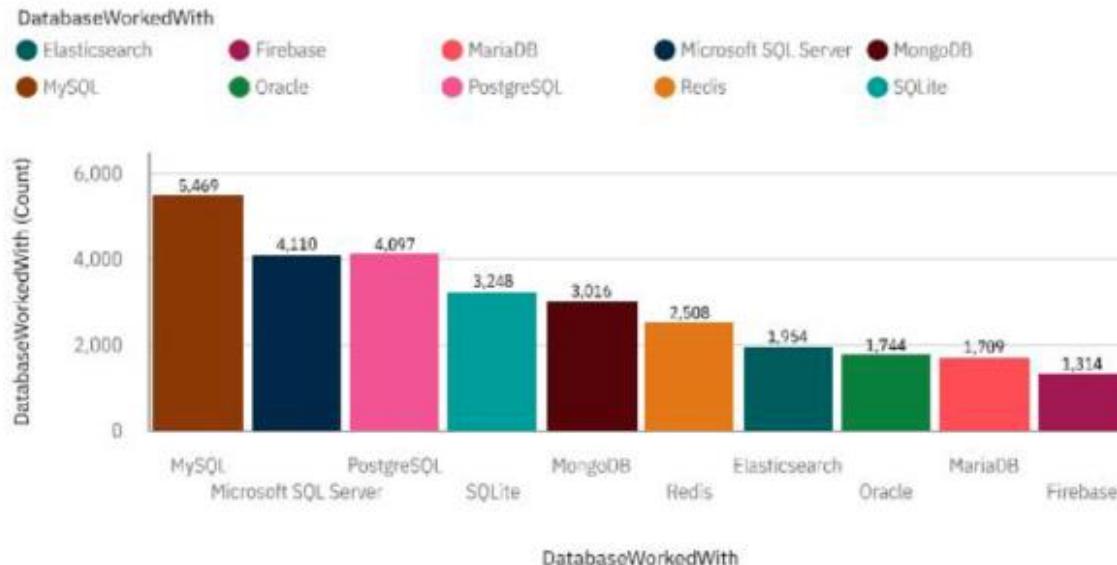


Current Technology

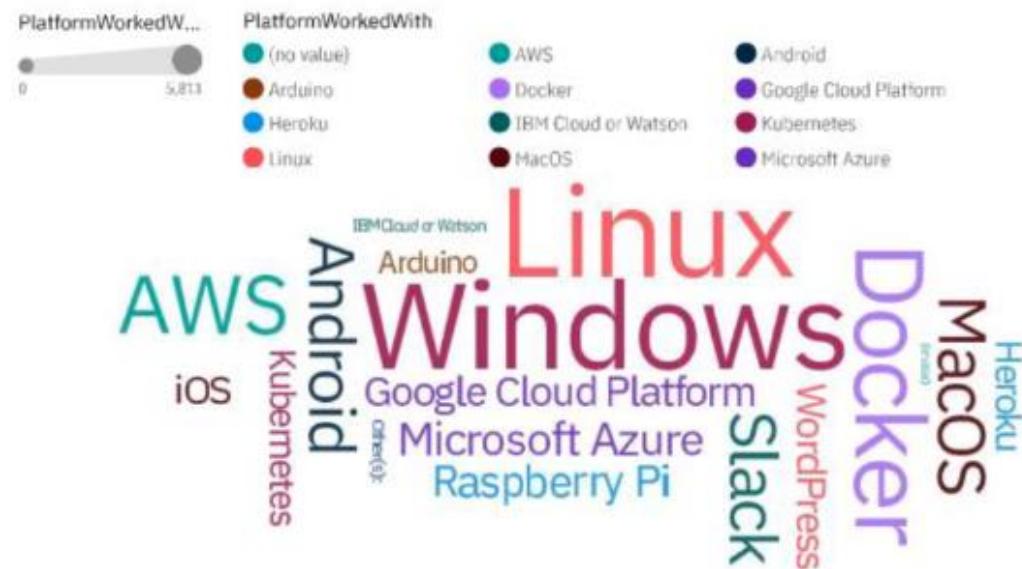
Top 10 Language Worked With



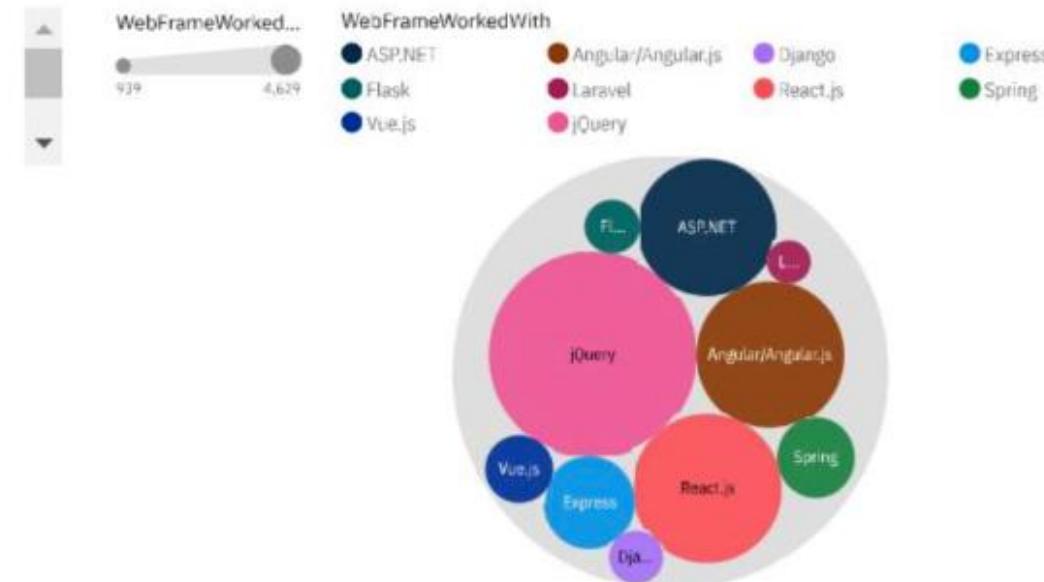
1 Top 10 Database Worked With



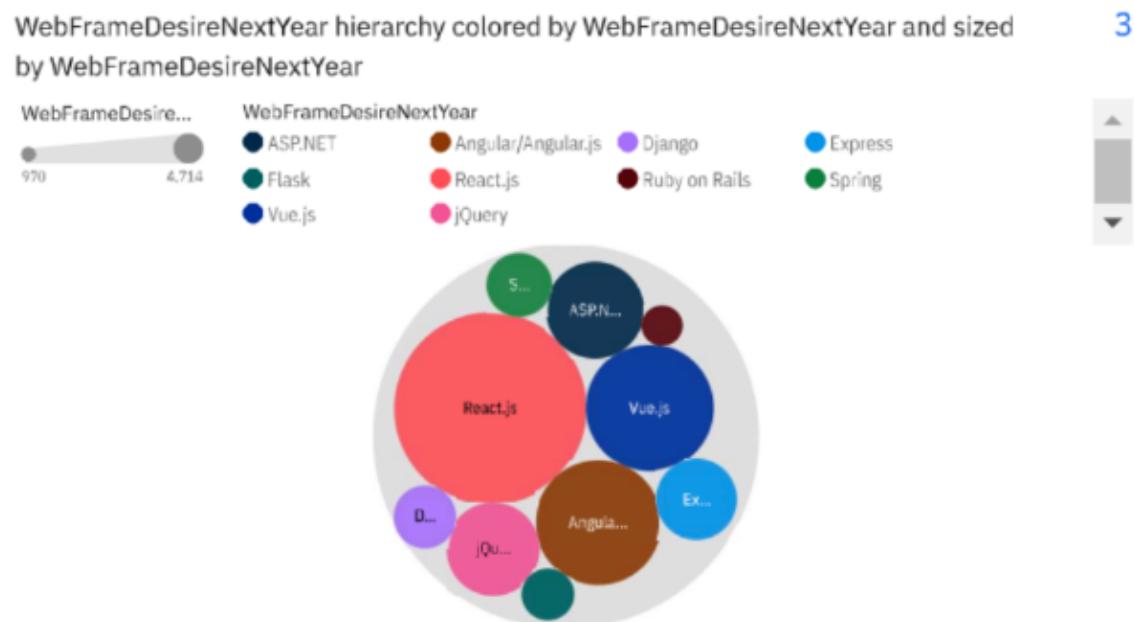
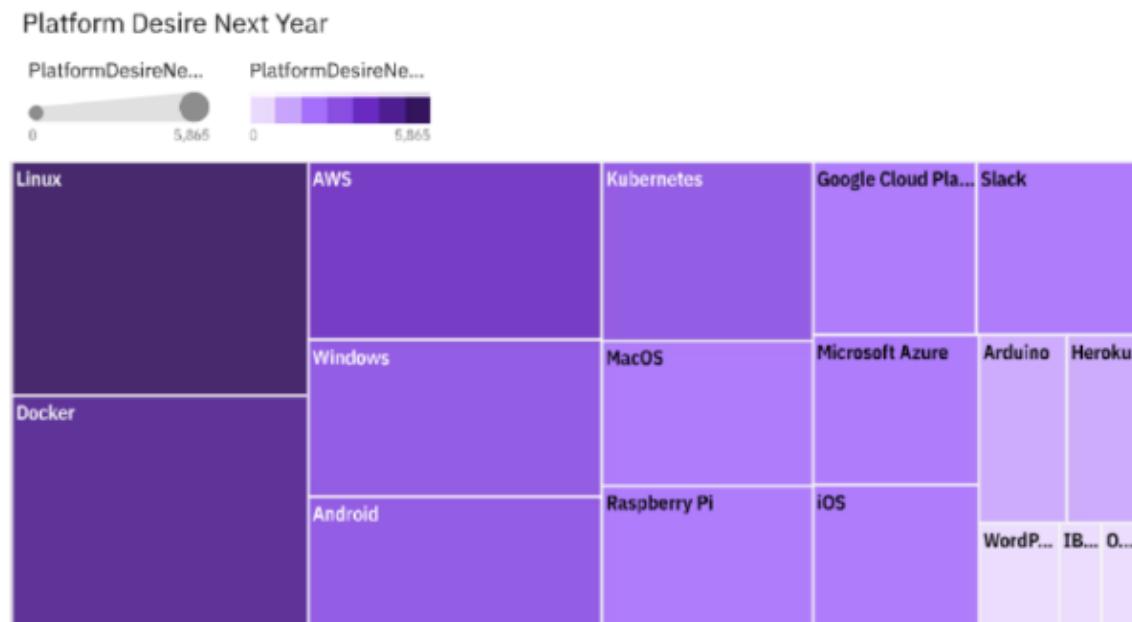
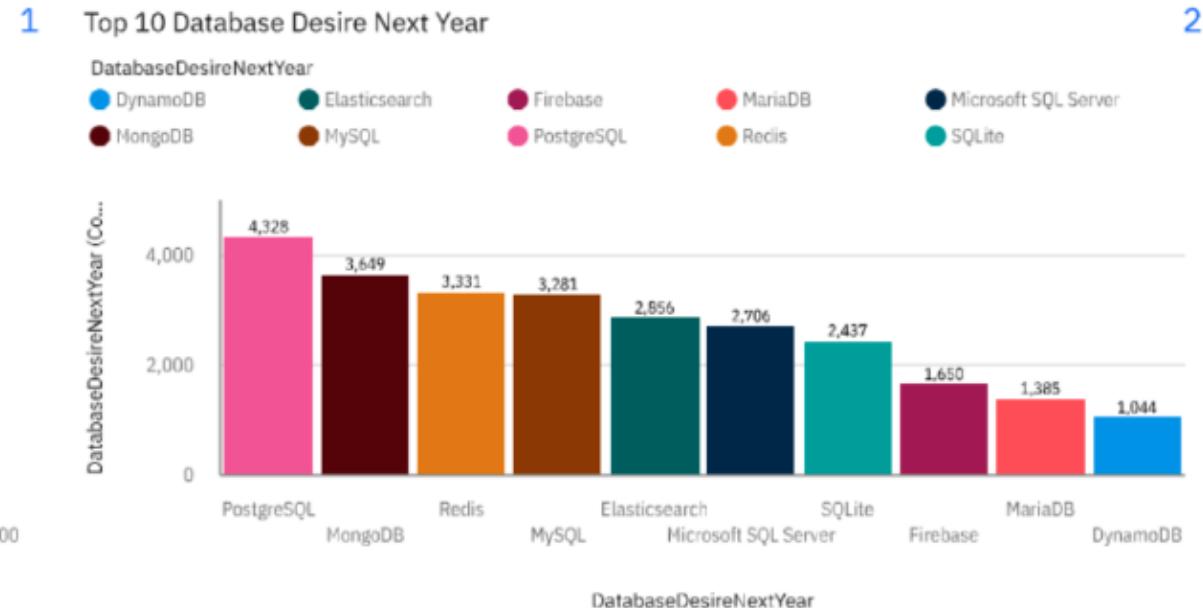
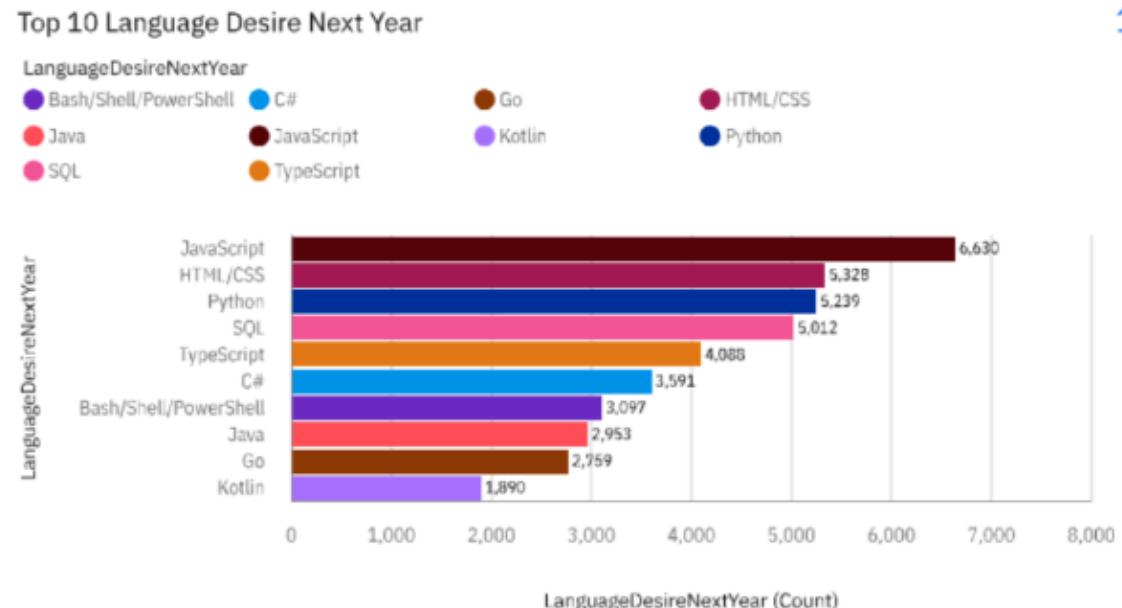
Platform Worked With



Top 10 Web Frame Worked With



Future Technology

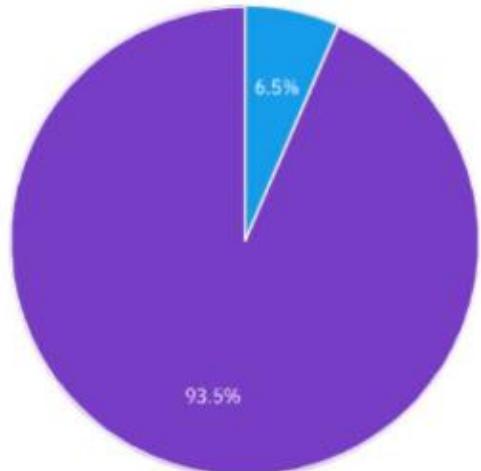


Demographics

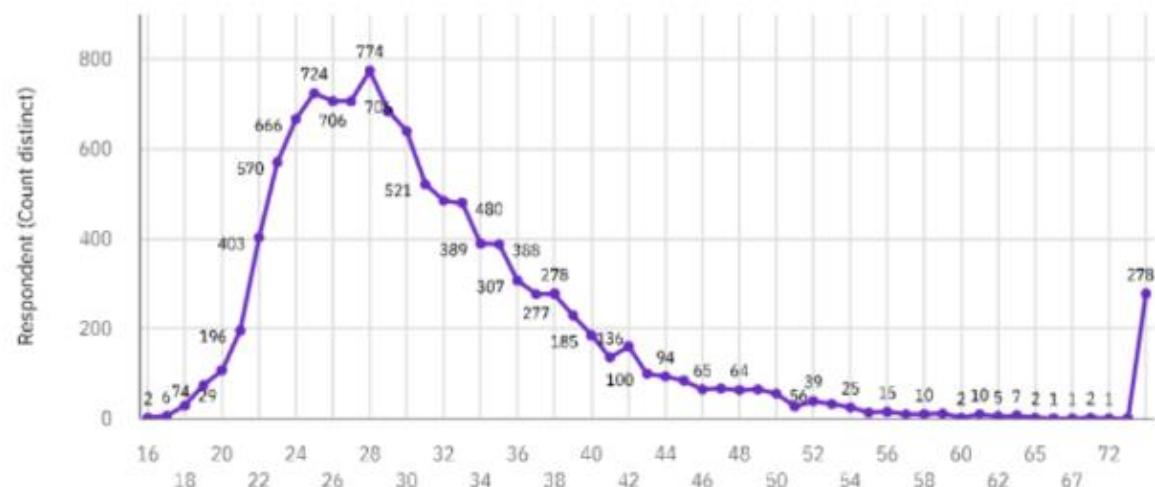
Respondent classified by Gender

Gender

- Woman
- Man



Respondent Count by Age



1 Respondent Count for Country

Respondent

- 16
- 17
- 19
- 24
- 49
- 50
- 53
- 57
- 62
- 67
- 68
- 86
- 87
- 92
- 109
- 111
- 114
- 117
- 118
- 119
- 140
- 144
- 163
- 174
- 176
- 188
- 201
- 211
- 213
- 217
- 219
- 224
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- 246
- 254
- 259
- 268
- 279
- 304
- 305
- 310
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- 351
- 373
- 374
- 383
- 388
- 400
- 401
- 402
- 410
- 426
- 427
- 435



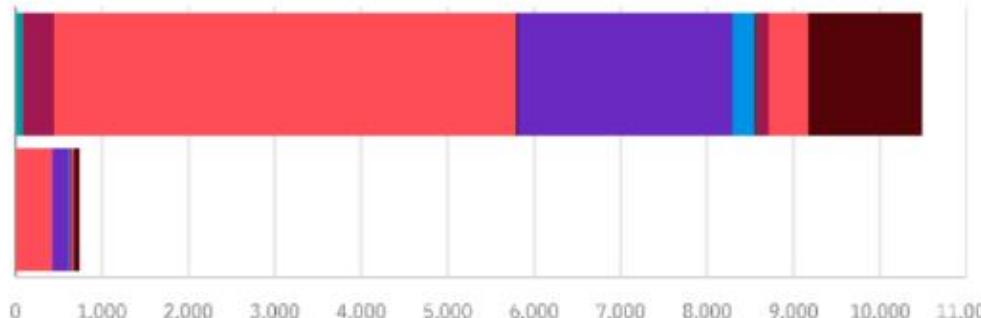
3 Respondent Count by Gender, classified by Formal Education Level

EdLevel

- (no value)
- I never completed any formal edu...
- Primary/elementary school
- Some college/university credit/cert...
- Associate degree
- Bachelor's degree (BA, BS, B.Eng,...)
- Master's degree (MA, MS, M.Eng, ...)
- Other doctoral degree (Ph.D, Ed.D,...)
- Professional degree (JD, MD, etc.)
- Secondary school (e.g. American ...)

Gender

- Man
- Woman



2

4

DISCUSSION



QUESTION

- 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
- React.js is predicted to be the highest preference of Web Frame in the next year instead of jQuery

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

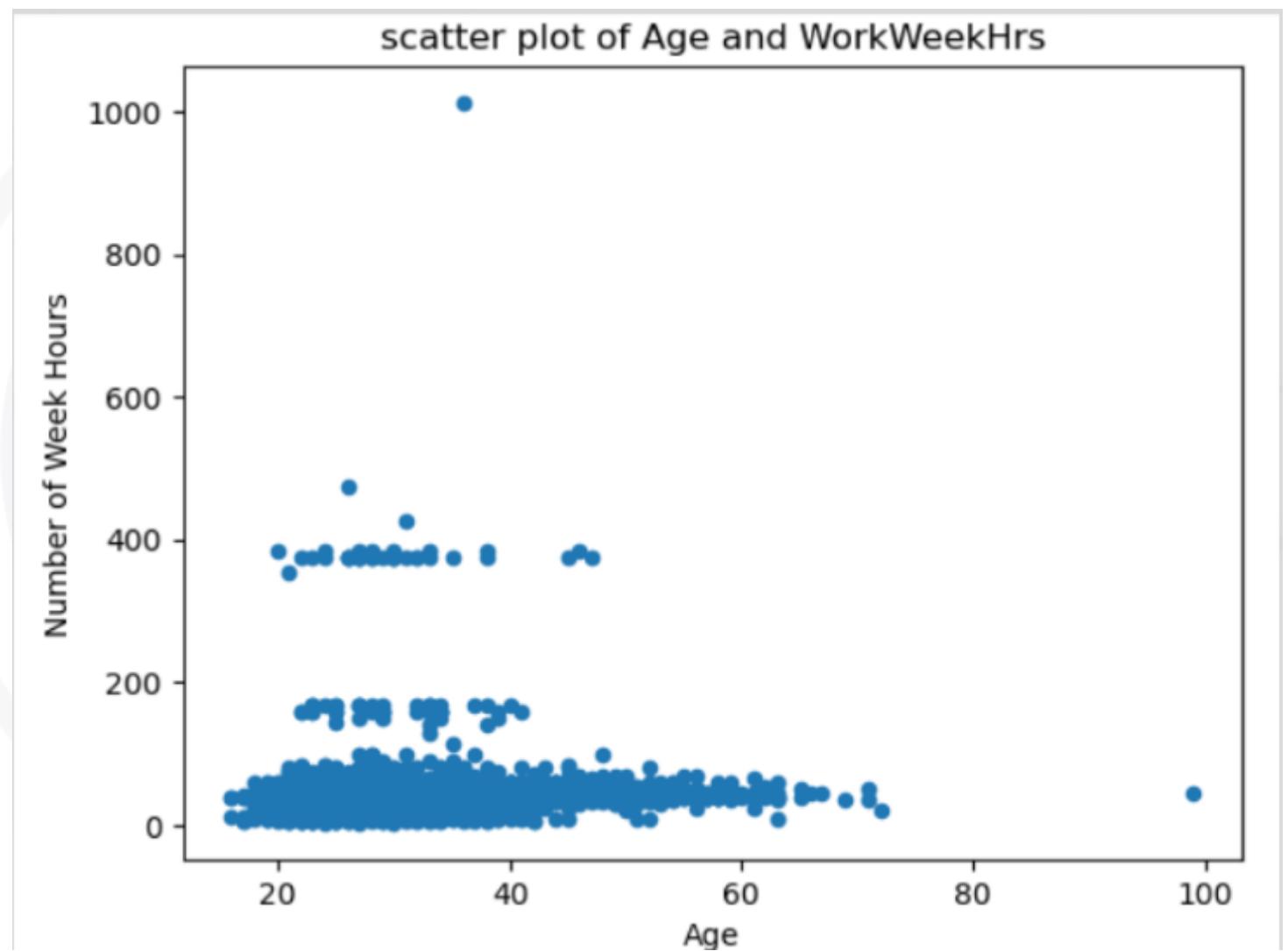
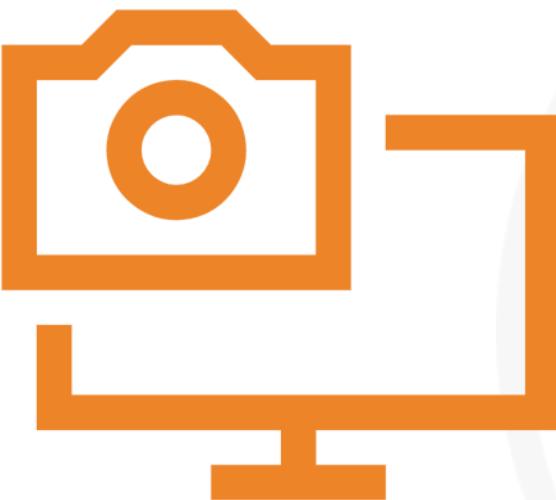
CONCLUSION



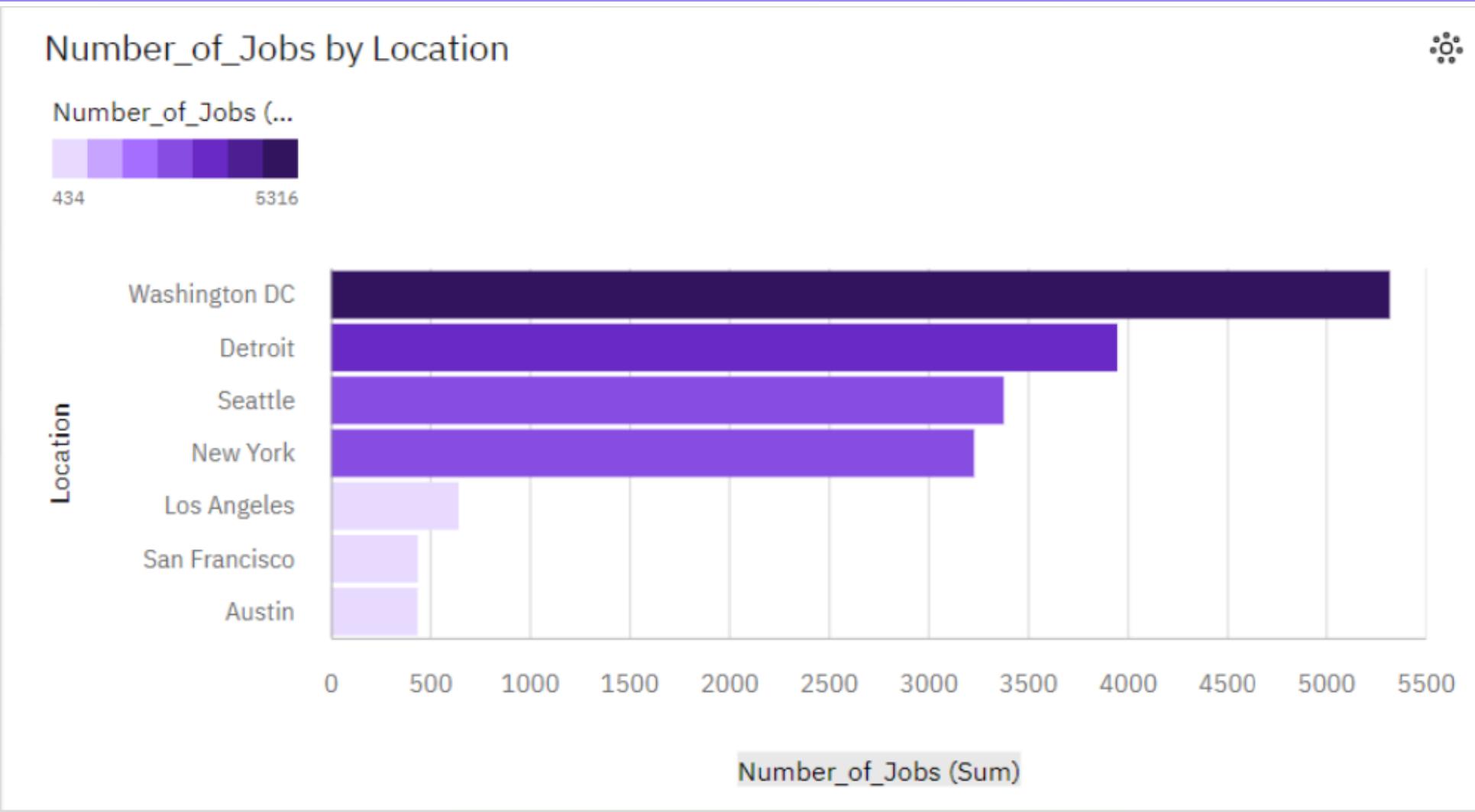
- HTML/CSS is estimated to stay popular the same in the next year
- PostgreSQL will be the most demand of database
- Linux platform is predicted to stay the same at 1st requirement
- The most percentage of Web Frame will be occupied by React.js
- Men are interested in IT skills more than women



APPENDIX



JOB POSTINGS



POPULAR LANGUAGES

Annual average salary by Language name

annual average sa...

