



Stack Overflow Developer Survey: 2019

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06/02/2022

OUTLINE



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- Introduction
- Methodology
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 - visualization – Charts
 - Dashboard
- Discussion
 - Findings & Implications
- Conclusion
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EXECUTIVE SUMMARY



- Current technology used for programming
 - Top 10 Languages worked with.
 - Top 10 Databases worked with.
 - Top 10 Platforms and web frames worked with.
- Future technology trends in programming
 - Top 10 Languages desired next year.
 - Top 10 Databases desired next year.
 - Top 10 Platforms and web Frames desired next year.
- Demographics
 - Respondents classified by gender.
 - Respondents count for age as well as countries.
 - Respondents count by gender classified by formal education level.

INTRODUCTION



- The top 10 programming languages in demand.
- The top 10 database, platform, and web frames in demand ↑
- Popular IDE's →
- Web scraping and API requests for collection of data.
- Numerical data correlation

METHODOLOGY



- Data collection through API requests
 - API requests
 - JSON data pulls over HTTP
- Data analysis using .csv files and Jupyter Notebooks.
- Building graphs and visualizations in IBM Cognos Watson Studio
- Data collection through web scraping.

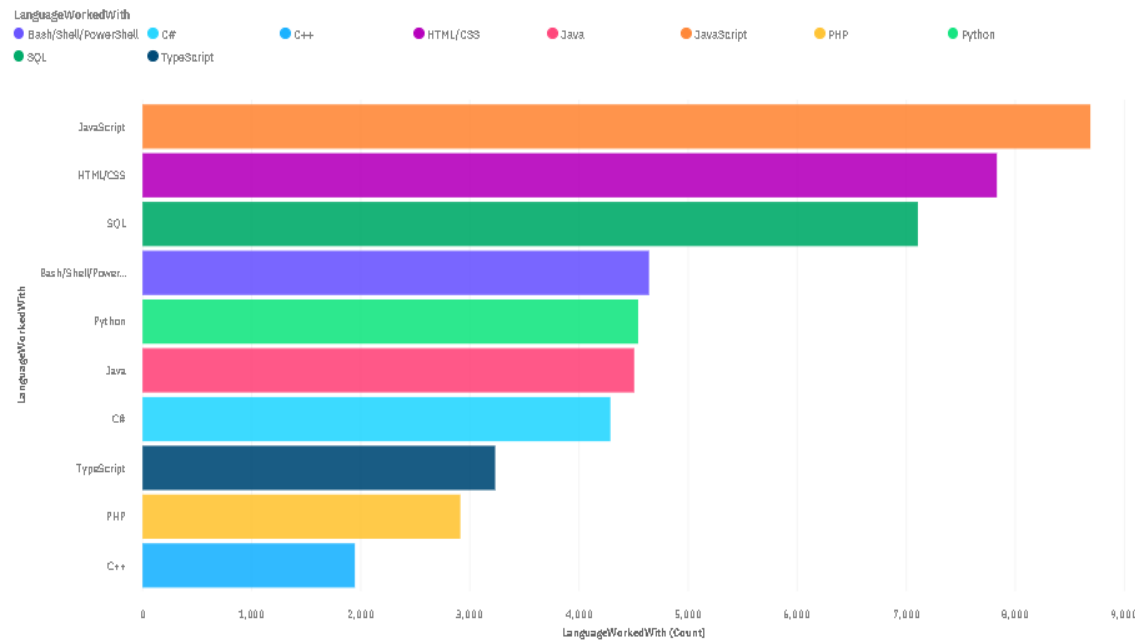
RESULTS



PROGRAMMING LANGUAGE TRENDS

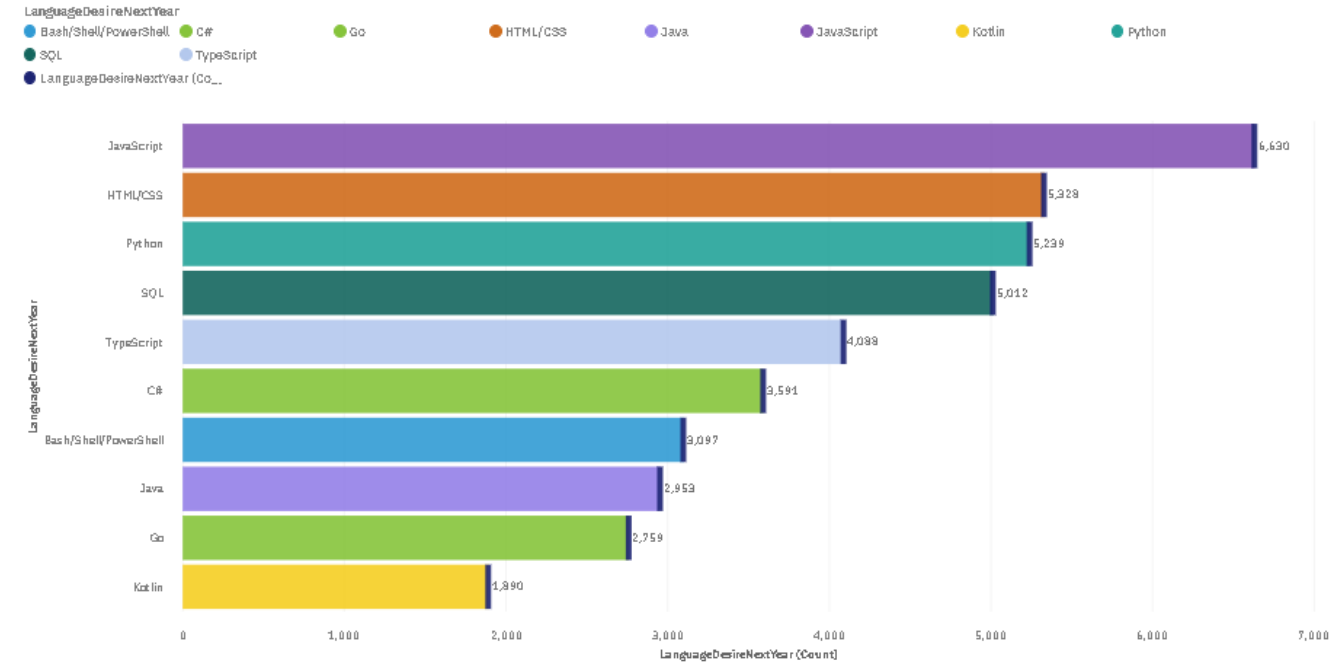
Current Year

Top 10 Languages Worked With



Next Year

Top 10 Language Desire Next Year



PROGRAMMING LANGUAGE TRENDS – FINDINGS & IMPLICATIONS

Findings

- JavaScript is the most popular language currently as well as in the future.
- HTML/CSS are the second most popular languages.
- SQL and Python are seeing a positive trend in popularity and demand.

Implications

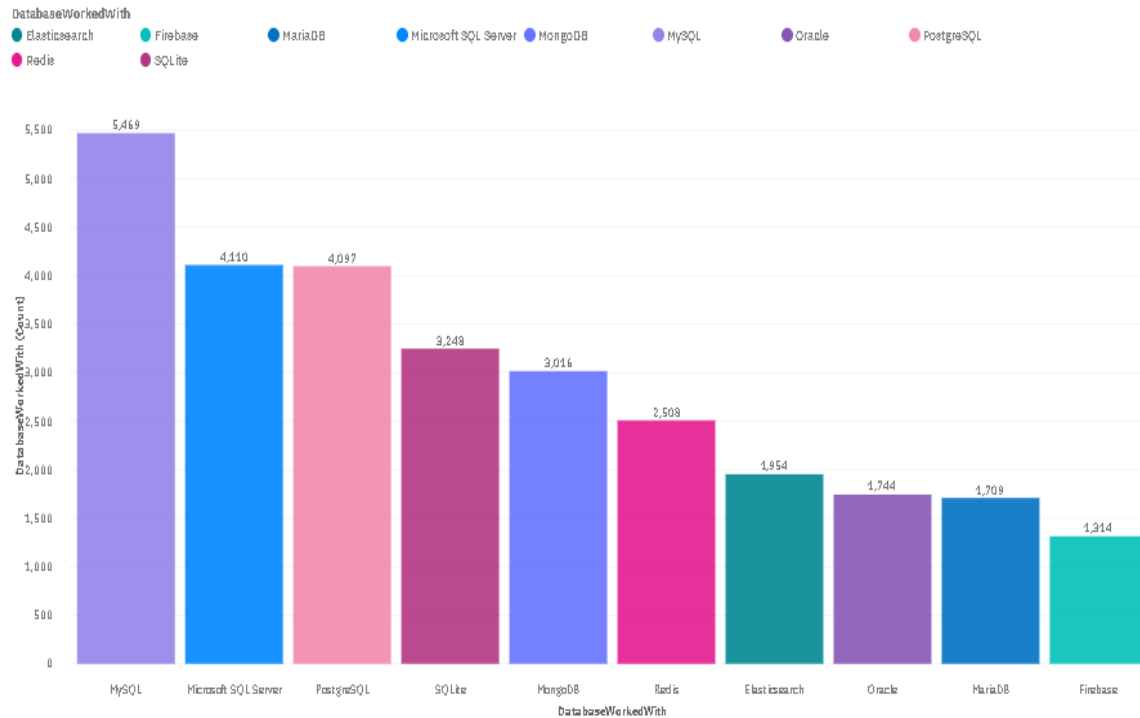
- JavaScript and HTML/CSS are in demand currently and will be in the future.
- Python's is becoming one of the most in-demand programming languages.
- Languages such as C#, C++, and Java are becoming less and less in-demand.

DATABASE TRENDS

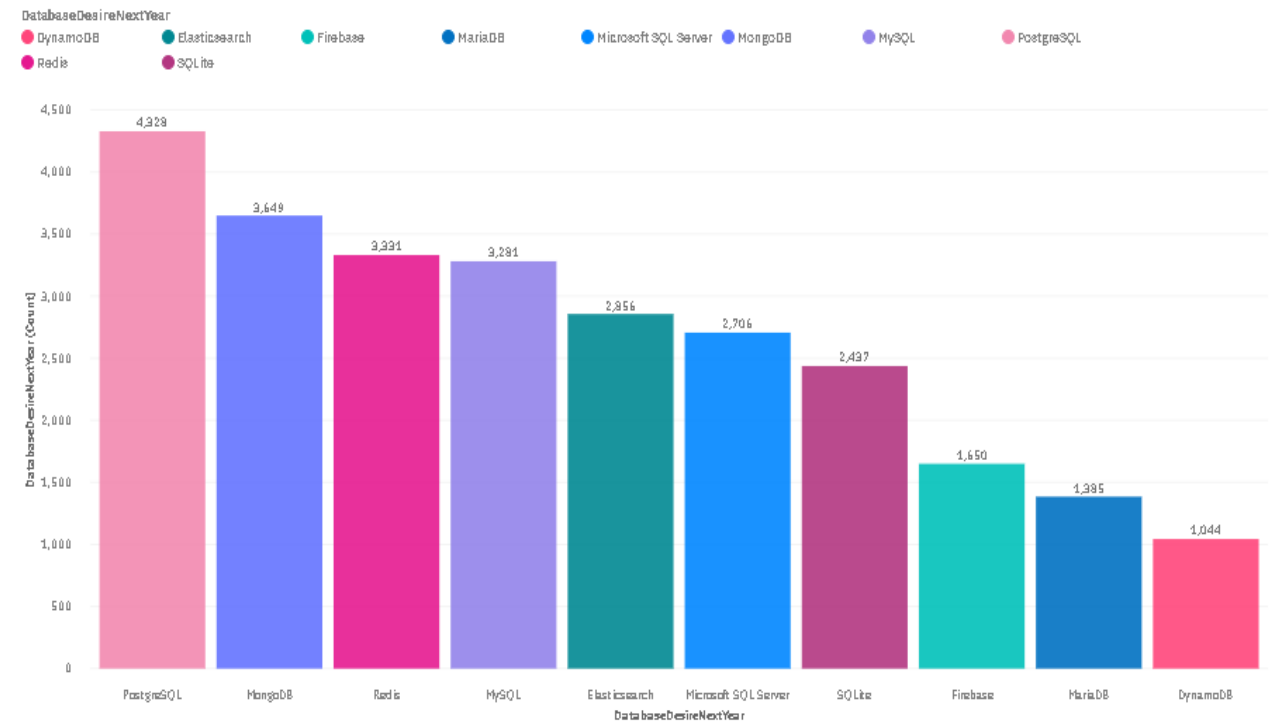
Current Year

Next Year

Top 10 Databases Worked With



Top 10 Database Desire Next Year



DATABASE TRENDS – FINDINGS & IMPLICATIONS

Findings

- Non-RDBMS like PostgreSQL and MongoDB are trending upwards in demand for the future.
- Standard RDBMS are losing popularity, however, they are the most in-demand currently.
- PostgreSQL looks like it will be the most desired non-relational database in the future

Implications

- Non-relational databases could be utilized more than the current DBMS
- Big data is becoming more and more important and more desired in the upcoming year according to the survey

DASHBOARD



<https://dataplatfrom.cloud.ibm.com/dashboards/1b686e1f-6469-4d50-a578-db89043f1e6a/view/7563d01b67f102910de3ee4079025507b35260ee3bb815189837b495a627297f3684193c87a4b52d2455362a6e8105c9a>

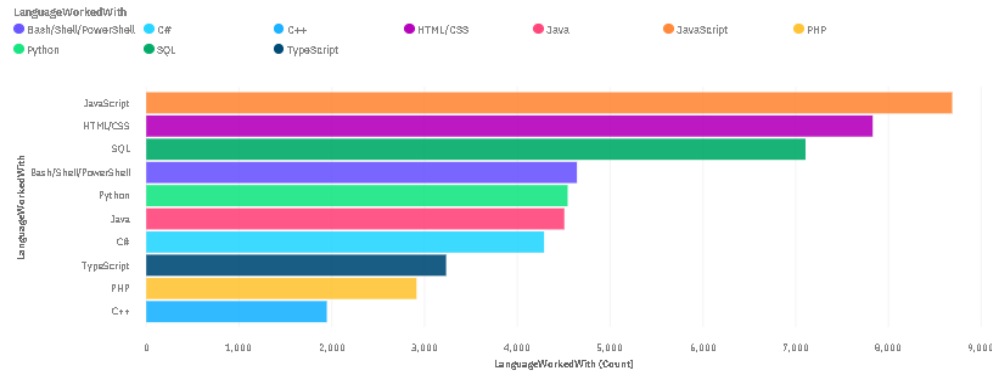
DASHBOARD TAB 1

Current Technology Usage

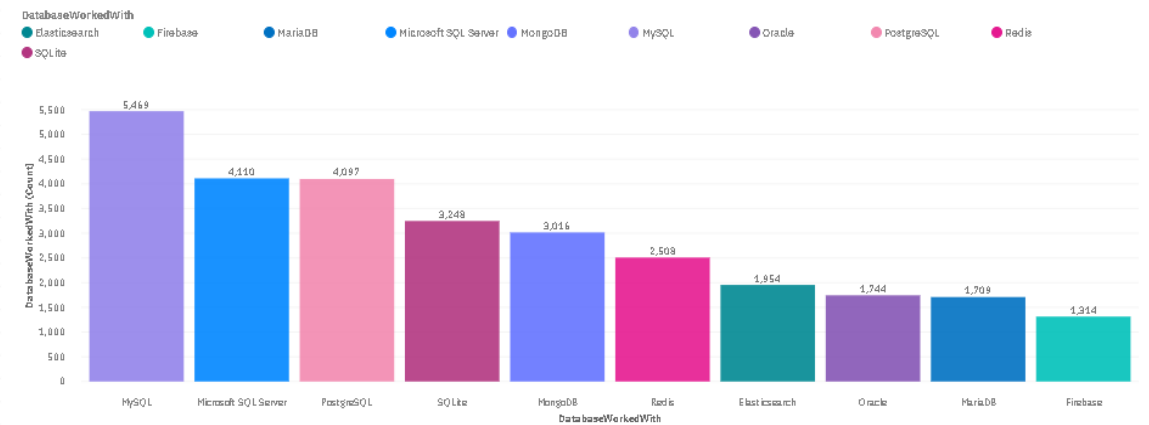
Future Technology Trend

Demographics +

Top 10 Languages Worked With



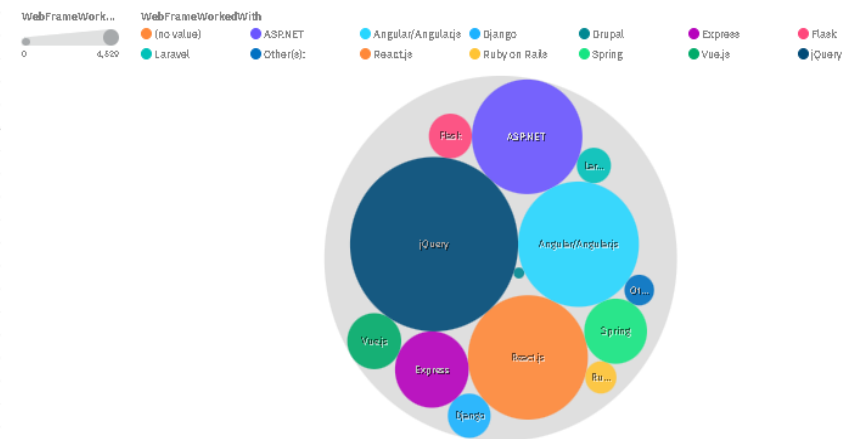
Top 10 Databases Worked With



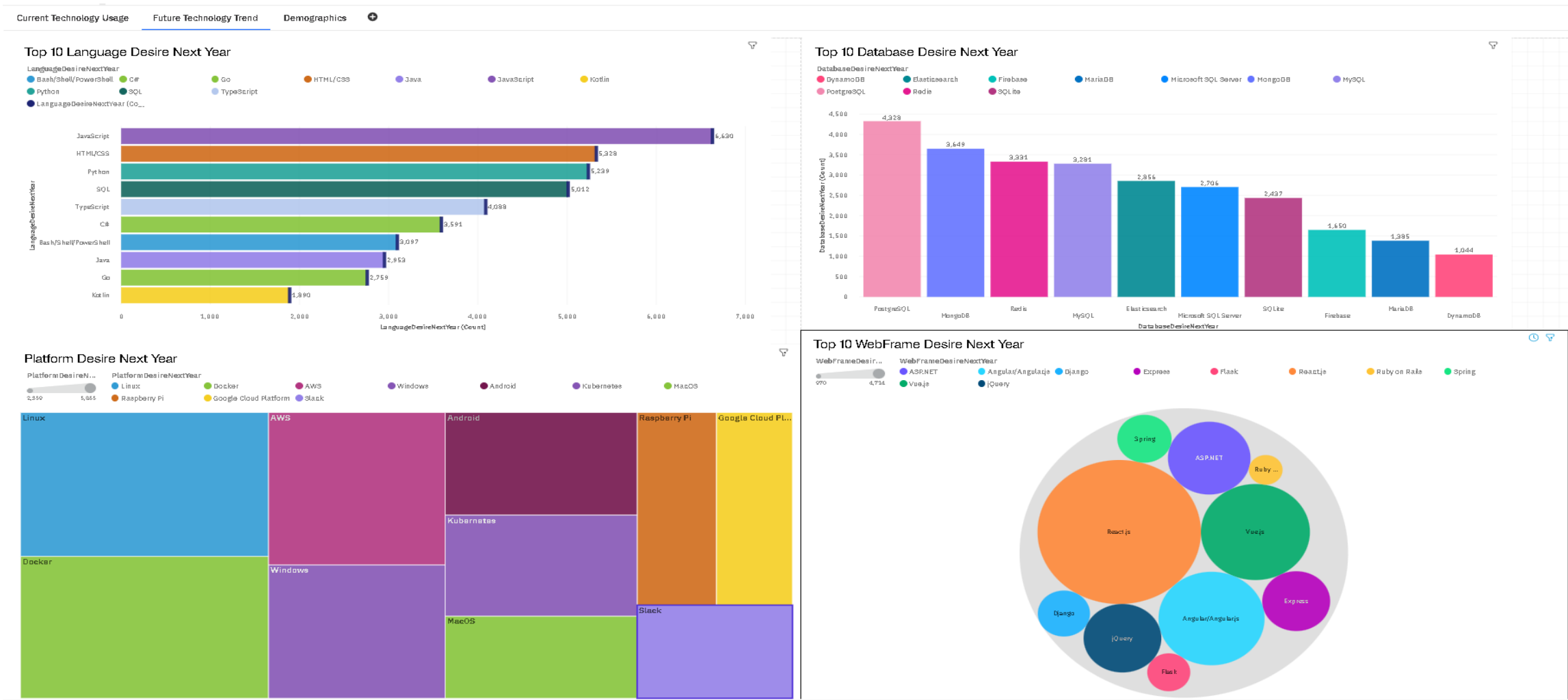
Top Platforms Worked With



Top WebFrames Worked With



DASHBOARD TAB 2

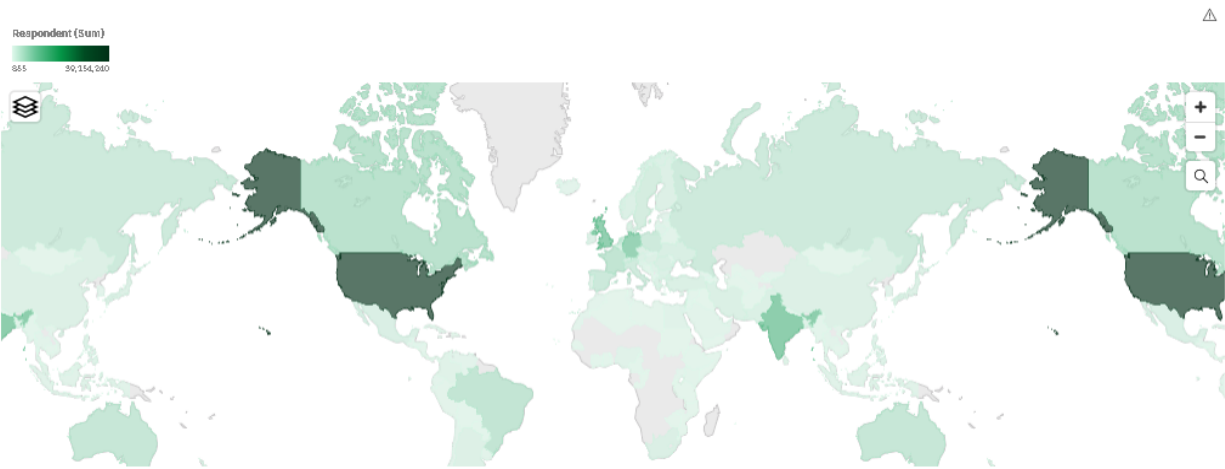
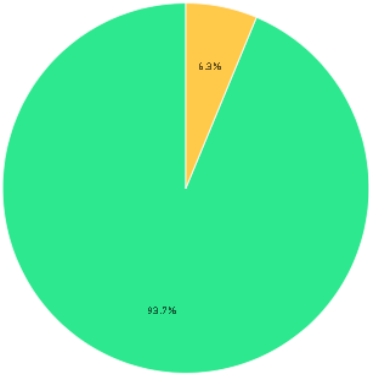


DASHBOARD TAB 3

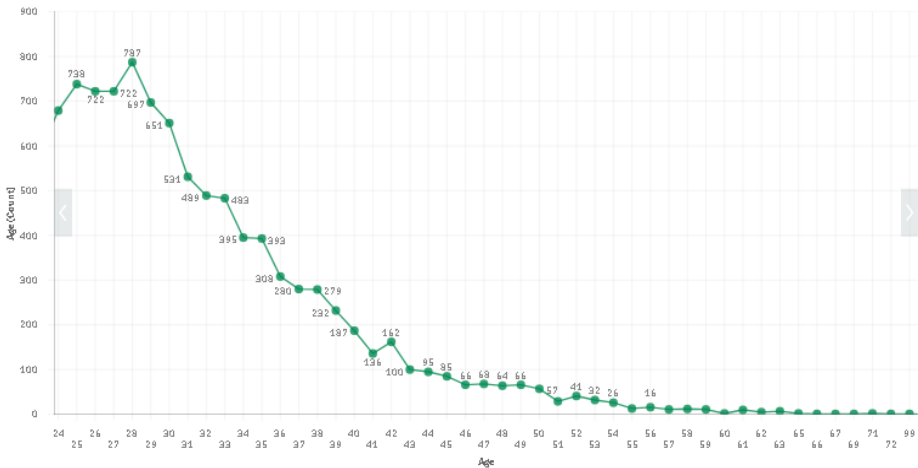
Current Technology Usage Future Technology Trend **Demographics** +

Respondent by Gender

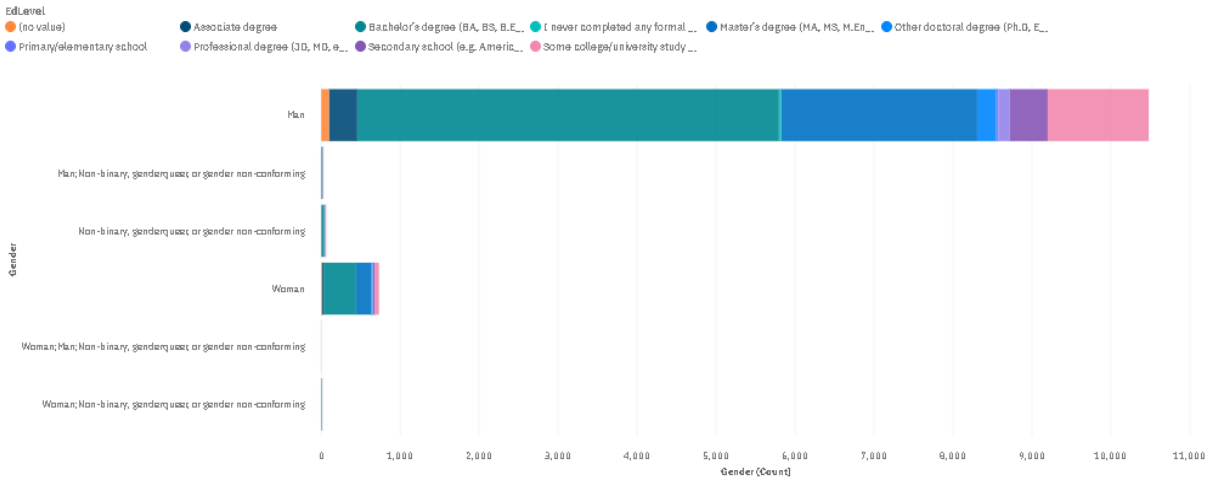
Gender
Woman Man



Respondents by Age



Respondent count by gender, classified by formal education level



DISCUSSION



OVERALL FINDINGS & IMPLICATIONS

Findings

- JavaScript and HTML/CSS are the most popular languages currently as well as the future.
- MySQL, Microsoft SQL Server and PostgreSQL are the most popular databases currently, however, PostgreSQL and MongoDB are expected to be the most in-demand in the future.
- The top webFrame currently is jQuery, however, React.js is expected to be the most in-demand in the future.
- Python and SQL are trending upwards in popularity
- Most of the respondents for this survey were males aged 22 – 40.

Implications

- JavaScript and HTML/CSS will continue to be the most dominant programming languages.
- Python and SQL are gaining steam while other languages like C# and C++ are losing steam
- Webframe and database demand is experiencing change and some pair better with some languages than others.

CONCLUSION



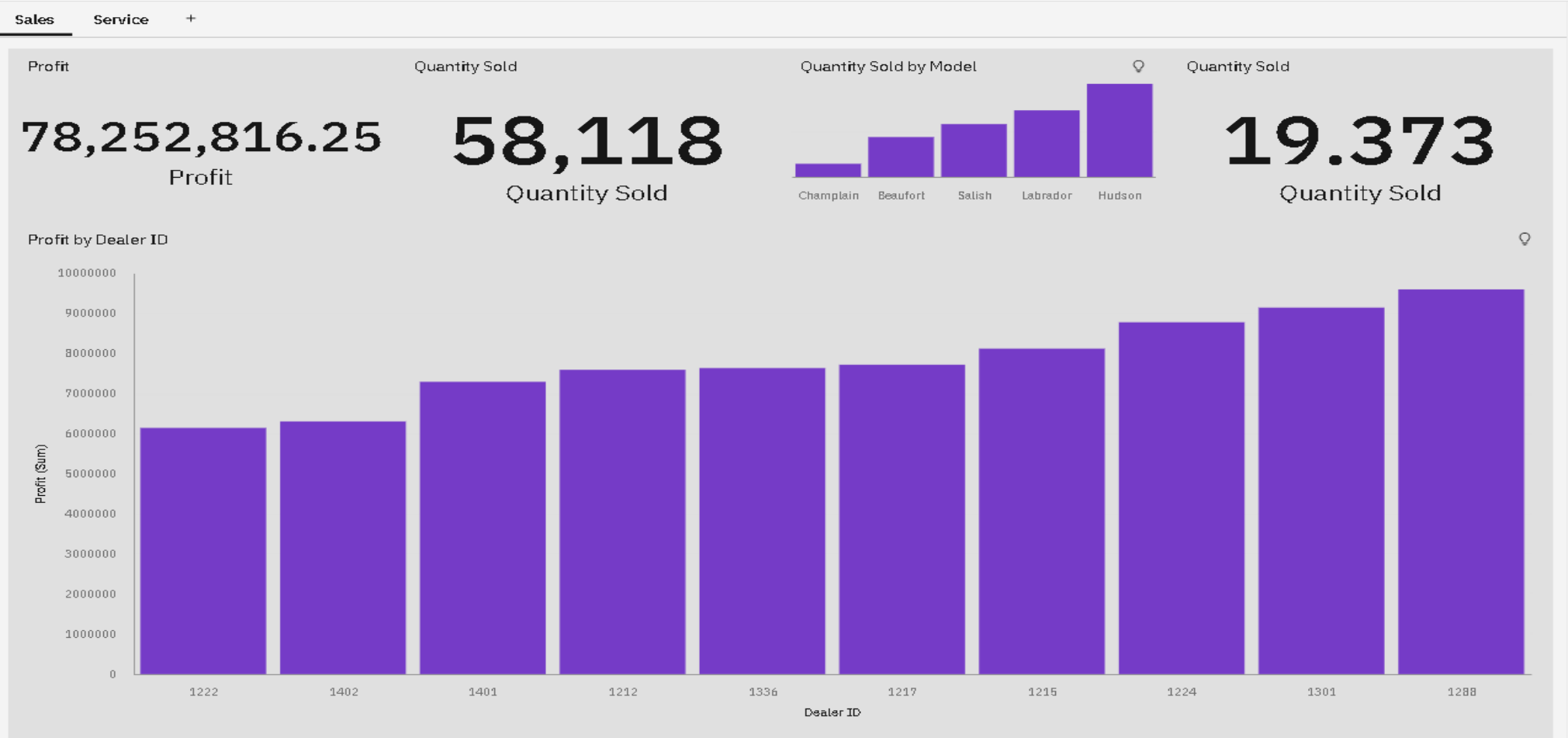
- If one wants to be a programmer it is best to be familiar with multiple languages like JavaScript, HTML/CSS, Python, and SQL, as well as multiple databases and WebFrames.
- A working knowledge of RDBMS as well as non-RDBMS is preferred.
- The more well-rounded one is the better.
- If you want to succeed then learn to love learning because technology is always changing.

APPENDIX

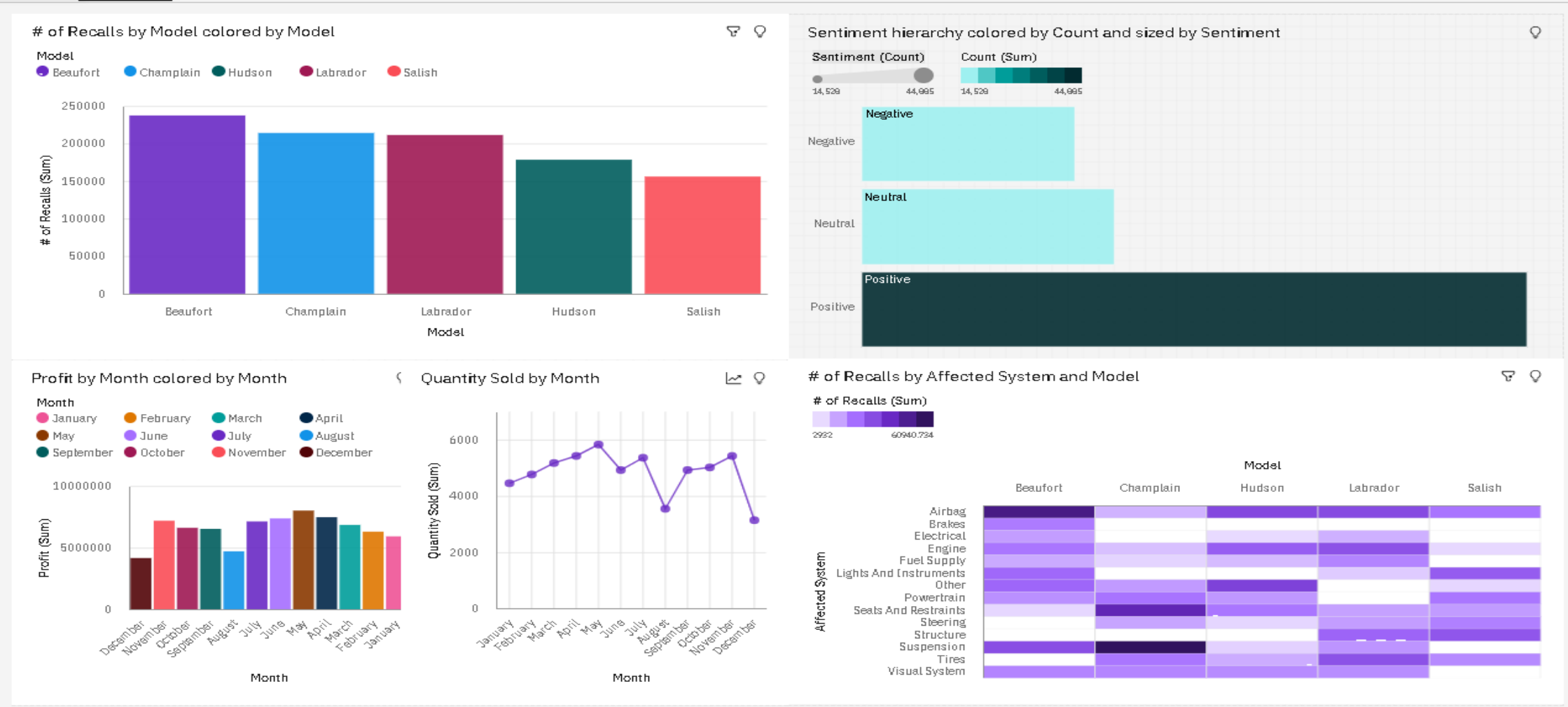


- Include any relevant additional charts, or tables that you may have created during the analysis phase.

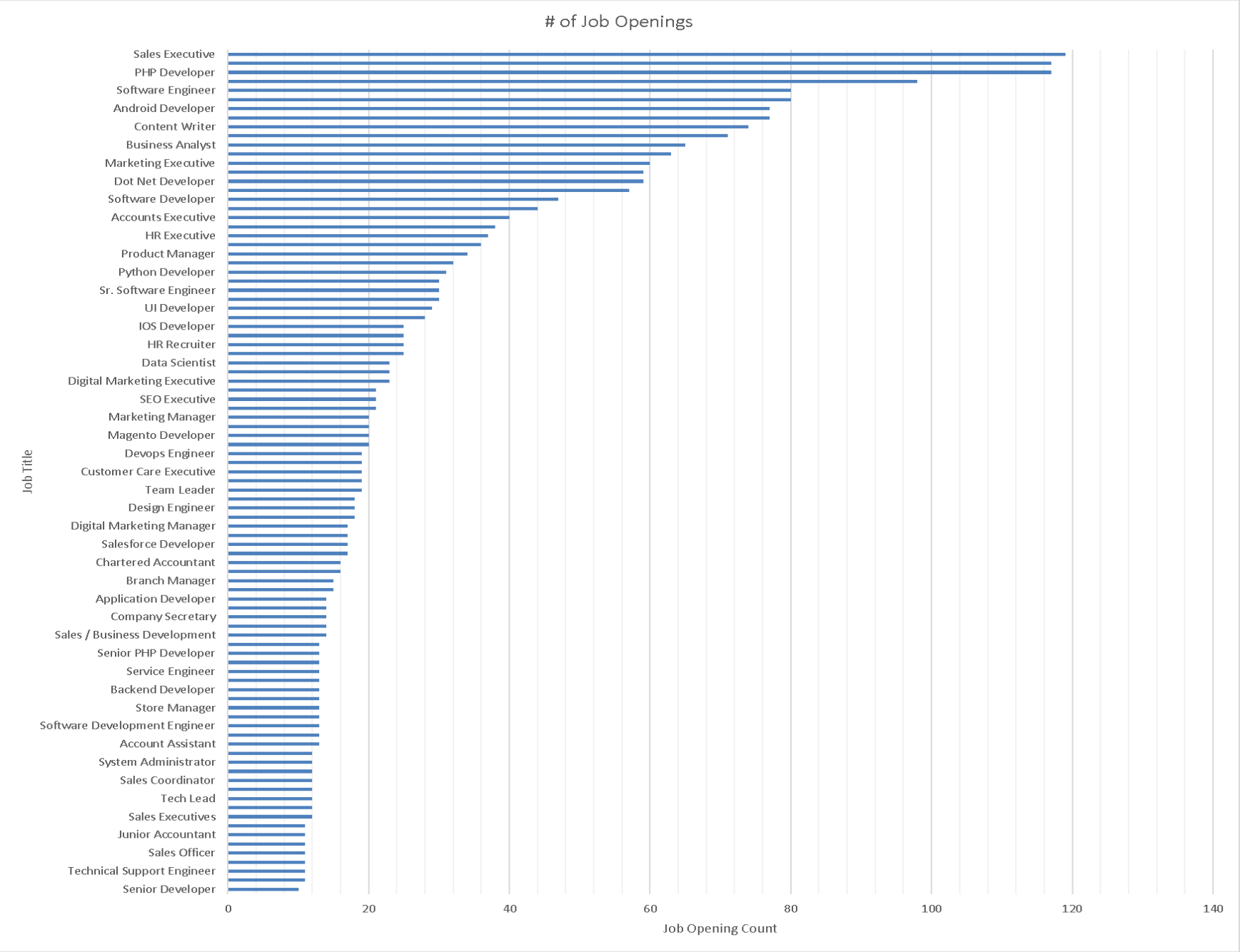
Auto Sales



Auto Service



GITHUB JOB POSTINGS



POPULAR LANGUAGES

