Capstone Project

Stack Overflow Dev Survey

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IBM Developer

SKILLS NETWORK

OUTLINE

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

EXECUTIVE SUMMARY

- Goal for gathering and analyzing current data.
- Methodology
  - Gathering Data
  - Analyzing Data
  - Presenting Data
- Resulting presentation supported with graphs and visuals
- Conclude with discussing findings based off the research of the data collected.

INTRODUCTION

- Stack Overflow is the world the world's largest community of professional software developers.
- Not all findings represent all developers equally.
- Findings based off responses from over 90,000 developers
- Overview of developers
  - Current trends vs Future desired trends
  - Developer demographics

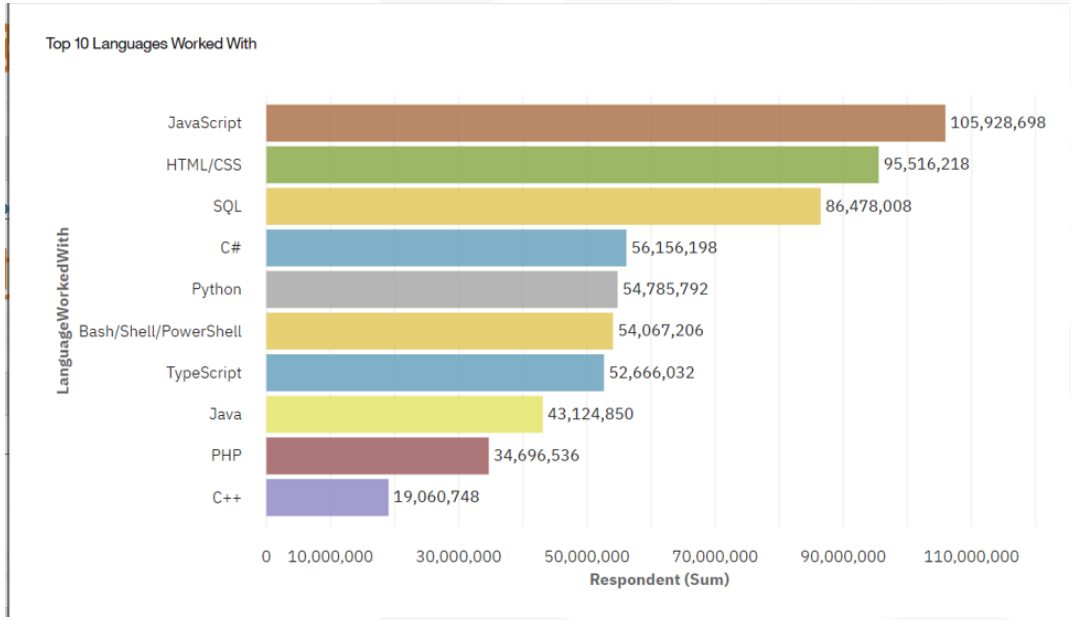
METHODOLOGY

- Collect data based off May '23 survey
- Exploring Data
  - Analyze data
  - Exclude outliers
- Data Visualization
  - Present the relation, composition and comparison of the data acquired.

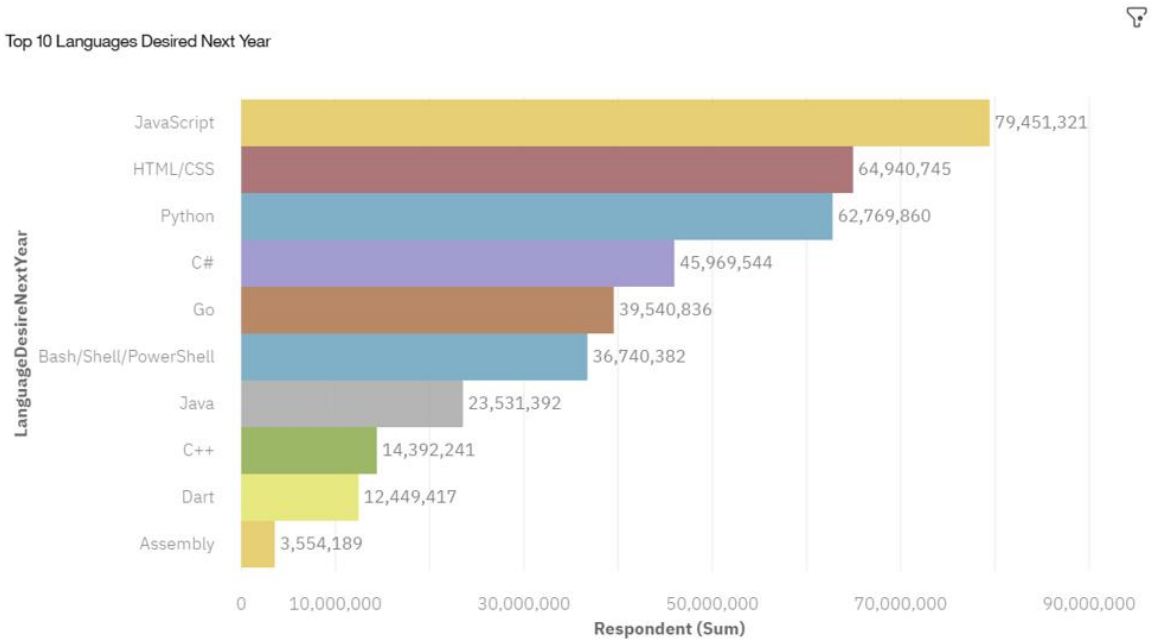
RESULTS

PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

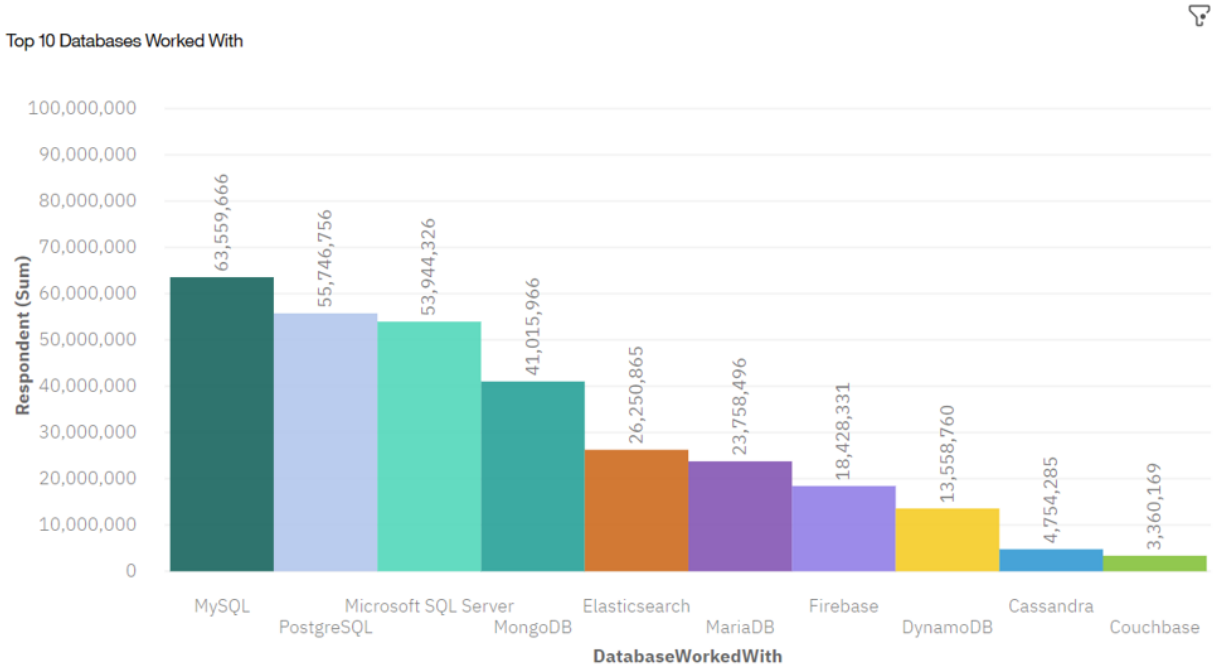
- JavaScript and HTML remain to be the top 2 most popular languages.
- Python will surge in popularity vs SQL and C#.

Implications

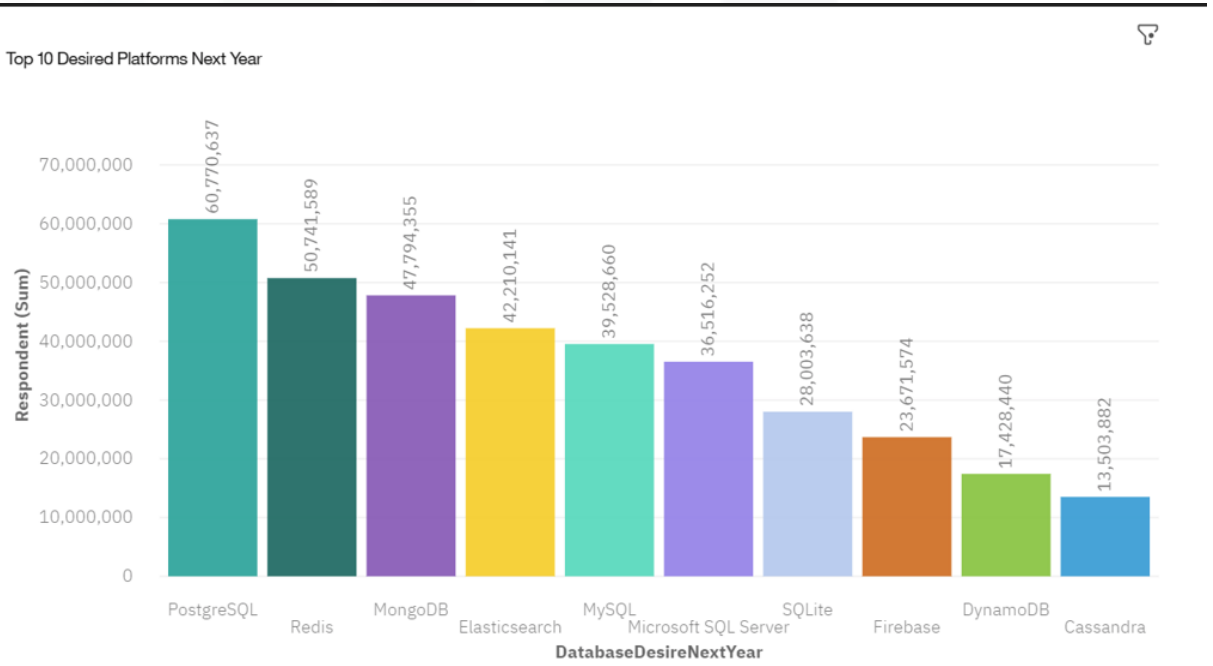
- Employment in JavaScript and HTML will continue to have a large demand.
- More opportunities for those that have Python knowledge.

DATABASE TRENDS

Current Year



Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- PostgreSQL will take over as the most common database.
- MySql losing popularity
- Finding 3

Implications

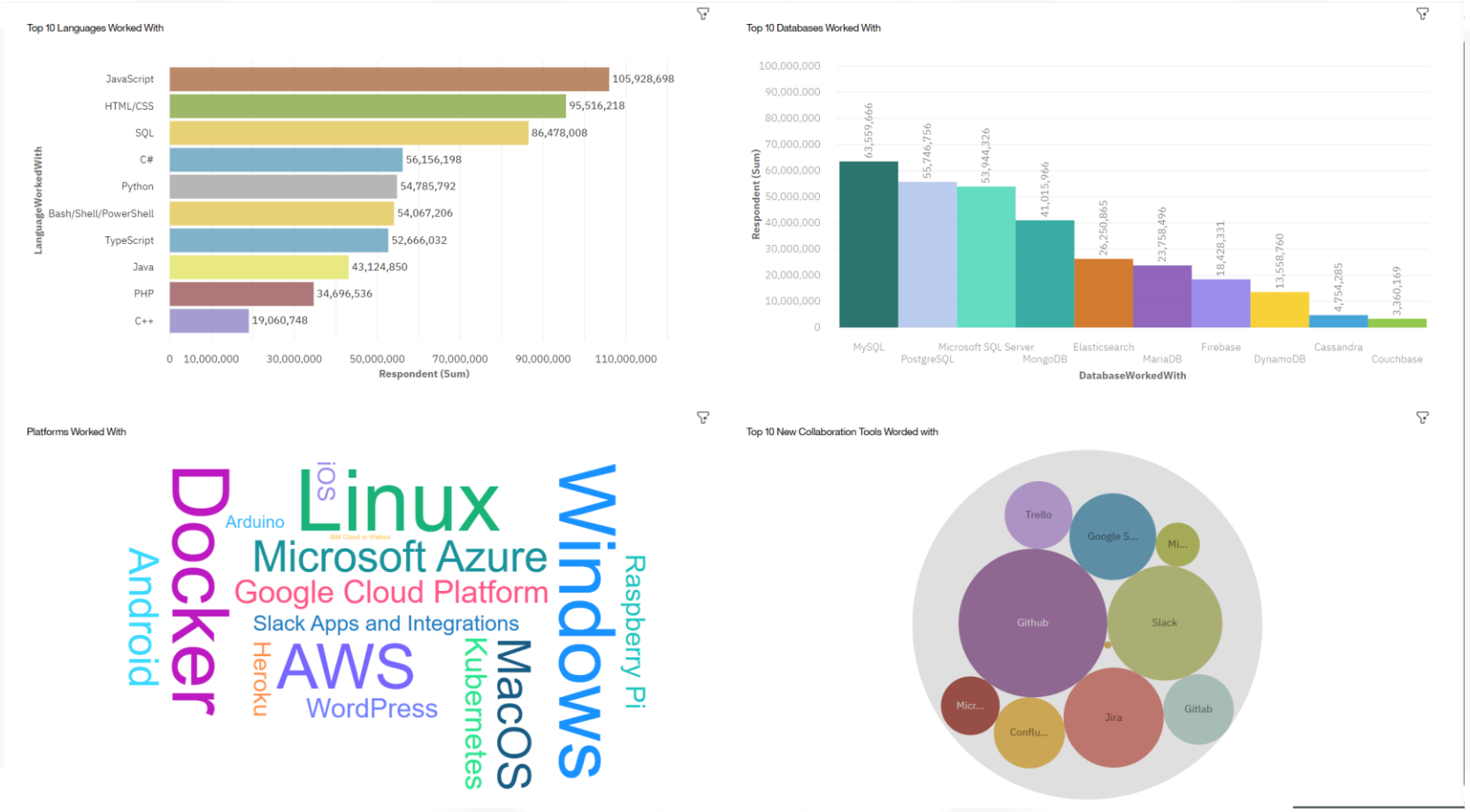
- Nonrelational databases like PostgreSQL have seen a surge in popularity.
- Dev's proficient in MySQL may seek educational material to further expand their knowledge.

DASHBOARD

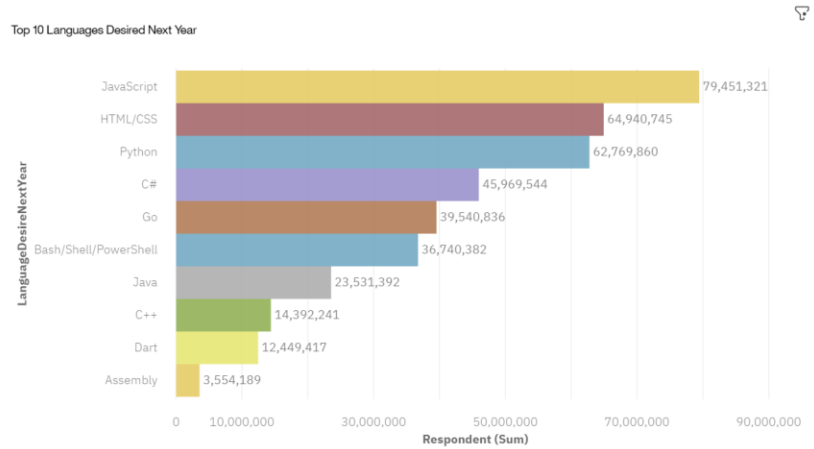
https://github.com/apostle14420/Capstone-Project/blob/dd006d736f647417497f2c34fc9ef4b3b958dc01/Final%20Assignment%20P1

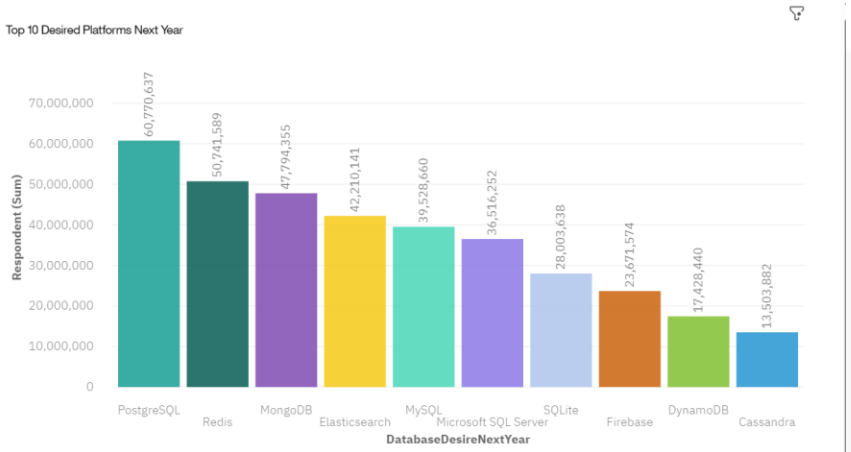
https://dataplatform.cloud.ibm.com/dashboards/f4b94dc0-d03b-453e-b087-afb7234f55fb/view/403ddc3500b828e149f0e2e40791250179612259bbbb8004d4857b490d612097f0381093c82b495b8b18076ba0e8410bc1

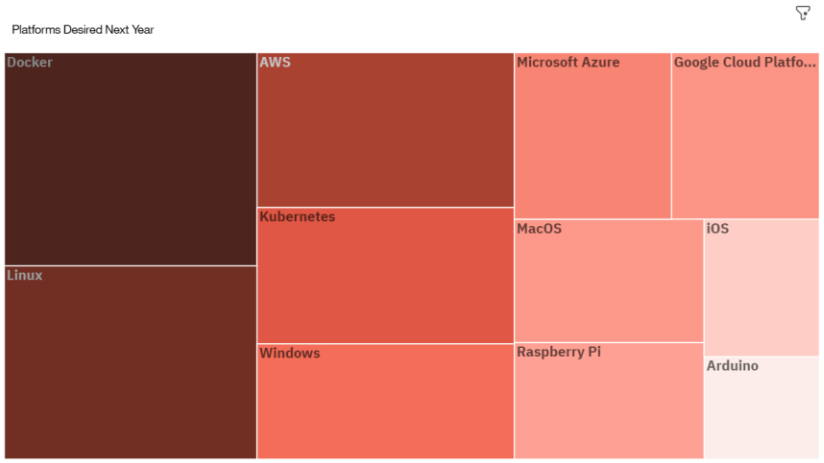
DASHBOARD TAB 1

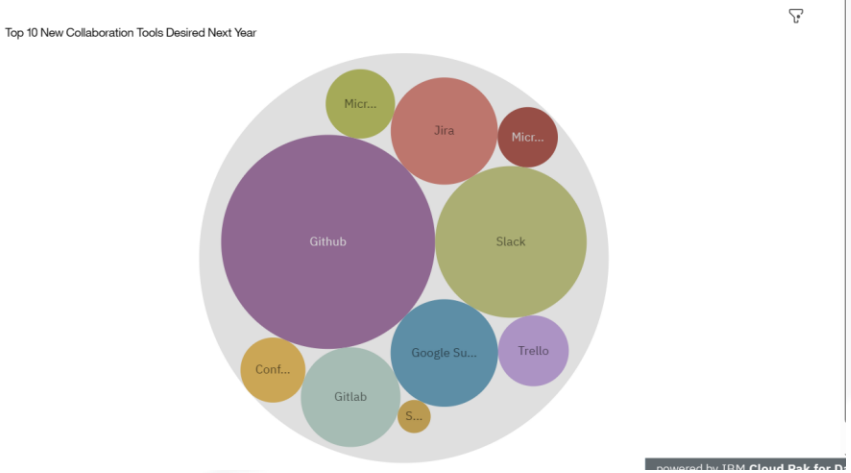


DASHBOARD TAB 2







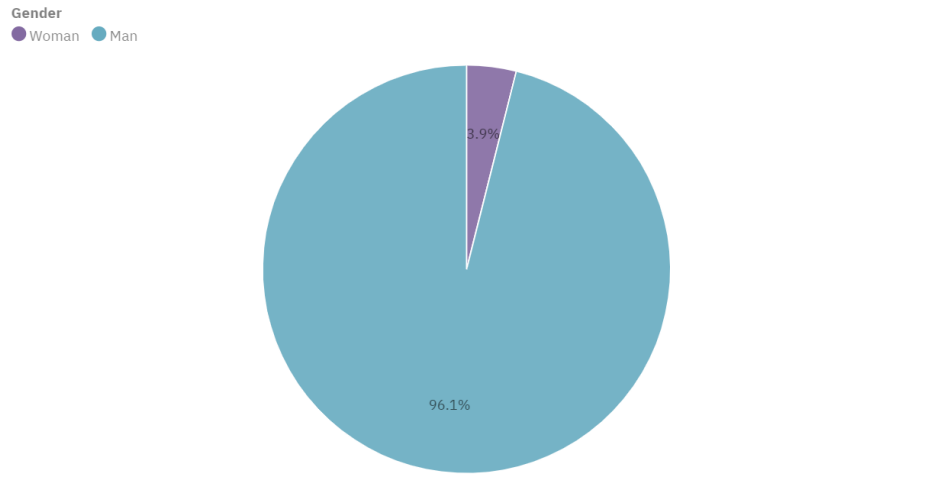


IBM Developer

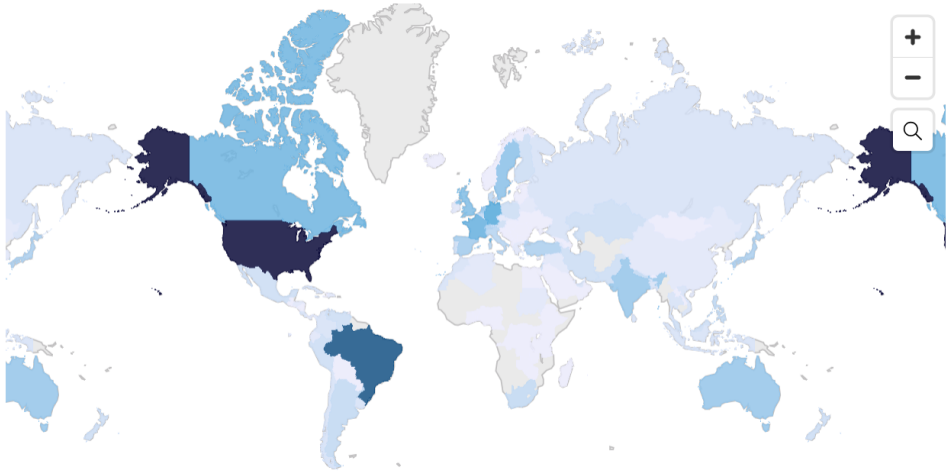
SKILLS NETWORK

DASHBOARD TAB 3

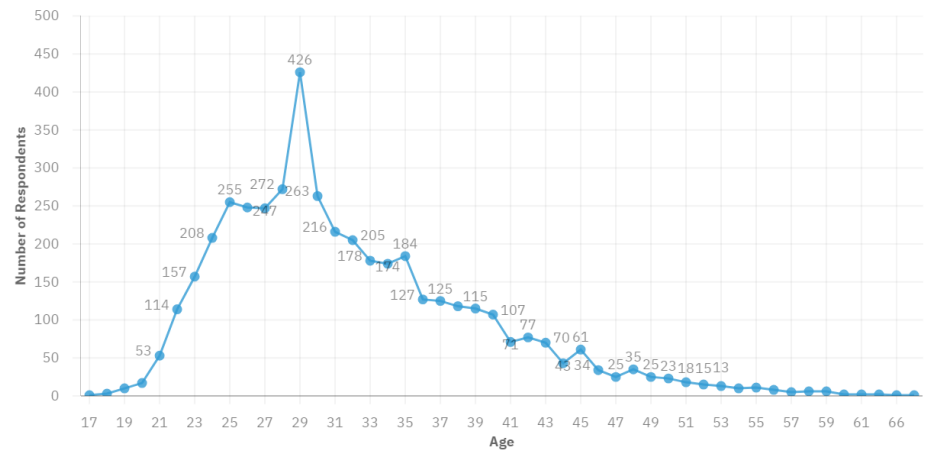
Respondent Gender Percentage



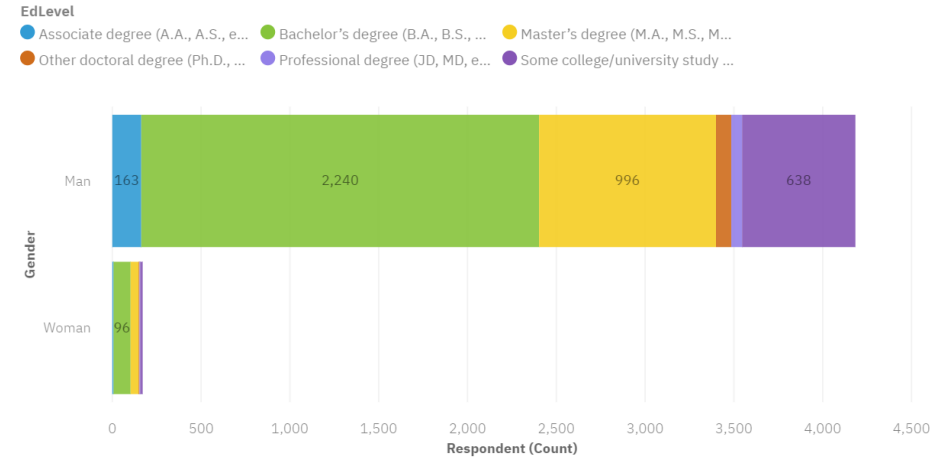
Respondant County by Country



Respondent Count by Age



Respondent by Gender, Filtered by Education



DISCUSSION

OVERALL FINDINGS & IMPLICATIONS

Findings

- AWS seems to be gaining popularity vs Windows.
- JavaScript remains to be the top language.
- Over 95% of developers are younger males.

Implications

- More people seem to be getting into data due to the wide variety of jobs they provide.
- Large data companies continue to seek expansion to surpass competitors.
- Easier to learn languages tend to gain the most traction.

CONCLUSION

- The data industry seems to be having an uptick in employment interest.
- JavaScript is the language currently highest in demand as well as the for seeable future.
- Although MySql is the currently the most in demand skill, it seems PostgreSQL may take the lead in the upcoming future.
- Windows seems to be losing traction compares to AWS however Linux and Docker seem to remain at the lead.

APPENDIX

- Stack Overflow Insights - Developer Hiring, Marketing, and User Research - https://insights.stackoverflow.com/survey

JOB POSTINGS

Collect the number of job postings for the following languages using the API:

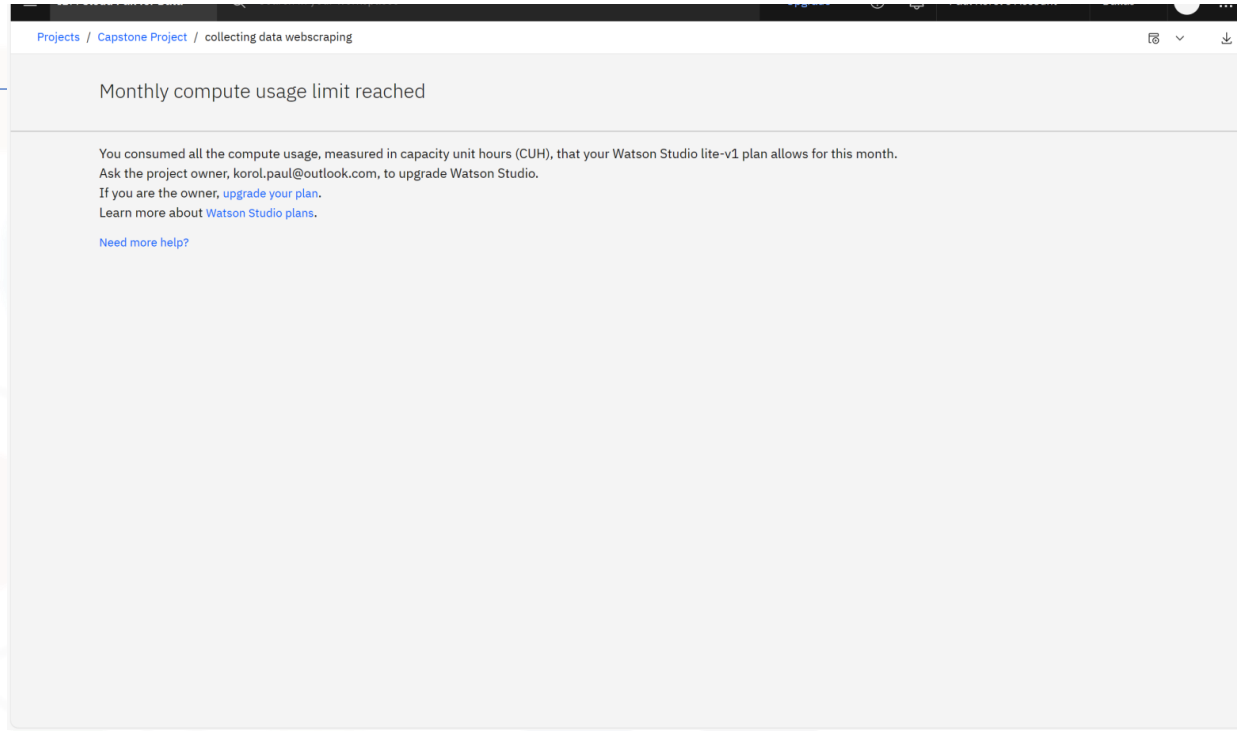
- C
- C#
- C++
- Java
- JavaScript
- Python
- Scala
- Oracle
- SQL Server
- MySQL Server
- PostgreSQL
- MongoDB

```
# your code goes here
language=['C', 'C#', 'C++', 'Java', 'JavaScript', 'Python', 'Scala', 'Oracle', 'SQL Server', 'MySQL Server', 'PostgreSQL', 'MongoDB']
language

ws.append(['Technology', 'Number of Jobs'])

for i in range(len(languages)):
    ws.append(get_number_of_jobs_T(language[i]))

wb.save('job-language.xlsx')
```



IMB computing limit reached, would not allow me to build bar chart for job posting

POPULAR LANGUAGES

Could not build chart due to IBM usage limit being reached.