



CURRENT AND FUTURE TRENDS IN PROGRAMMING TECHNOLOGIES

David B. Jolley

3/29/2022

OUTLINE

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



EXECUTIVE SUMMARY



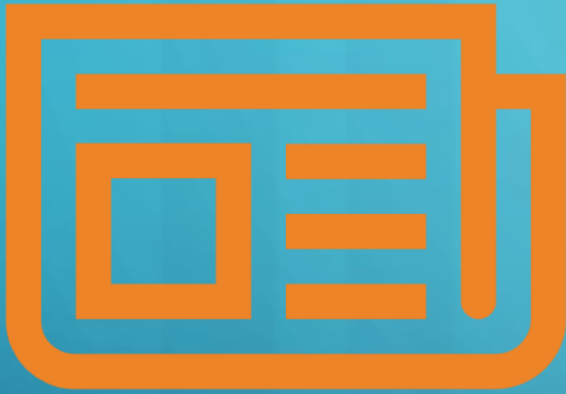
- What are the best skills for Elfast to invest in?
- Use large programmer survey to get current and future trends
- The most popular programming language is Javascript
- The most popular database is MySQL
- The most popular combination is Javascript and MySql

INTRODUCTION



- Elfast needs to hire 3 employees
- The employees need programming language and database experience
- Elfast has older code that is not very easy to find candidates for
- Elfast wants to change the coding directions of their company to one that makes it easier to find employees
- Elfast has contracted our company to discover the current and future trends in programming and databases

METHODOLOGY



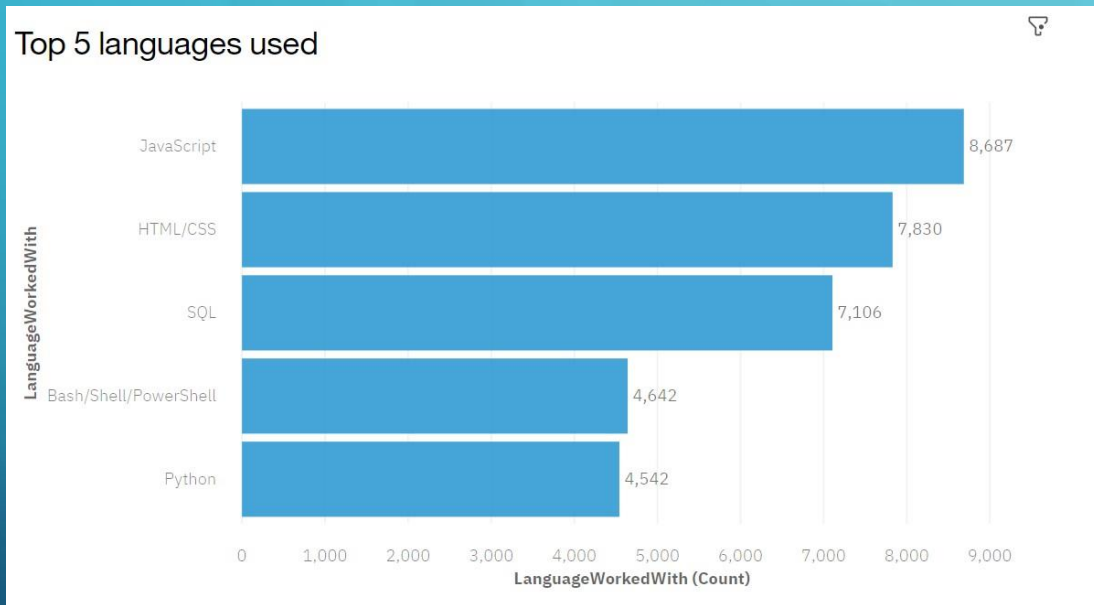
- IBM Cloud Pak for Data platform was used for this analysis along with IBM Cognos Dashboard Embedded (CDE) <https://cloud.ibm.com/>
- The data used for this report comes from the following source: <https://stackoverflow.blog/2019/04/09/the-2019-stack-overflow-developer-survey-results-are-in/> under a [**ODbL: Open Database License**](#).

RESULTS

- Programming Language trends
- Database trends

PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

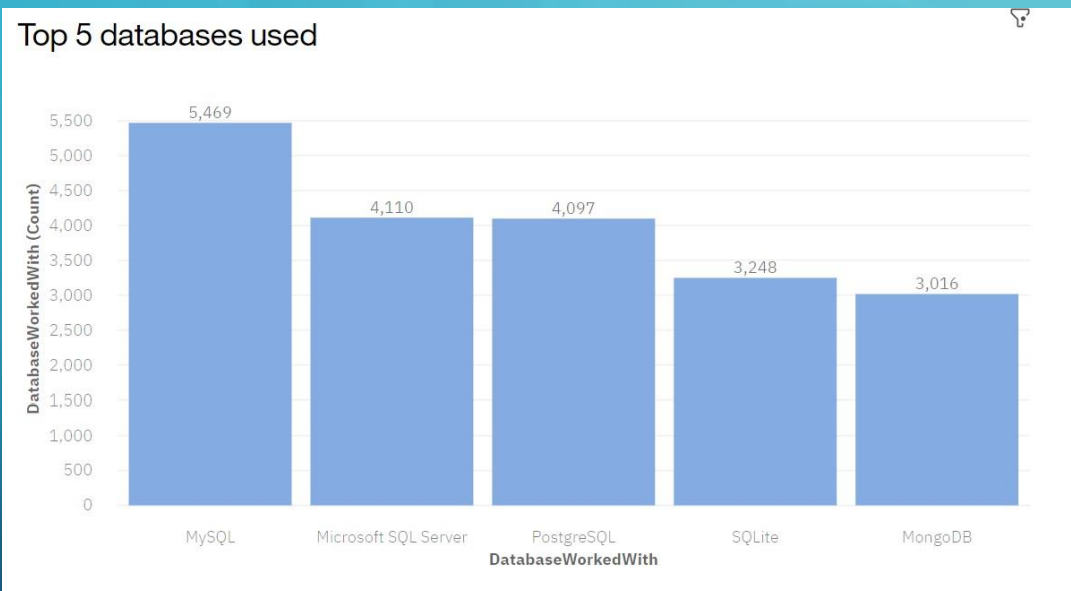
- Javascript is top now and in the future
- HTML is high currently and in the future
- Python is rising in popularity

Implications

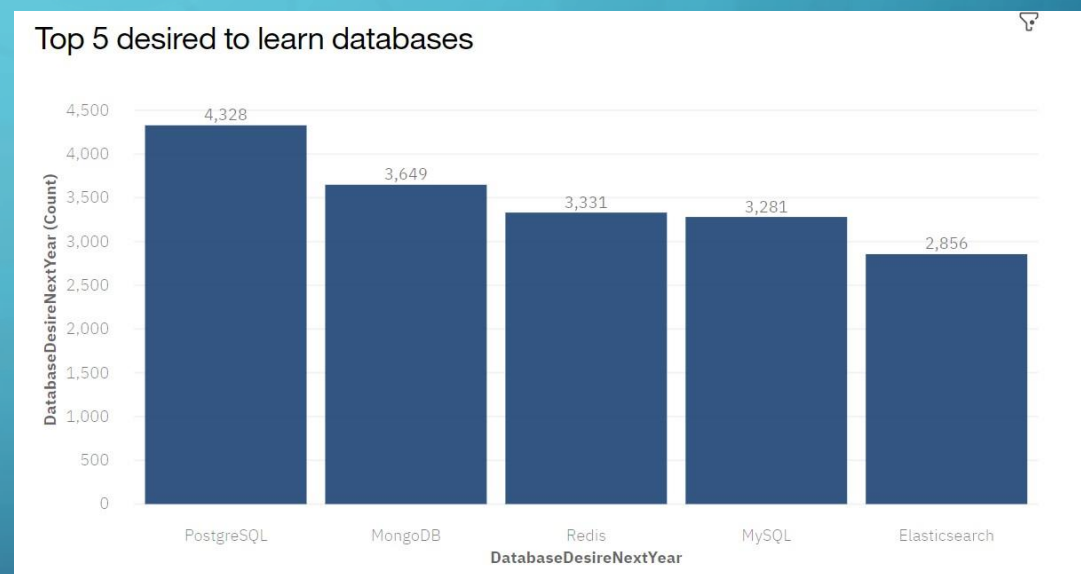
- Javascript programmers are available
- HTML is another solid candidate
- Python would also be a good candidate

DATABASE TRENDS

Current Year



Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL is in the currently and projected in the future
- Postgre is also a top database now and projected into the future
- Microsoft SQL is not projected for the future

Implications

- This could be a recommended database
- This could be a recommended database
- This does not look as a good database to project into the future

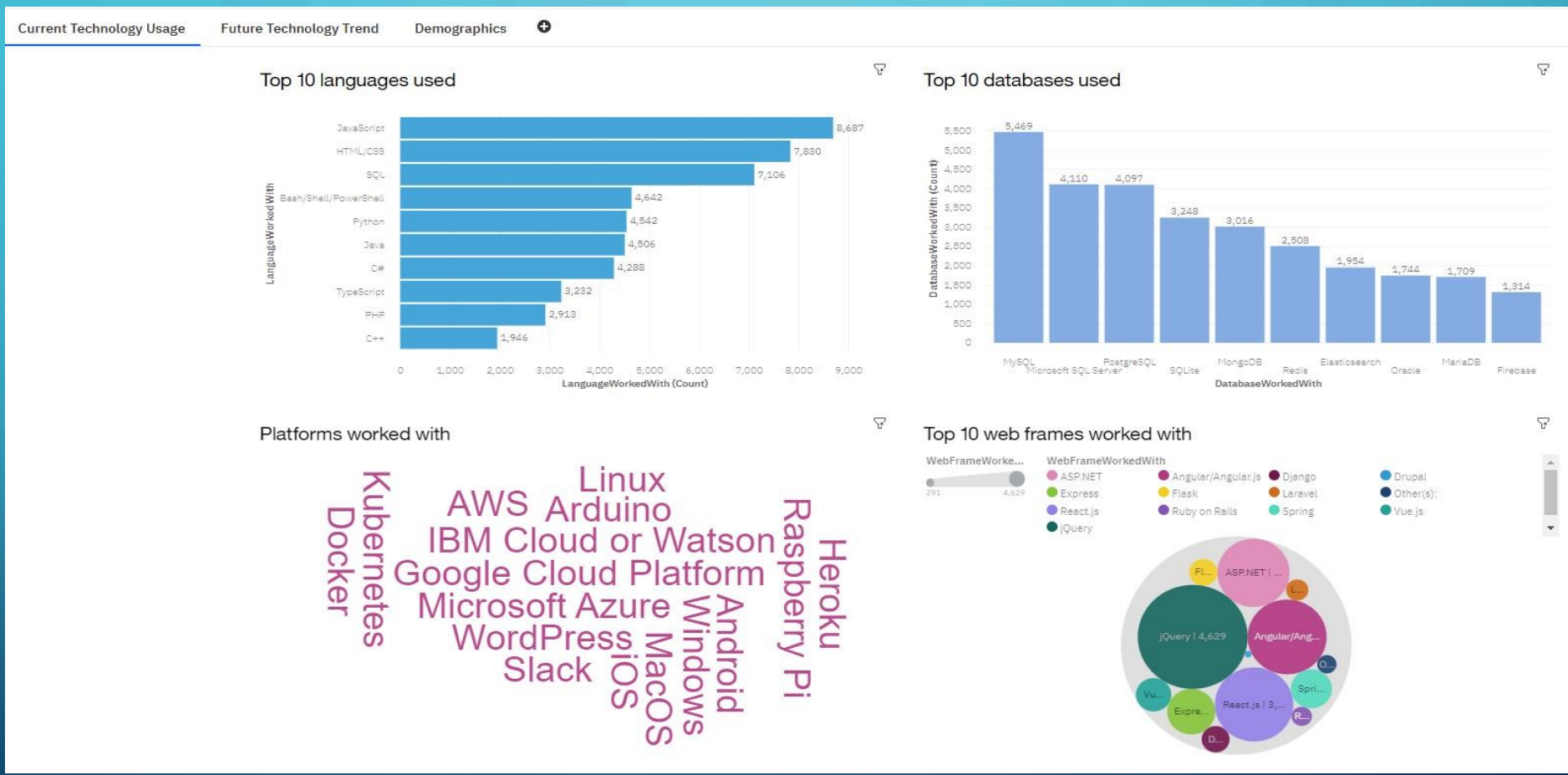
DASHBOARD

Link to the created Watson Dashboard created



<https://dataplatform.cloud.ibm.com/dashboards/36481b76-bbcf-45d3-b5db-e57c1338210f/view/580aa1213189759512ddc0e4079f2e507f63765cb7bbd10584807b4909637797f06d1393c87d4b59d2435035a5e540589b>

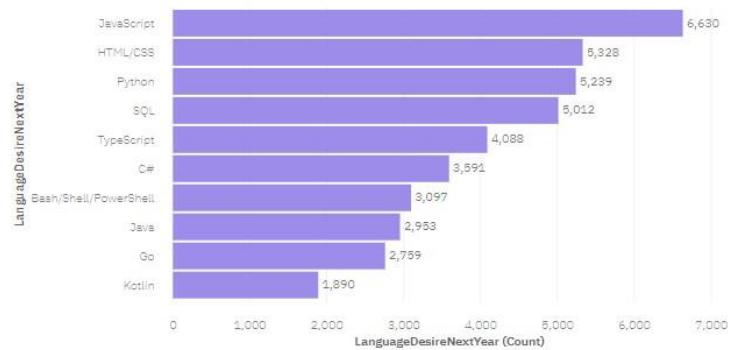
DASHBOARD TAB 1



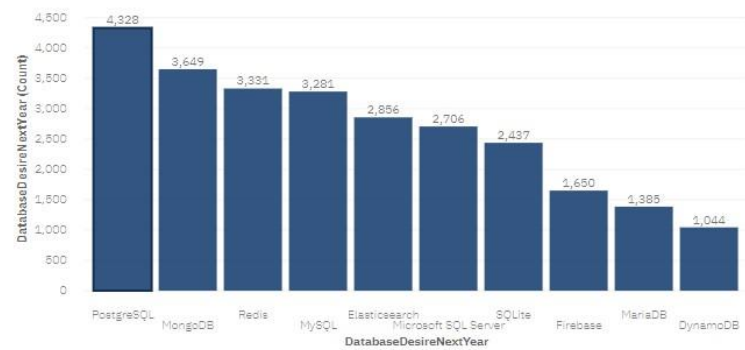
DASHBOARD TAB 2

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

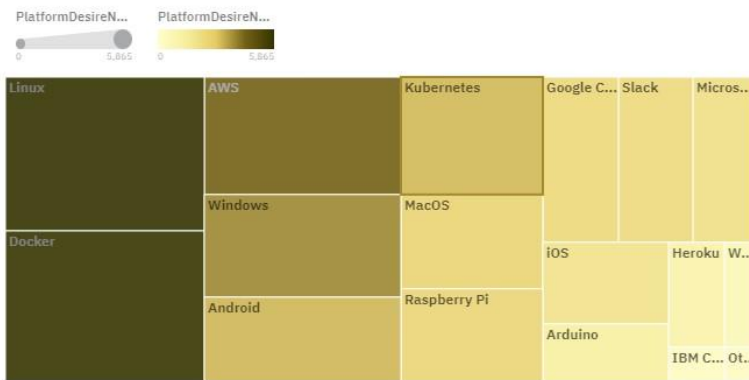
Top 10 desired to learn languages



Top 10 desired to learn databases



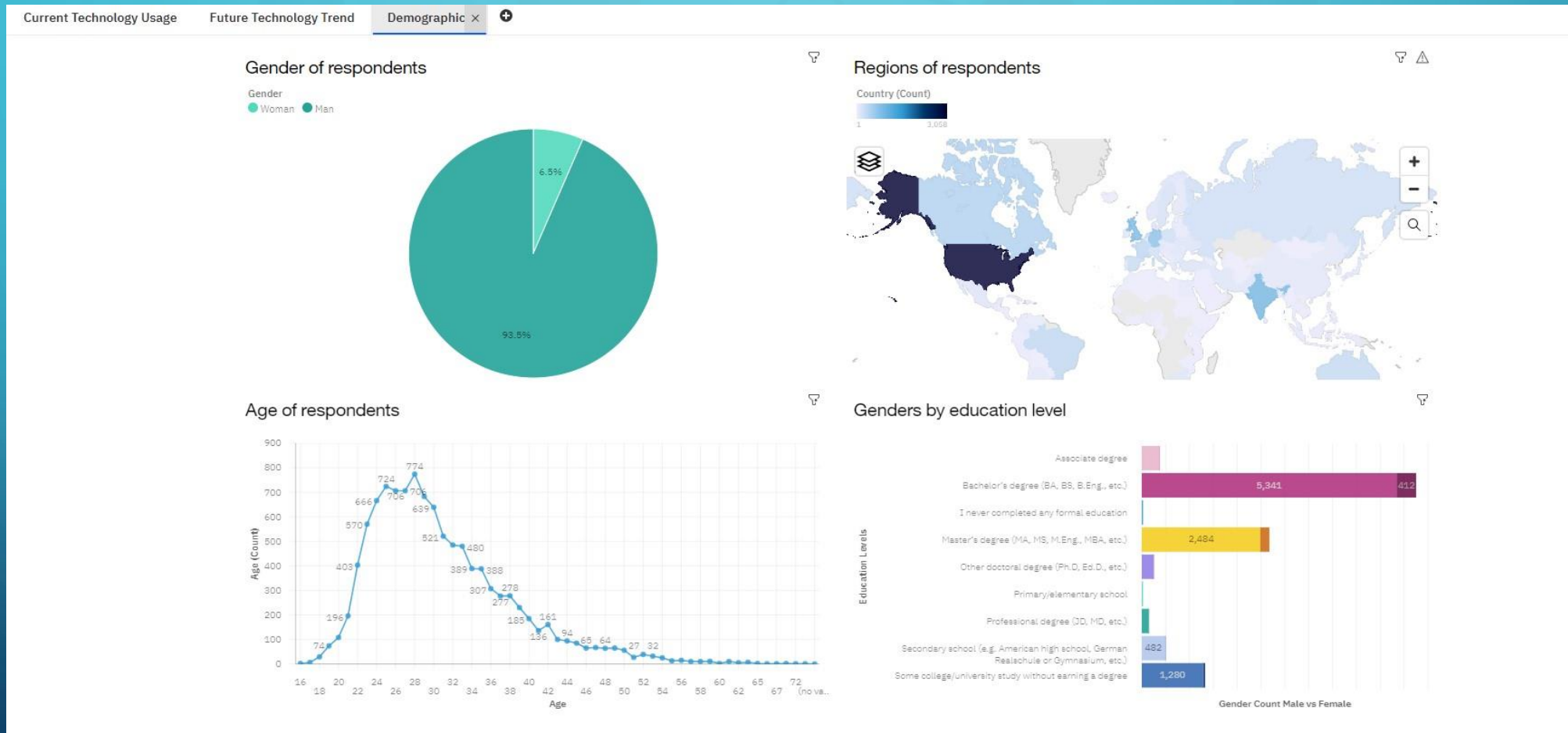
Top platforms to learn next year



WebFrameDesireNextYear



DASHBOARD TAB 3



DISCUSSION



- From this analysis we can recommend a language and database combination
- We can also recommend based on a preferred Playform

OVERALL FINDINGS & IMPLICATIONS

Findings

- Javascript is the top programming language now and projected in the future
- MySQL is the top database right now.
- Postgre SQL is the projected top database in the future

Implications

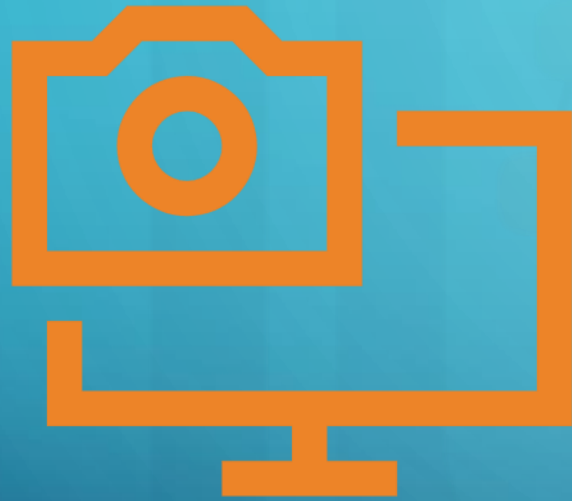
- Javascript should first choice
- MySQL is top but projected to lose ground with the popularity of Postgre SQL increasing

CONCLUSION



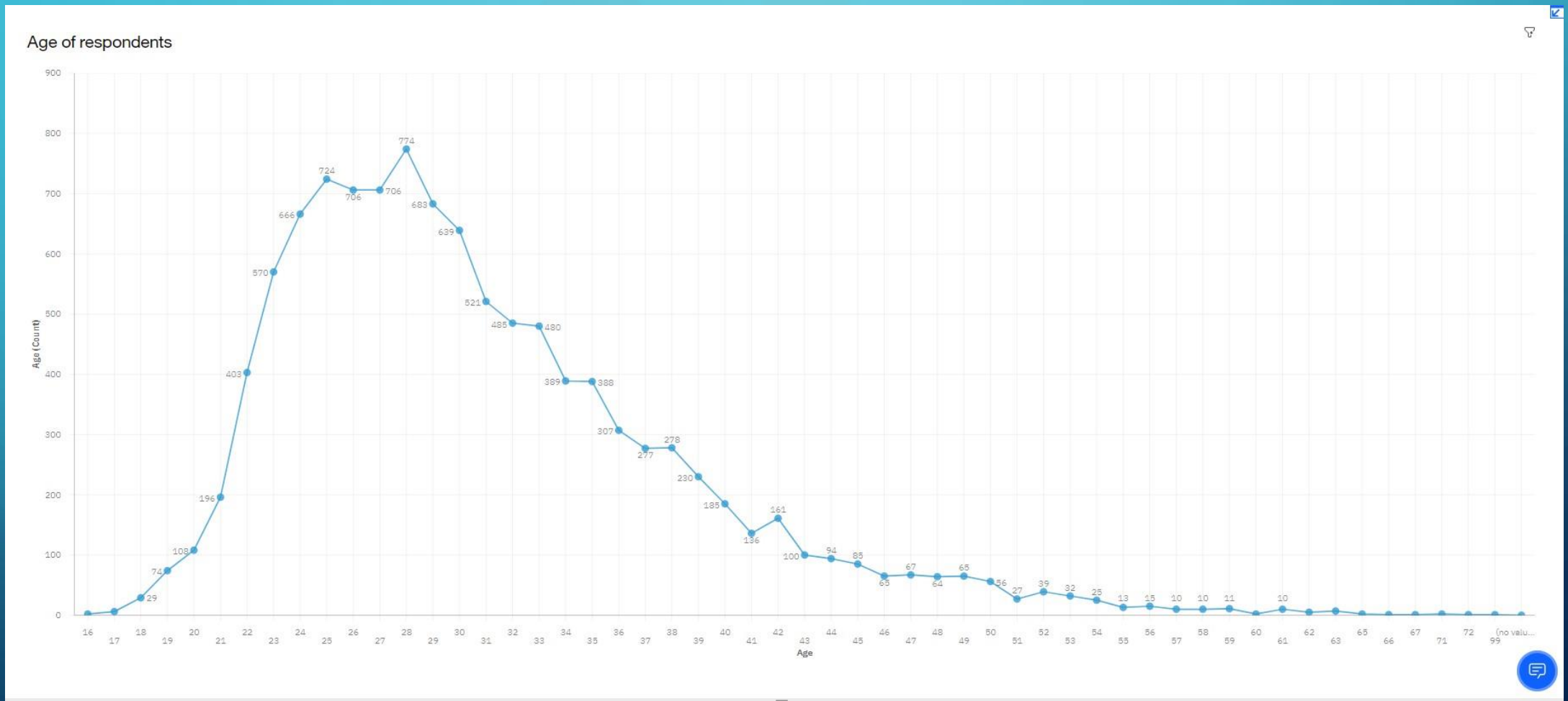
- Javascript based on a programming skill only
- Postgre SQL based on a candidate with database skills only
- MySQL and Javascript would be an ideal combination of skills based a candiate with both skills
- Developing platform also plays a factor. If developing for a Windows system, C+ and SQL server would be the best combination

APPENDIX

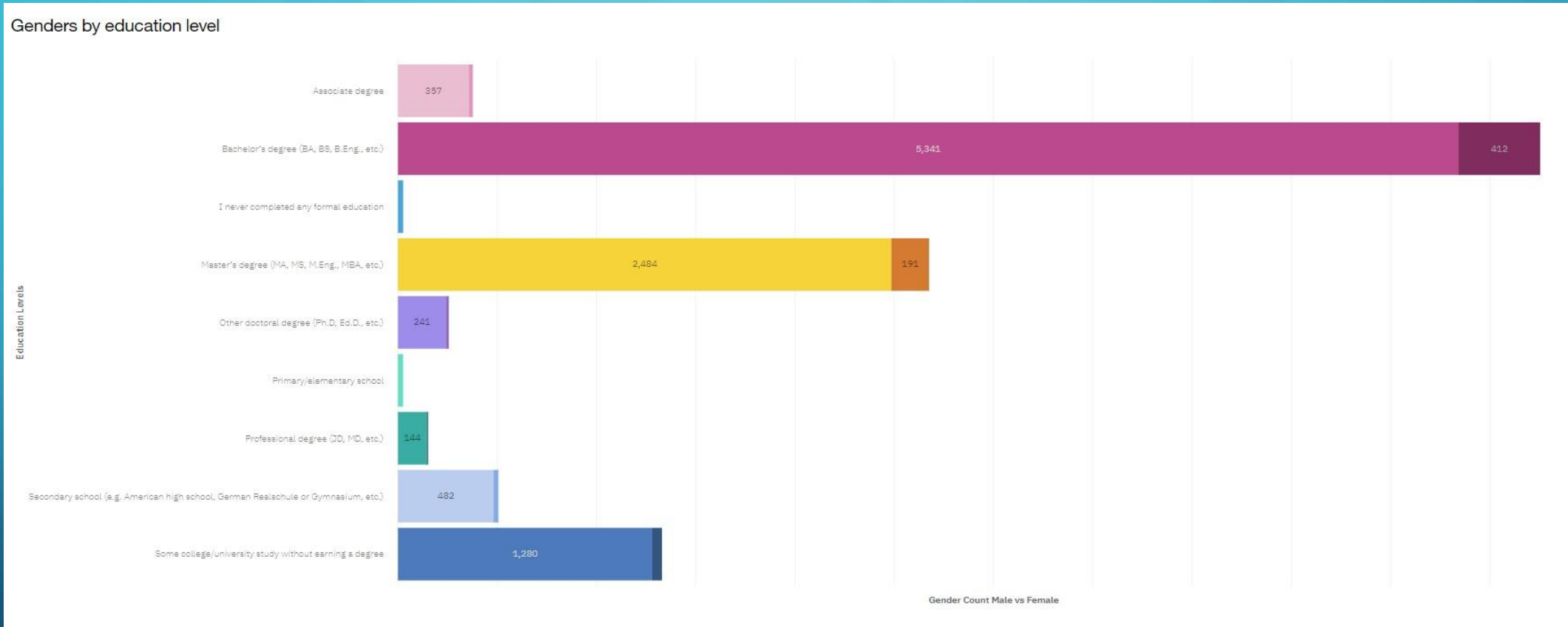


- Age of respondents
- Education level of respondents
- Combinational results based on platform
- Stack Overflow 2021 survey had similar results

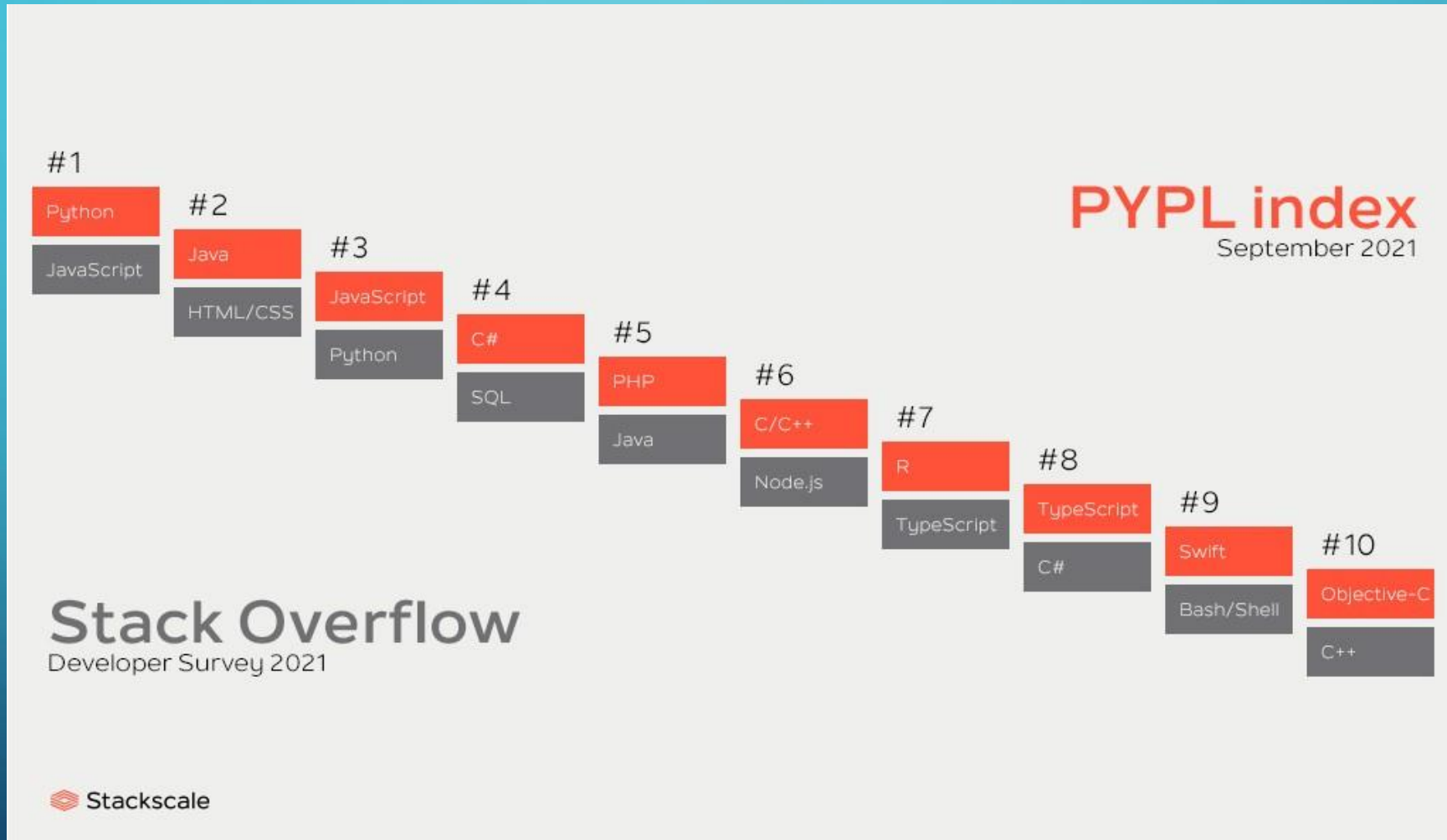
AGE OF RESPONDENTS



EDUCATION LEVEL OF RESPONDENTS

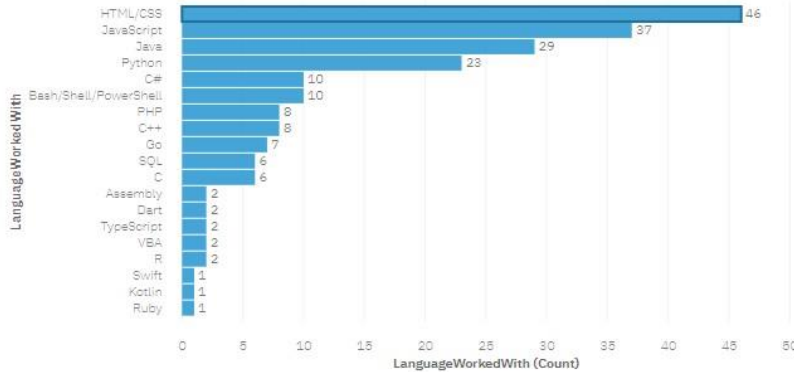


2021 STACK OVERFLOW SURVEY

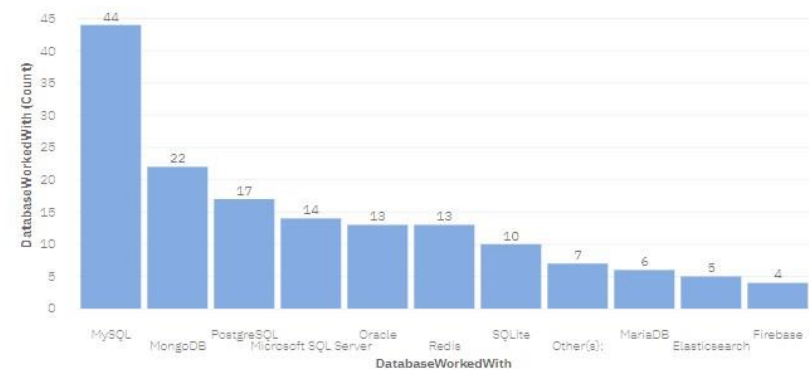


IBM CLOUD AND WATSON PLATFORM

Top 10 languages used



Top 10 databases used



Platforms worked with

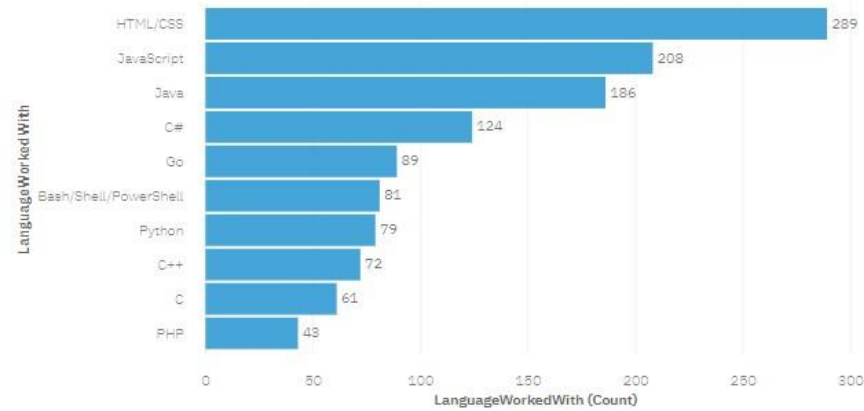


Top 10 web frames worked with

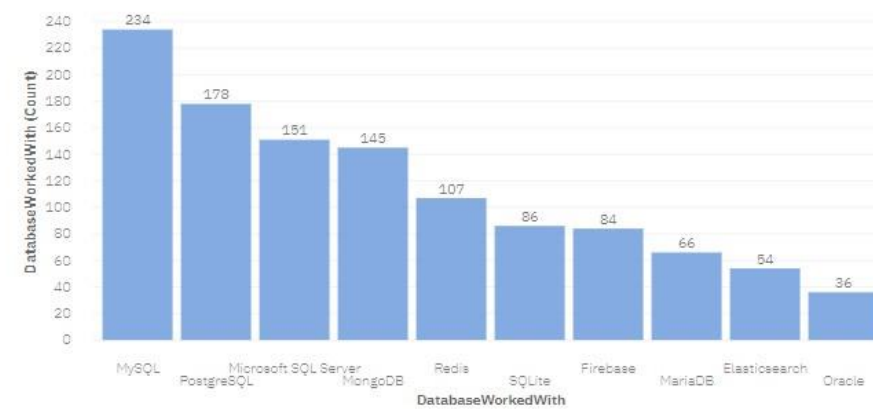


GOOGLE CLOUD PLATFORM

Top 10 languages used



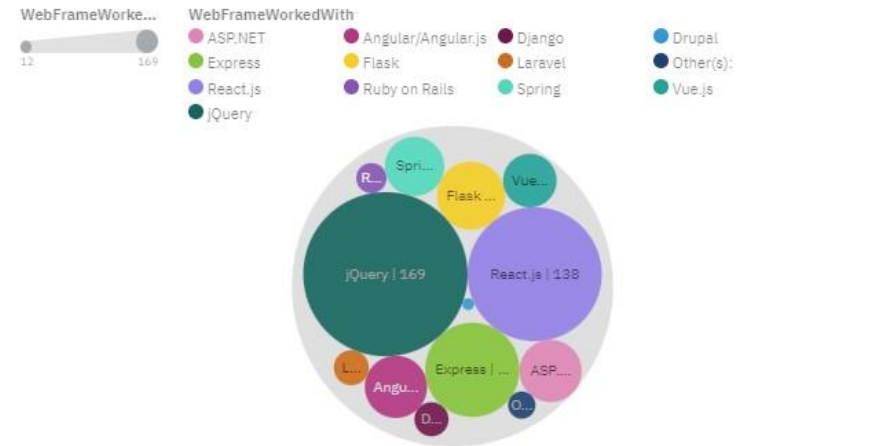
Top 10 databases used



Platforms worked with

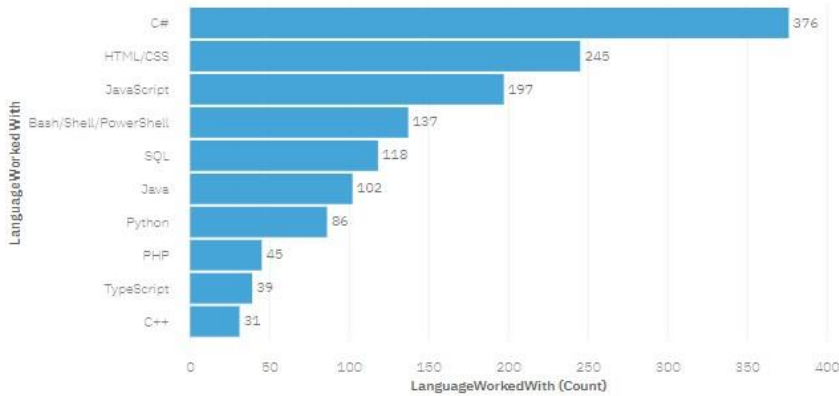


Top 10 web frames worked with

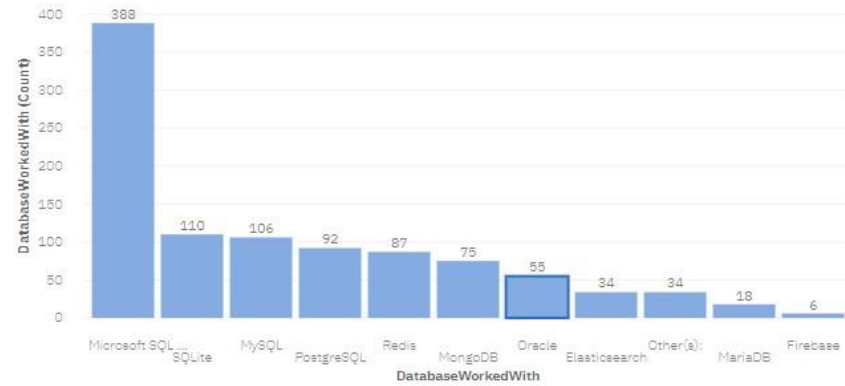


MICROSOFT AZURE PLATFORM

Top 10 languages used



Top 10 databases used



Platforms worked with



Top 10 web frames worked with

