



The Stack Overflow Developer Survey

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OUTLINE



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

EXECUTIVE SUMMARY



- Python has risen in the ranks of programming languages in the survey edging out Java this year and standing as the second most loved language. Javascript has continue to dominate the programming language technology. Programmers are planning to learn python for the upcoming year. And developing training curriculums for prospect students could be the key for companies that has the resources and capability.
- MySQL and Microsoft SQL server are the most used databases by developers and tech professionals. PostgreSQL and MongoDB are the forerunners in the desired databases developers aspire to learn.
- In terms of platform AWS, Linux and windows tops the rank and jQuery and Angular takes the leading position from the survey. Reac.js, Vue.js, and Angular are the top platform developers are planning to learn in the next year.
- Geography wise, USA takes the leadership in technology. In the gender category 93% of respondents are men.

INTRODUCTION



- This presentation is consisted of the methodology used in the survey and in the data analysis process. It will continue to cover the findings and results of the survey in the trends of technology. Recommendation will be forwarded for decision makers and stakeholders. It will finally draw the conclusion.
- Discussion will be opened to create an opportunity to ask questions and forward suggestions.

METHODOLOGY



- The analysis used the revised version of the stack overflow developer survey dataset. In the preparation stage, we find and removed duplicate. Missed values are replaced with mean of the variable. Then the data set was normalized.
- Exploratory data analysis (EDA) was conducted to analyze the data distribution , find outliers and correlation between the variables. After, EDA, we did visualization of data distribution, composition and relationship.
- Finally, I build dashboards which is a composition of the data in visual image which you will have the opportunity to look at in this presentation.

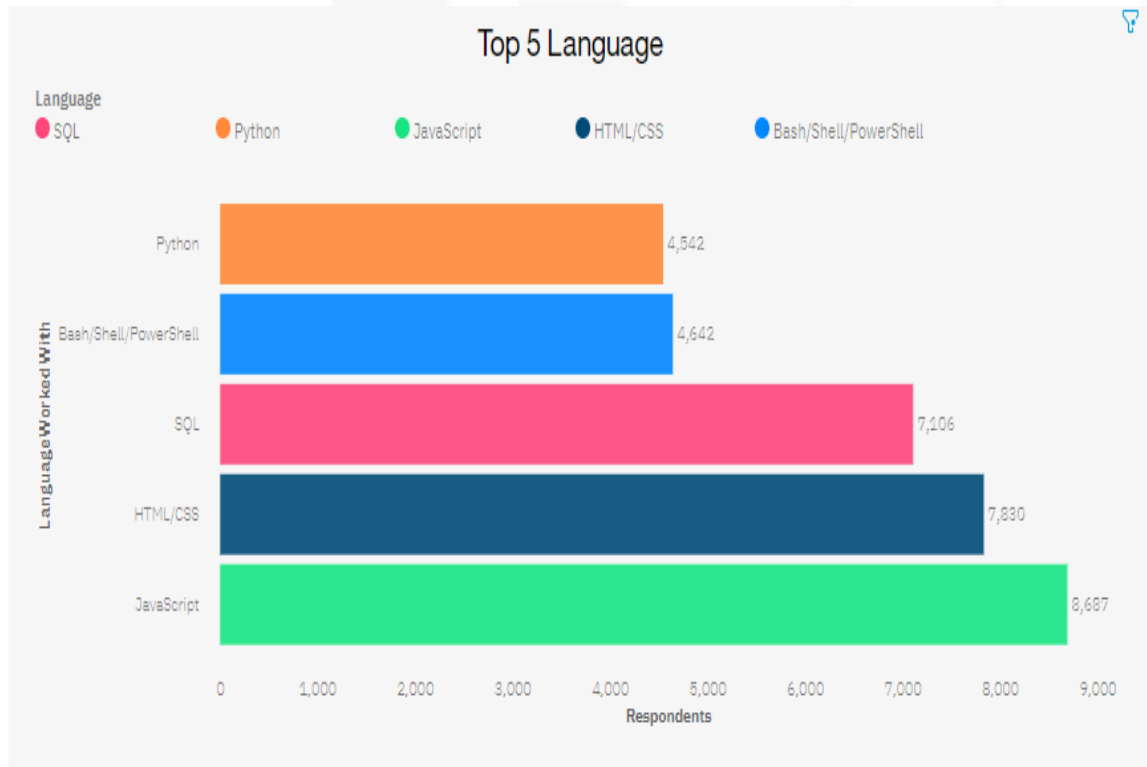
RESULTS

Results

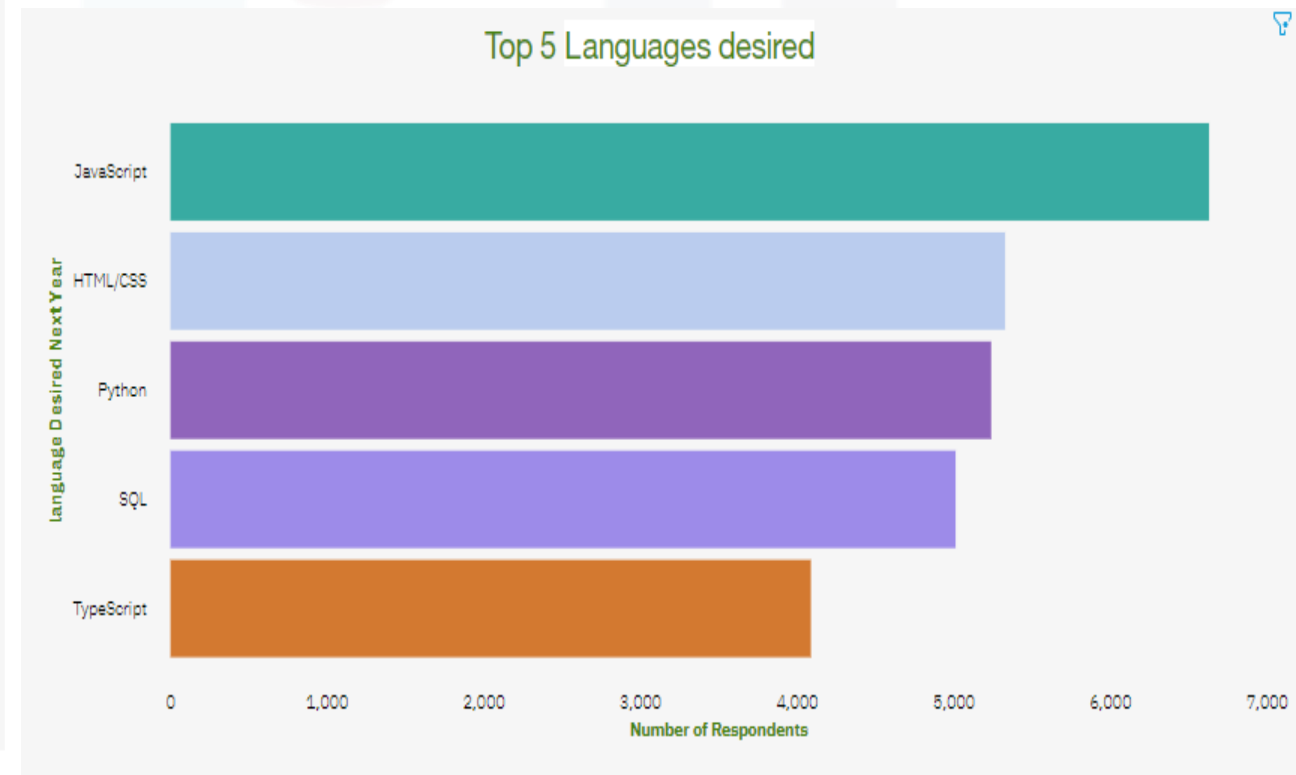


PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

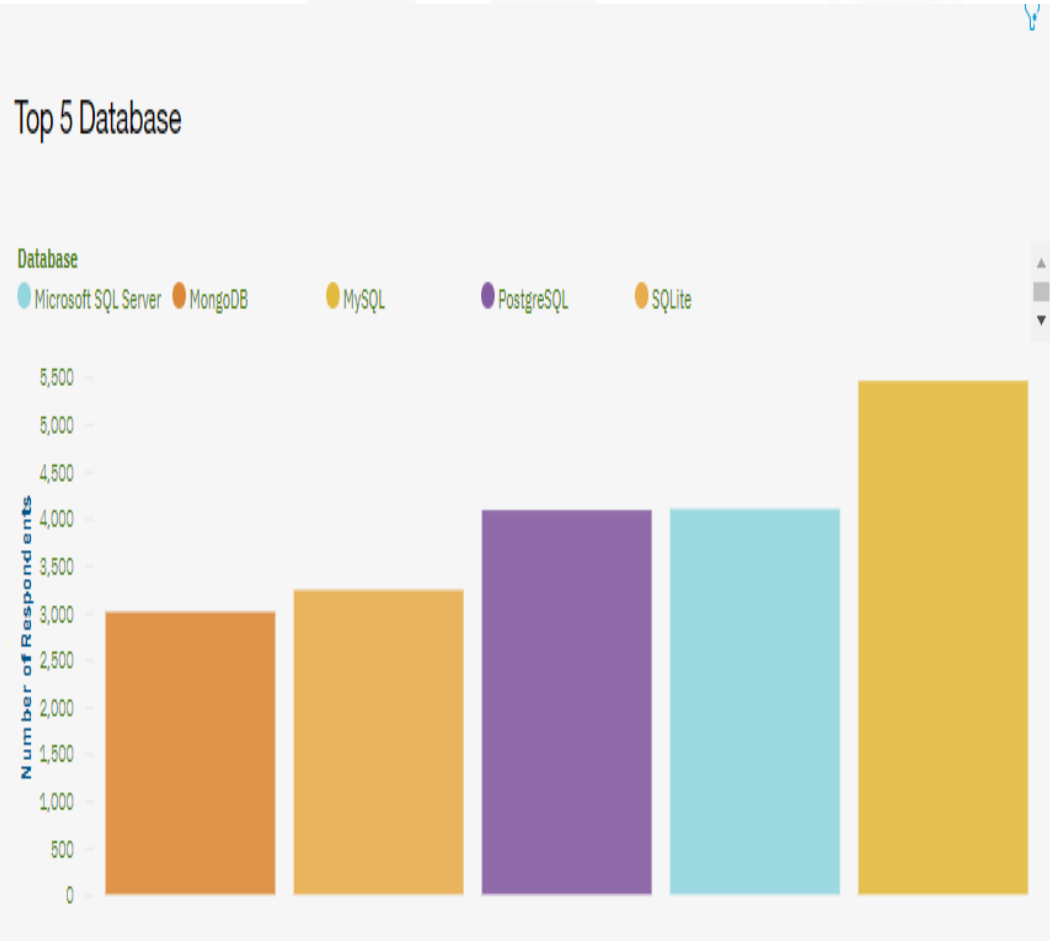
- JavaScript and HTML/CSS continue to top the programming technology.
- Python is on the raising as one of the popular programming language and will grow exponentially for the coming years.
- There is huge gender and geographic disparity in technology whereby the industry is men dominated and US controlled.

Implications

- Continue to attract professionals with high HTML/CSS skillset
- Design training modules for the growing technologies like Python and join the market early.
- Increase the women diversity in tech roles. And continue to disrupt the technology sector to edge the competitive advantage of the US market in technology.

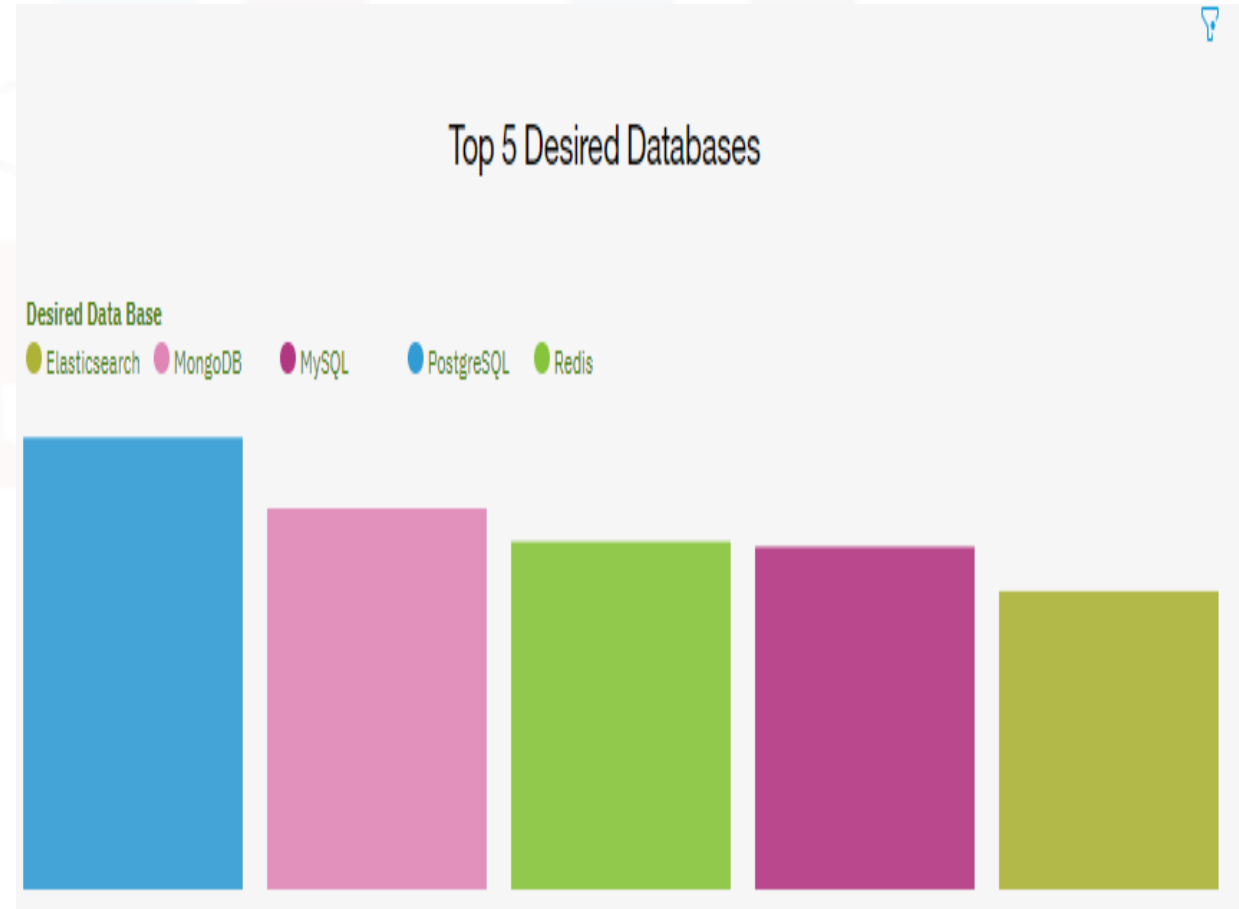
DATABASE TRENDS

Current Year



IBM Developer

Next Year



SKILLS NETWORK 

DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL, Microsoft SQL server and PostgreSQL are the highly used databases by developers currently.
- PostgreSQL and MongoDB will increase in usage for the upcoming year.

Implications

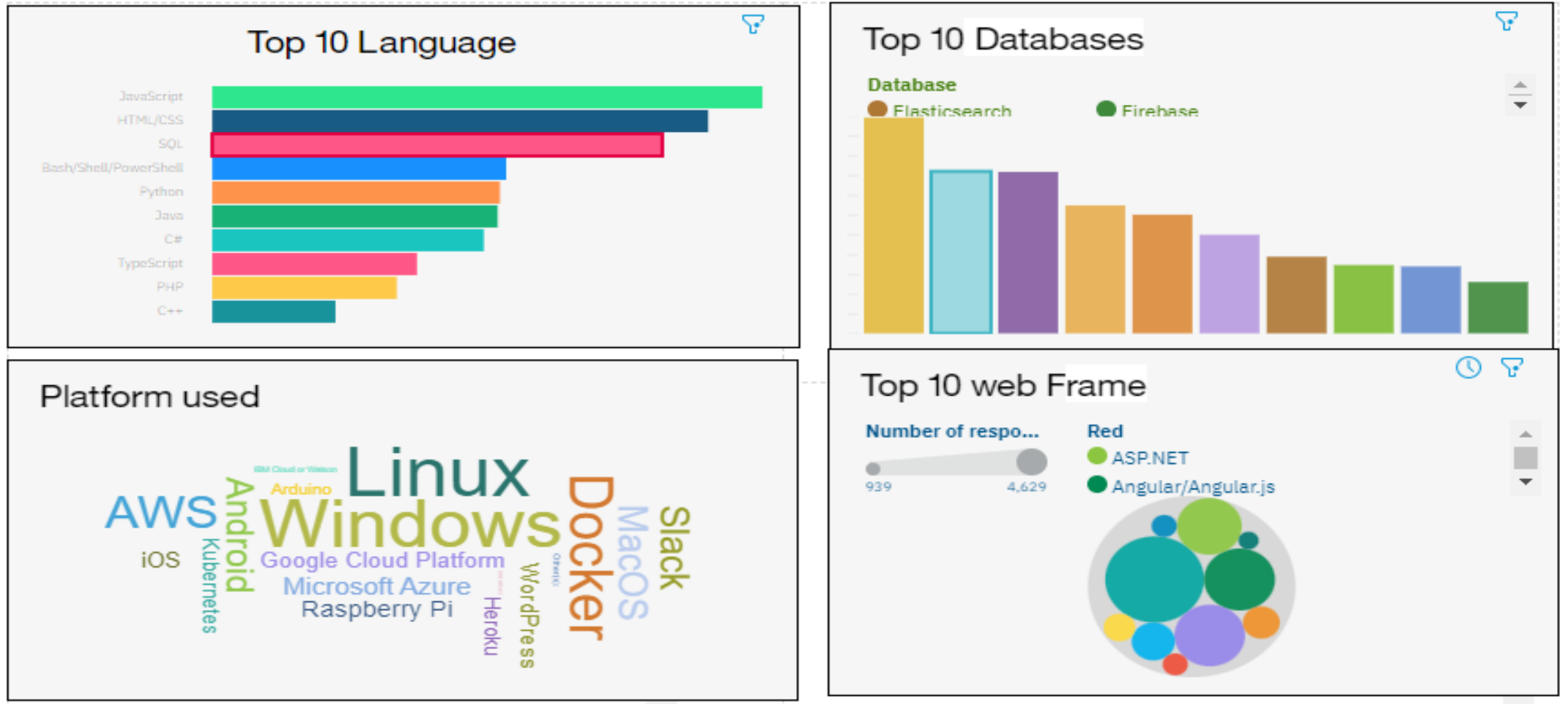
- Keep focus on the current highly used database and at the sometime on an increasing demand among developers which is PostgreSQL

DASHBOARD

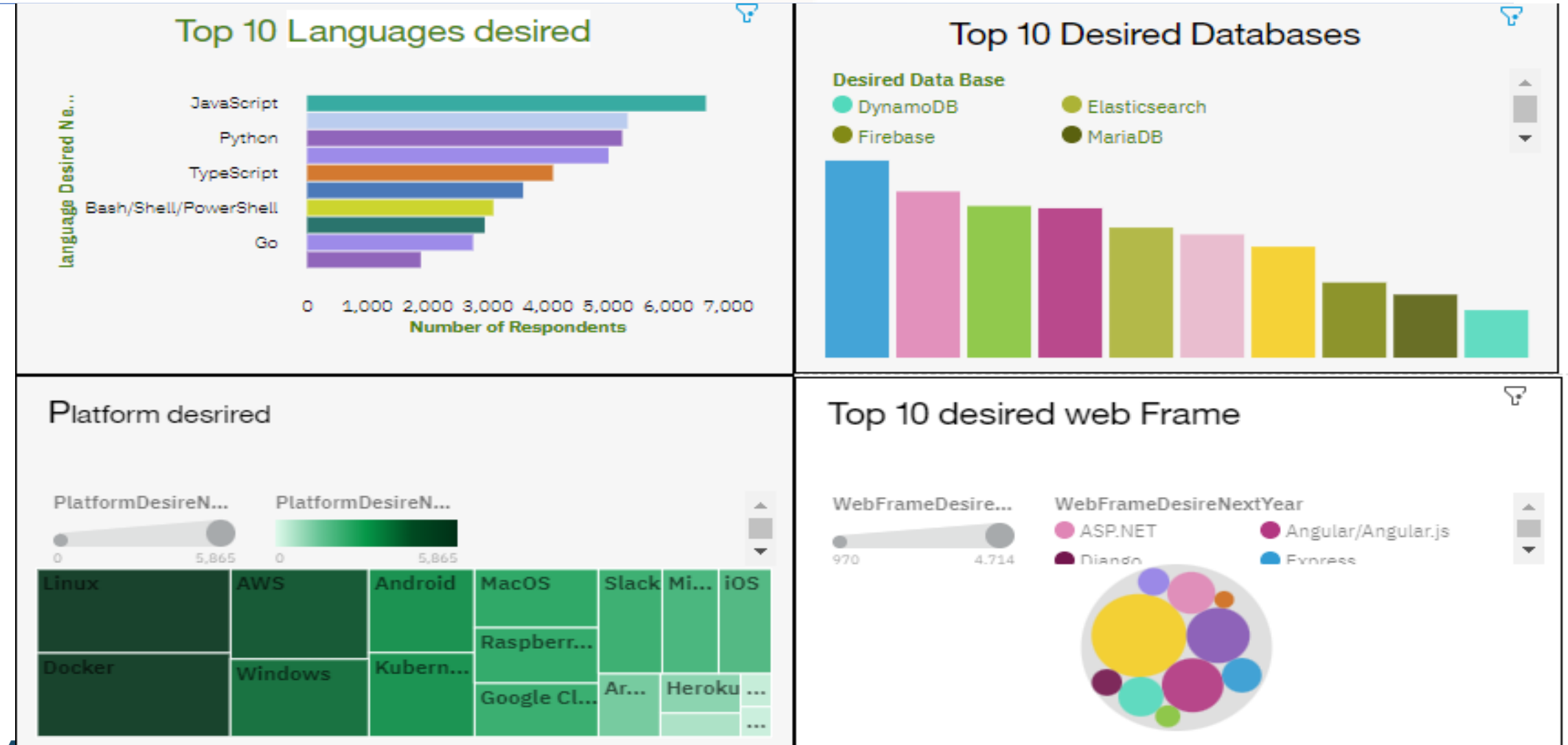


For full dashboard please [My dashboard](#)

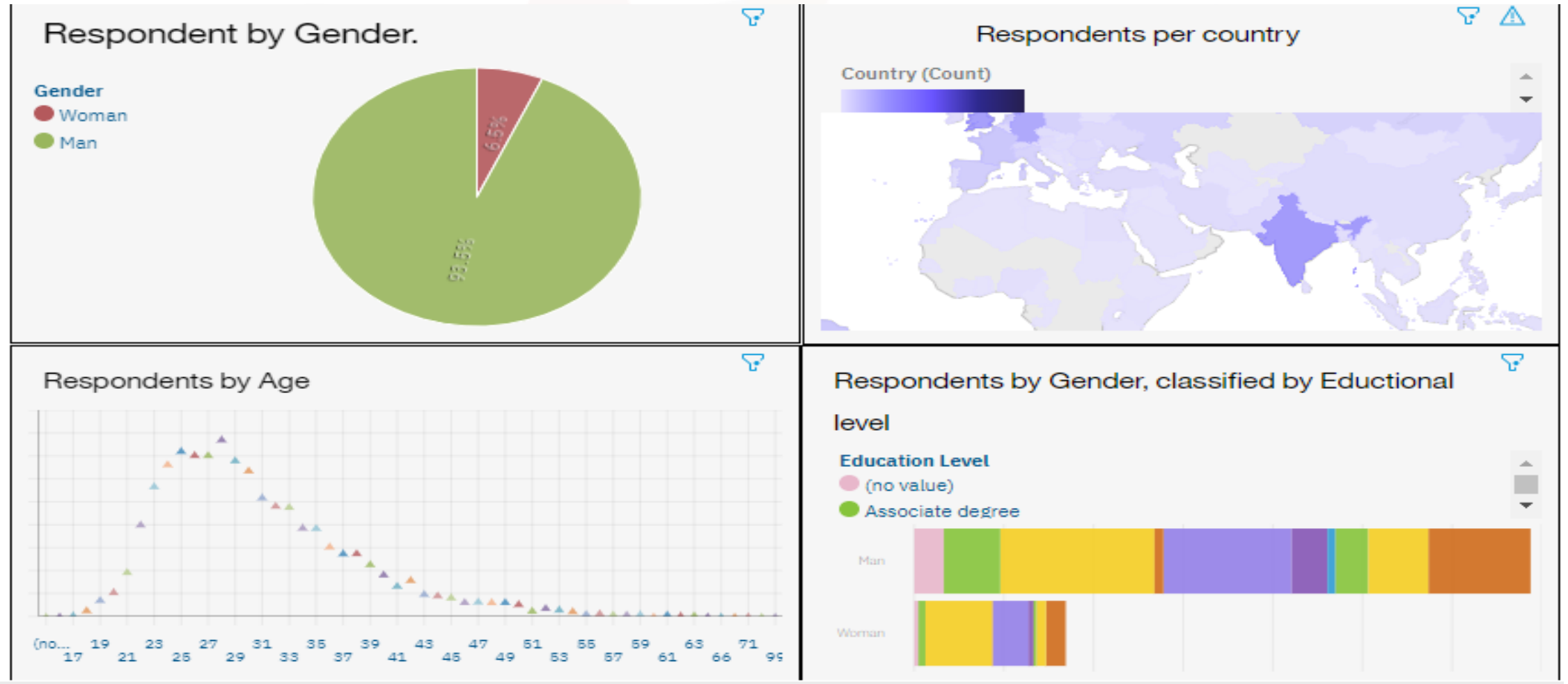
DASHBOARD TAB 1



DASHBOARD TAB 2



DASHBOARD TAB 3



DISCUSSION



OVERALL FINDINGS & IMPLICATIONS

Findings

- JavaScript and HTML/CSS continues to be the leading programming languages.
- Python has become increasingly growing language among the developer community.
- PostgreSQL will be the most popular database in the industry in which it both a leader and stays in the interest of professionals to learn.



Implications



Redirect financial resource to the growing programming language of Python while keeping an eye for the stable technologies like JavaScript, HTML/CSS



Take a leading posture in the growing language in education, courses and recruitment and development of the technology.

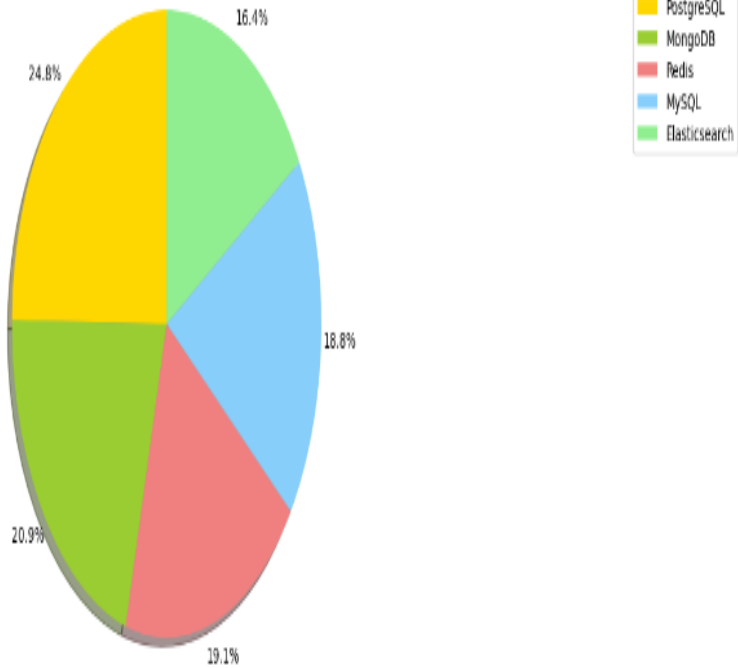
CONCLUSION

- Take a leading position in the growing languages and databases in education, training, development and adaptability. Headhunt for the pioneers and skilled professional in the specific industry.
- At the same time, focus on the stable and widely applied technologies. Coordinate both the stable and the growing technologies in humane resources and other resources.
- Adjust to the fast changing and fluid technology development.

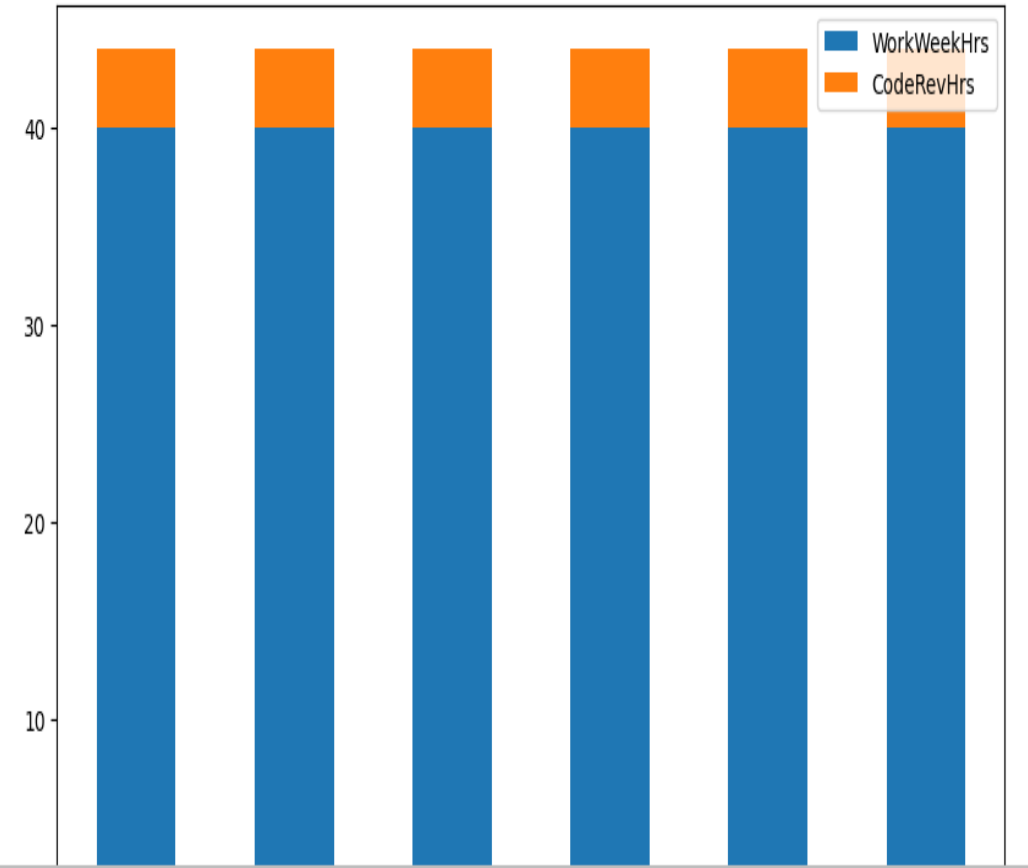


APPENDIX

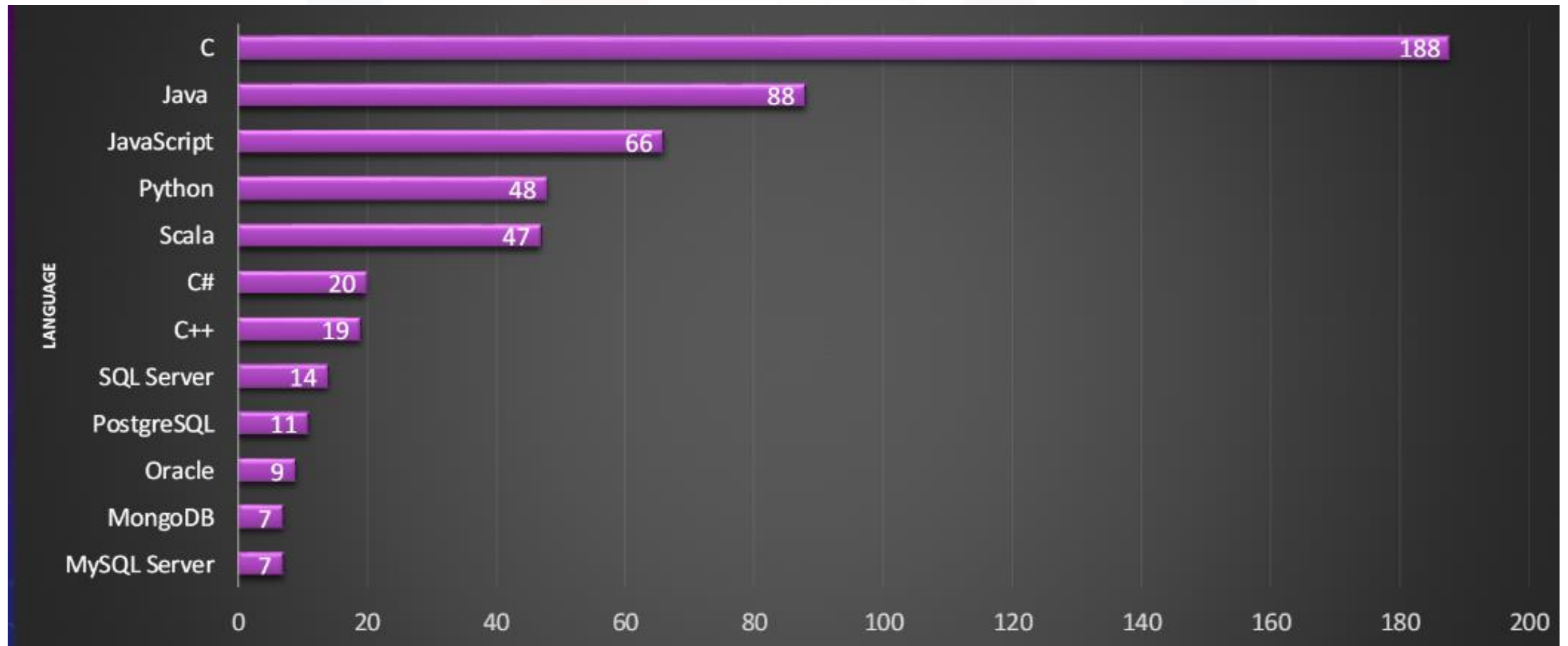
Top 5 Databases Respondents Wish To Learn



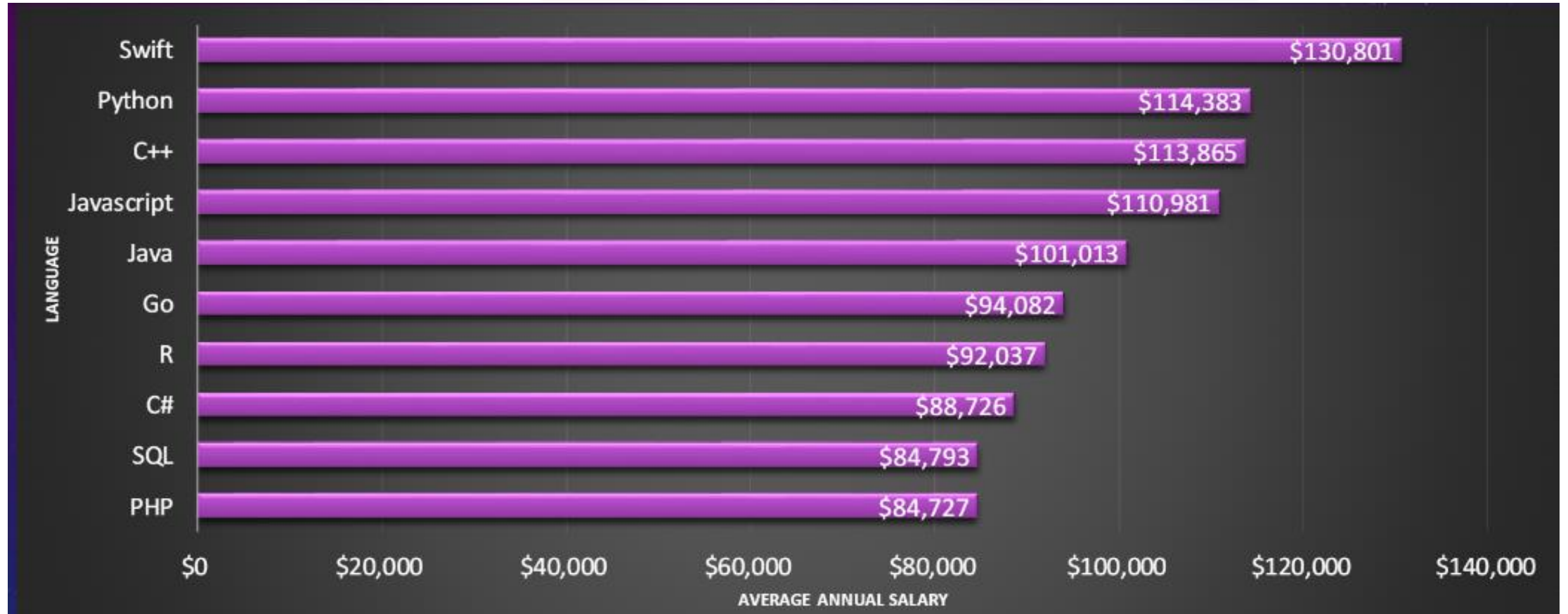
Stacked Bar Chart of Median WorkWeekHrs and CodeRevHrs for Those Age 30 to 35



GIRTHUB JOB POSTINGS



POPULAR LANGUAGES



Resources and References

Dataset Stack overflow Developers Survey 2019 [Stack overflow](#)

GitHub job postings from [link](#)

[IBM Data Analyst course sources](#)

thank you