Stack Overflow Developer Survey 2019 Findings

Omer Bekmez

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EXECUTIVE SUMMARY

- Prelude
- Methodology
  - Data sources
  - Data Analysis procedure
  - Findings and Results of the analysis
- Dashboards and Trends
- Discussion
- Final Thoughts

INTRODUCTION

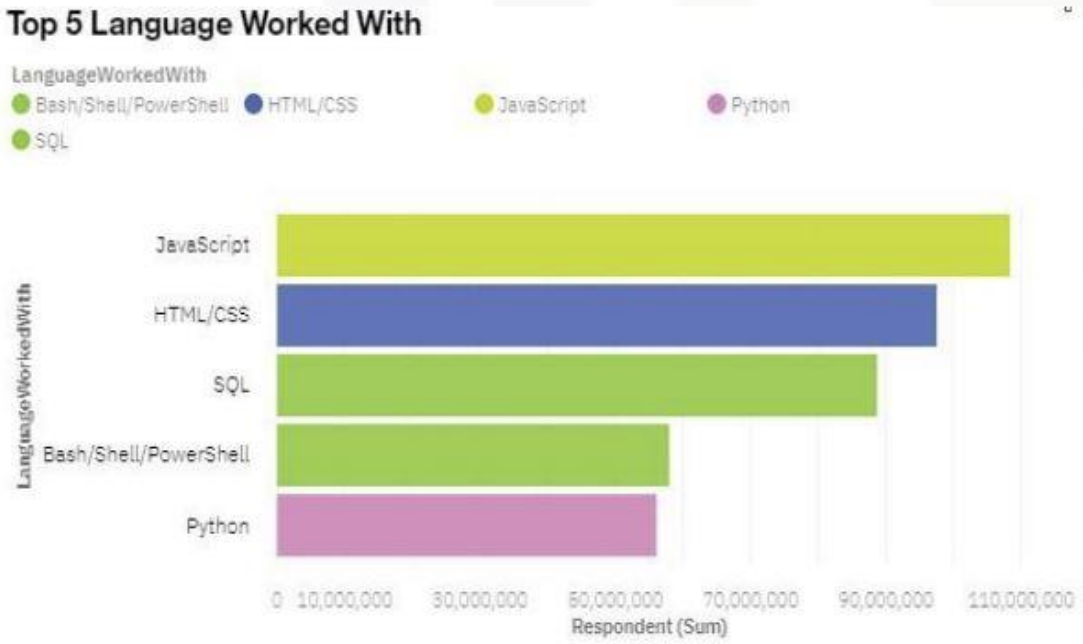
- The purpose and objective of this analysis is to reveal trends and statistics about the use of current technology and to predict future usage of that technology.
- Specifically, the report focuses analyzing the usage of programming languages and databases in addition to which demographic uses which technology.
- The report also sheds lights on possible future trends about the usage of databases and programming languages.
- The report is for those who work in data analysis or are interested in data analysis and willing to learn more about it
- By completing this report, the reader will gain insights about the data analysis process, the top programming languages and databases used.

METHODOLOGY

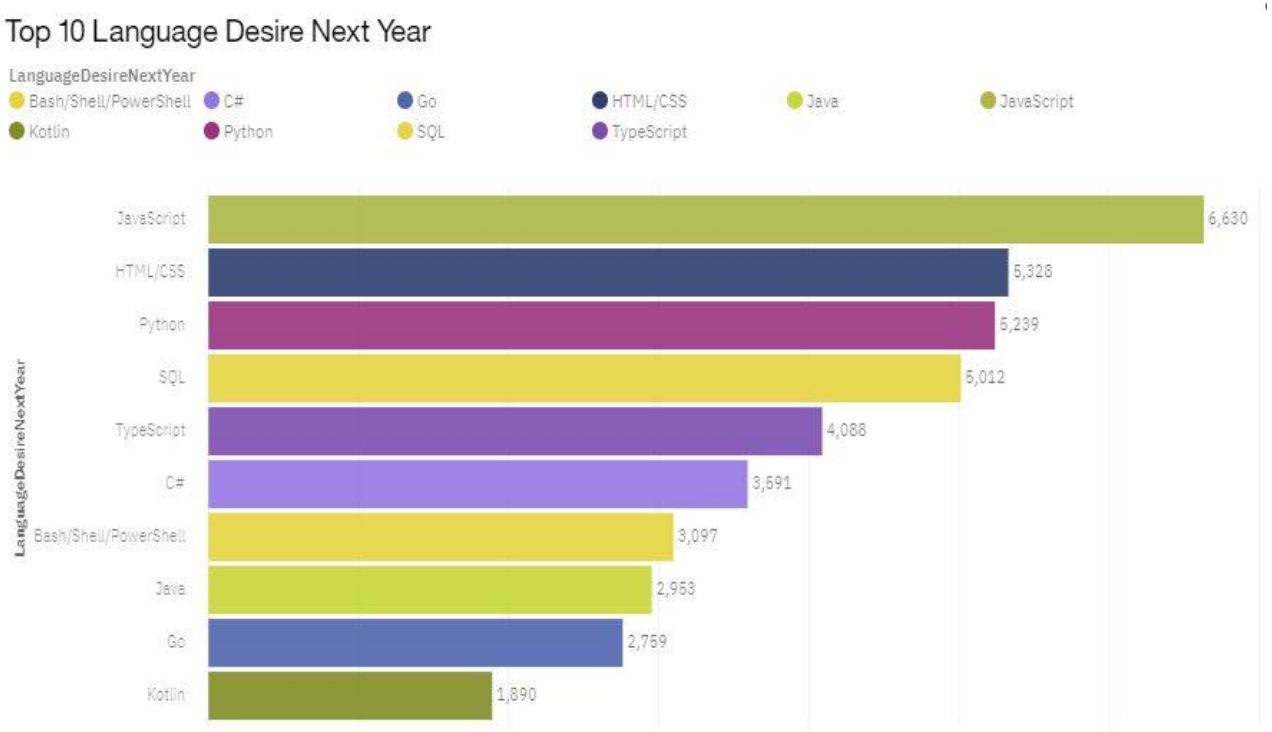
- Data sources: sources include Stack Overflow Developer Survey 2019, Git hub job postings and other CSV files used in hands-on labs.
- Data Collection: Using the mentioned sources, data were collected using APIs and manual collection from the internet and
- Data cleaning: data was cleaned using python, Cognos and excel
- Data Analysis: data was analyzed using python
- Data visualization: data was visualized using IBM Watson studio and IBM Cognos Dashboard.

PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

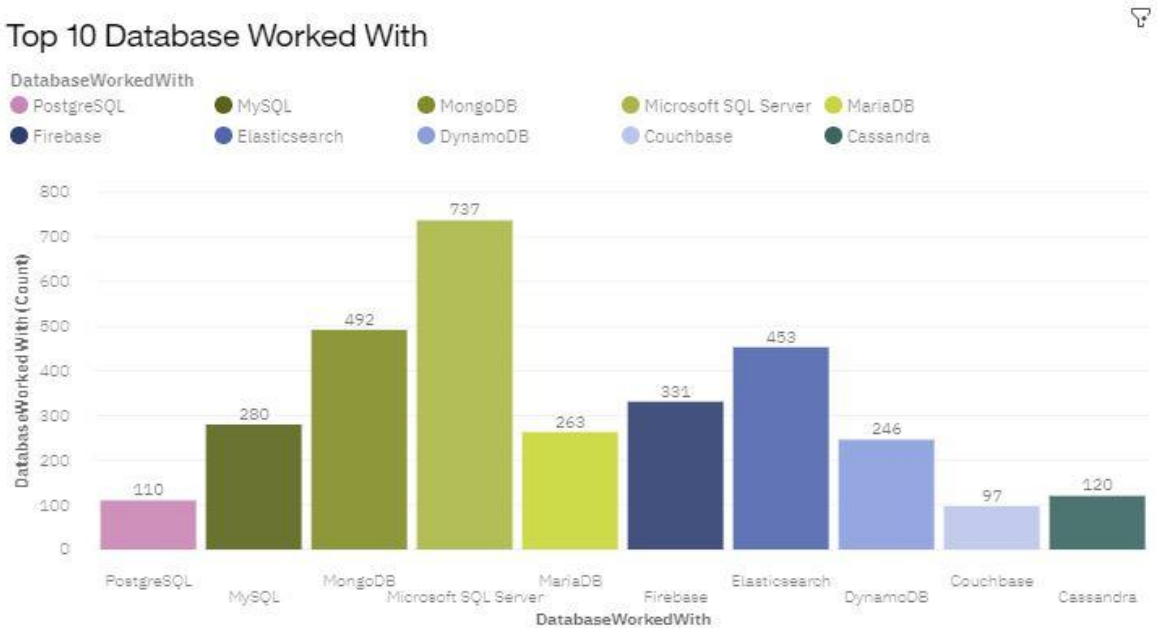
- Python and HTML are dominating the current trends and predicted to keep the same performance.
- Python is expected to rise up and replace HTML with HTML keeping its popularity
- Typescript is a rising star

Implications

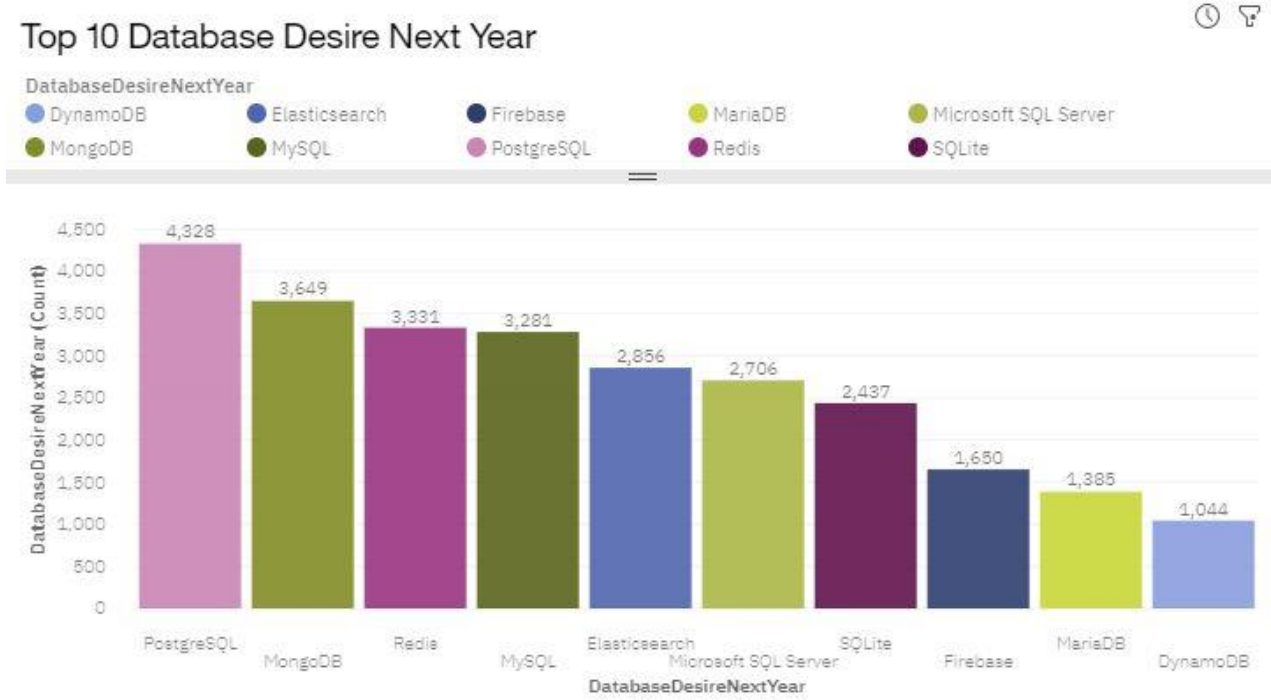
- The demand will stay around python, Javascript and HTML/CSS
- New learners may consider Typescript
- C is losing the battle and may be the language of specific set of developers

DATABASE TRENDS

Current Year



Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MSSQL and MongoDB are at the top currently with MongoDB predicted to keep on the same level in the future.
- PostGreSQL is predicted to dominate in the future with increasing interest in Elastic Search
- Maria DB will not be as popular as now.

Implications

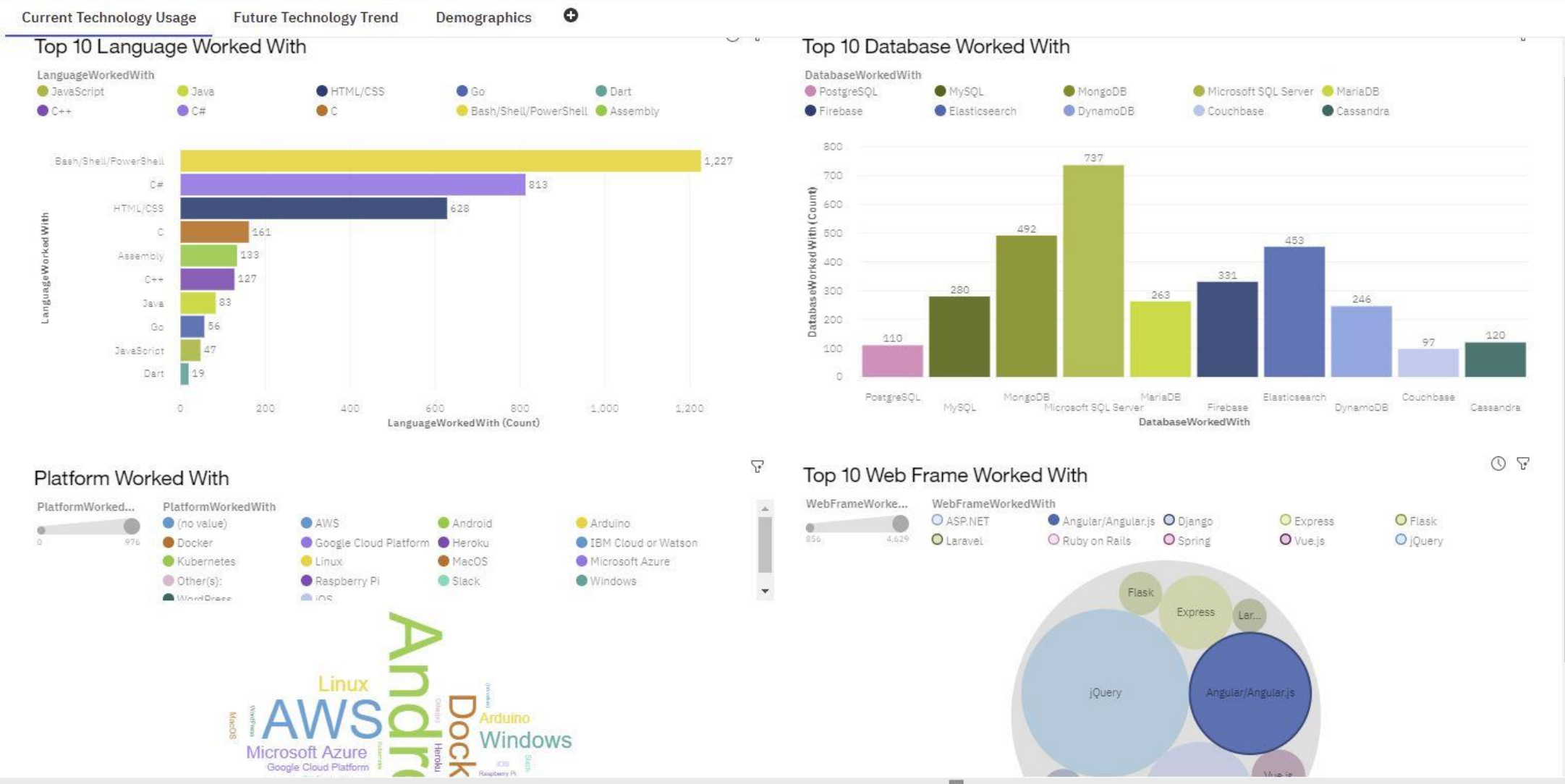
- NOSQL is gaining popularity more than SQL which means more interest towards non-relational Databases
- SQL will be less popular than now
- Implication 3

DASHBOARD

LINK:

https://eu-de.dataplatform.cloud.ibm.com/dashboards/ae2ade5b-0a3c-488b-a5b4-86ae393d1747/view/7265c67b379b1cf653f0eee4079d2e007864240fb4bbd70284827b490d687697f33c1b97c82f435fdd160d30fbef415fc1

DASHBOARD TAB 1



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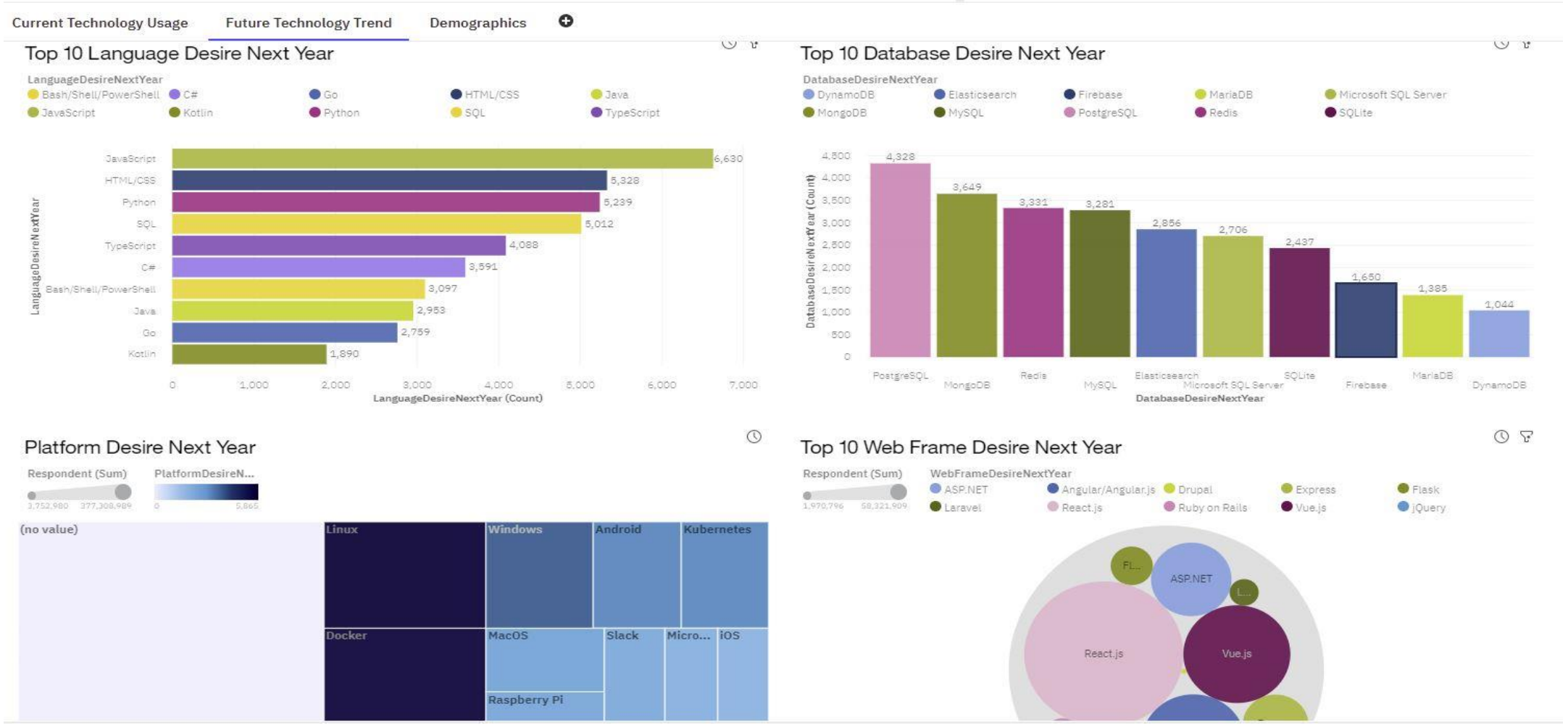

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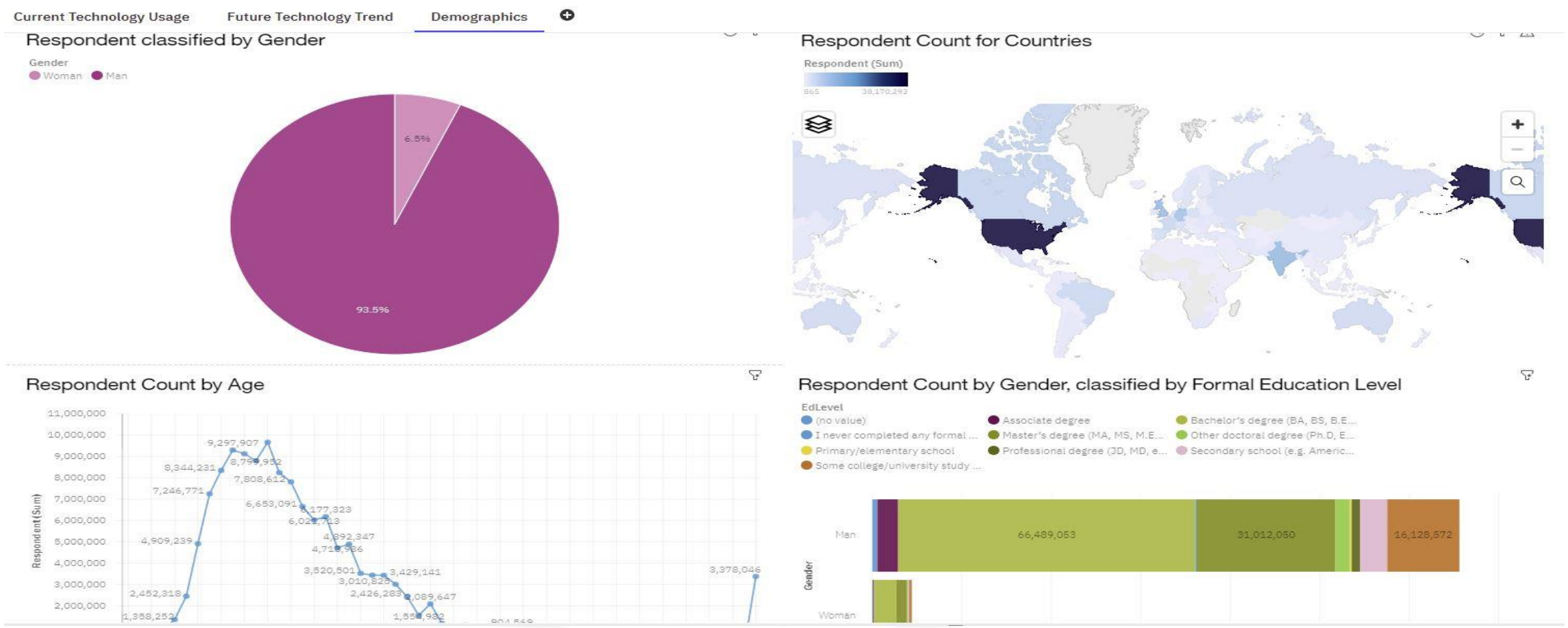


DISCUSSION

- From the findings above, the reader can focus their attention on the top programming languages for now and top ones in the future thus they will know where to focus their learning and development efforts
- Same goes for the databases, DB admins and developers will have formed an idea about where there efforts may go currently and in the future.

OVERALL FINDINGS & IMPLICATIONS

Findings

- HTML/CSS and Javascript are the currenty popular languages with python interests growing.
- SQL databases such Microsoft SQL server is the top used Database software and warehouse
- Most survey respondents are males with ages varying between 24-30

Implications

- The focus is heavy on developing web applications using HTML/CSS and Javascript. Python is also used more towards this purpose as a backend language
- NOSQL may replace SQL
- Still there is a gender gap in the technology field.

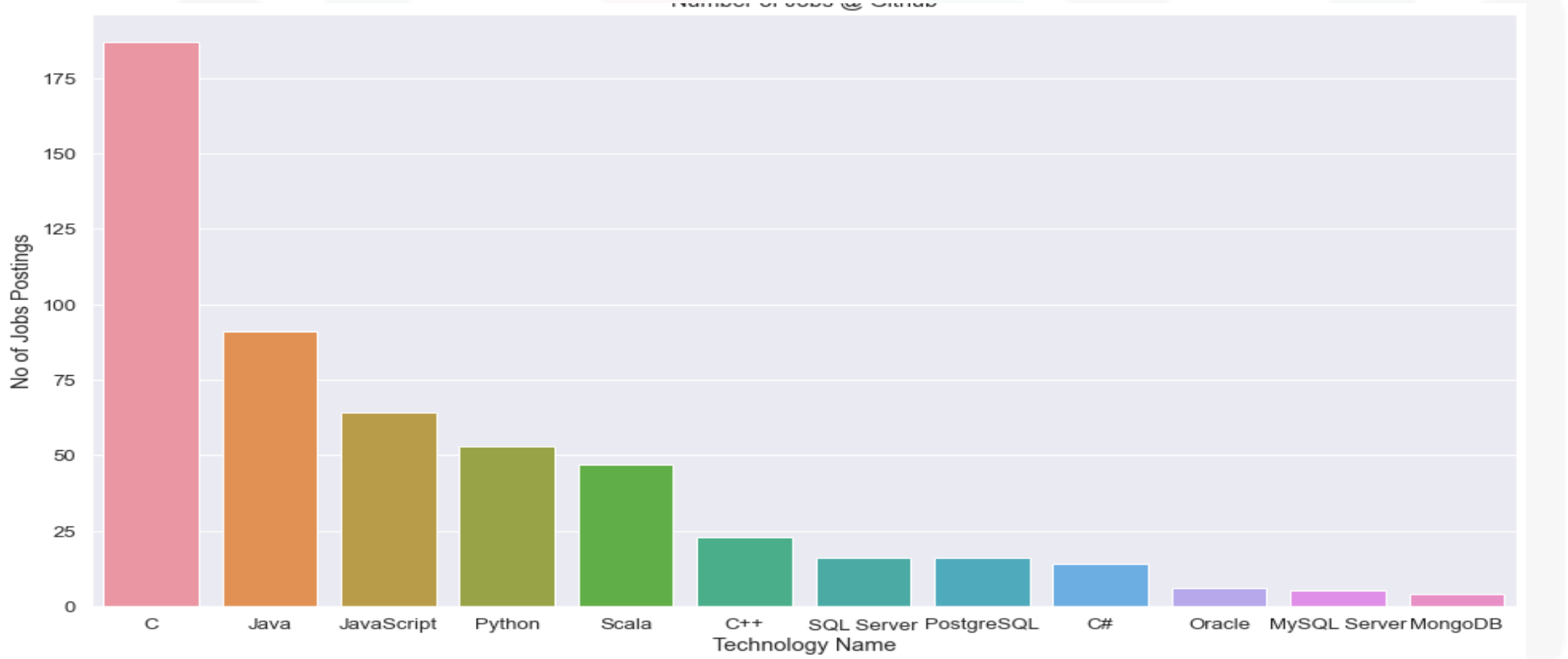
CONCLUSION

- Learners and current workforce may focus their efforts on learning and keeping up with the top programming languages and databases for now and in the future.
- The gender gap is still an issue in this sector.
- Technology change rapidly which means learners and current workforce need to show high adaptation

APPENDIX

- Data analysis using python APIs
- Visualization with IBM Cognos and Watson Studio

GITHUB JOB POSTINGS



POPULAR LANGUAGES