

Programming Trends

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OUTLINE

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



EXECUTIVE SUMMARY



- ❖ Programming languages and Database trends current and future analyses, web-based most popular like JavaScript and HTML
- ❖ Used technology dashboard
 - ❖ Current technology used overview, Windows and Linux still dominate all developing platforms
 - ❖ Future technology used overview
 - ❖ Technology demographics
- ❖ Discussion
 - ❖ Is opensource databases and platforms the future?
 - ❖ How to get more women to join the technology industry

INTRODUCTION



- In this presentation we will analyze the current used technologies and program languages and what will be the expected trend for next year.
- First focus is on the program languages and used databases for this year and the desire for next year.
- After this introduction, a dashboard overview is presented with additional information like used platforms and geographic and gender information from the surveyed users.

METHODOLOGY



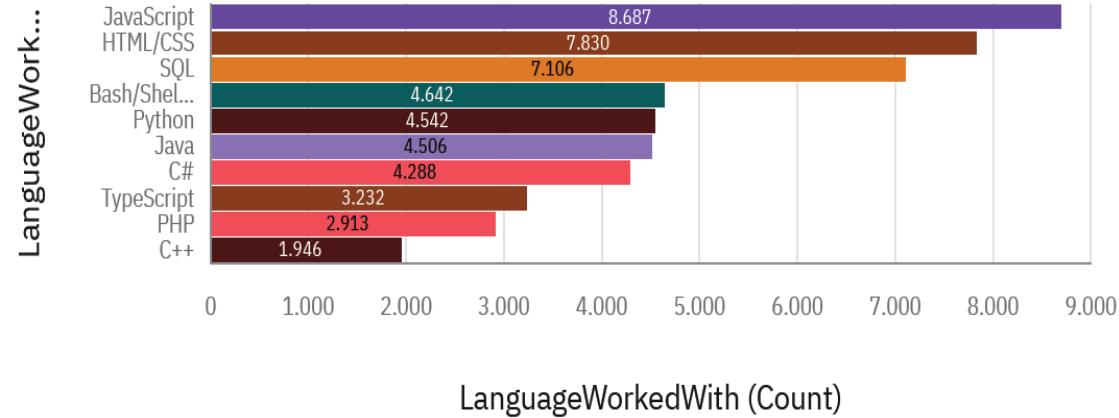
- ❖ The data source used in this presentation is from the stackoverflow developer-survey 2019:
 - ❖ <https://stackoverflow.blog/2019/04/09/the-2019-stack-overflow-developer-survey-results-are-in/> under a ODbL: Open Database License.
 - ❖ This dataset is already normalized
- ❖ The dashboards are created with IBM Cognos from the above data set.
 - ❖ The data is filtered and sorted to display the top results.



PROGRAMMING LANGUAGE TRENDS

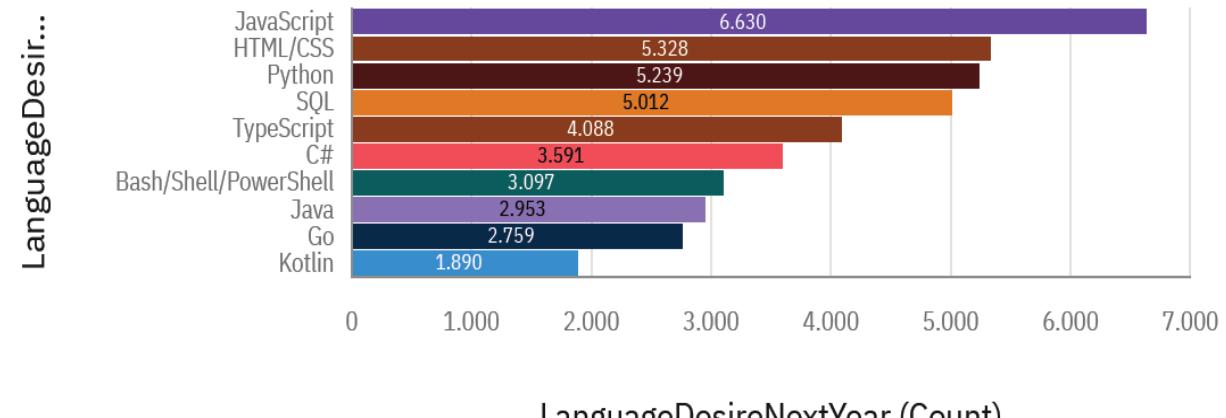
Current Year

Top 10 Languages worked with



Next Year

Top 10 Language Desire Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- ❖ JavaScript and HTML/CSS will stay on top
- ❖ Third place SQL is replaced by Python
- ❖ TypeScript is the highest climber

Implications

- ❖ JavaScript and HTML/CSS are still on top but are losing terrain on Python / TypeScript
- ❖ Python will probably earn more ground, but SQL will always stay strong
- ❖ JavaScript will probably be overtaken / replaced by TypeScript

DATABASE TRENDS

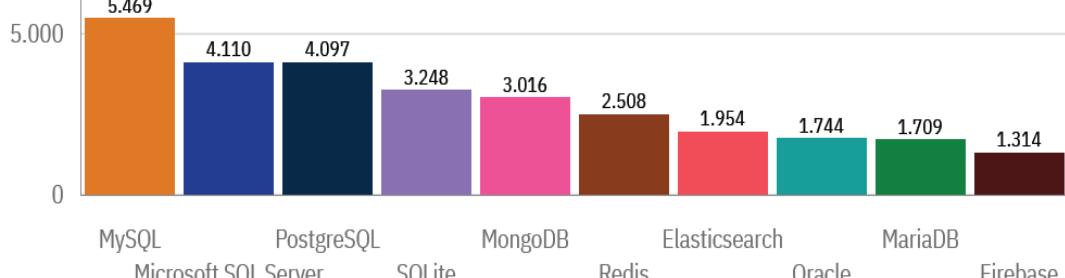
Current Year

Top 10 Databases worked with

DatabaseWorkedWith



DatabaseWorkedWith

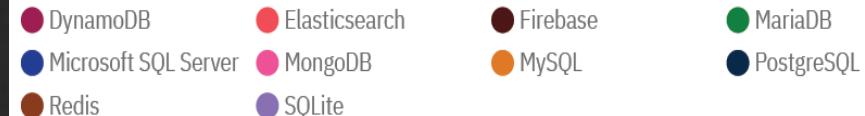


DatabaseWorkedWith

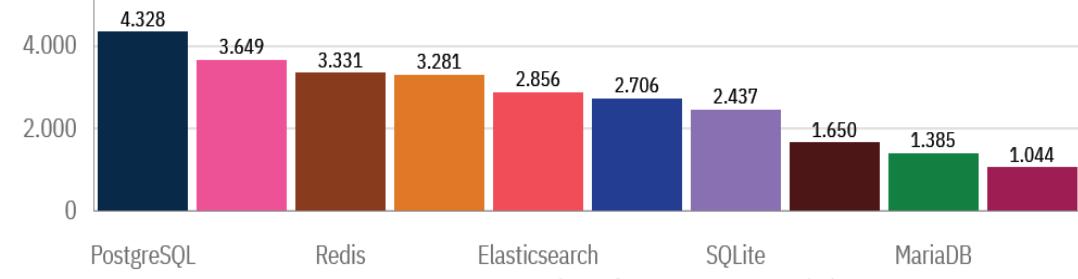
Next Year

Top 10 Database Desire Next Year

DatabaseDesireNextYear



DatabaseDesireNextYear



DatabaseDesireNextYear



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- ❖ MySQL, Microsoft SQL Server and SQLite are losing ground in the market next year
- ❖ Opensource databases like PostgreSQL, MongoDB, Redis are becoming more popular
- ❖ Oracle is disappearing from the top 10

Implications

- ❖ Opensource DB's are gaining more ground over the paid DB's
- ❖ Opensource DB's are the new trend.
- ❖ Oracle getting out of date

DASHBOARD



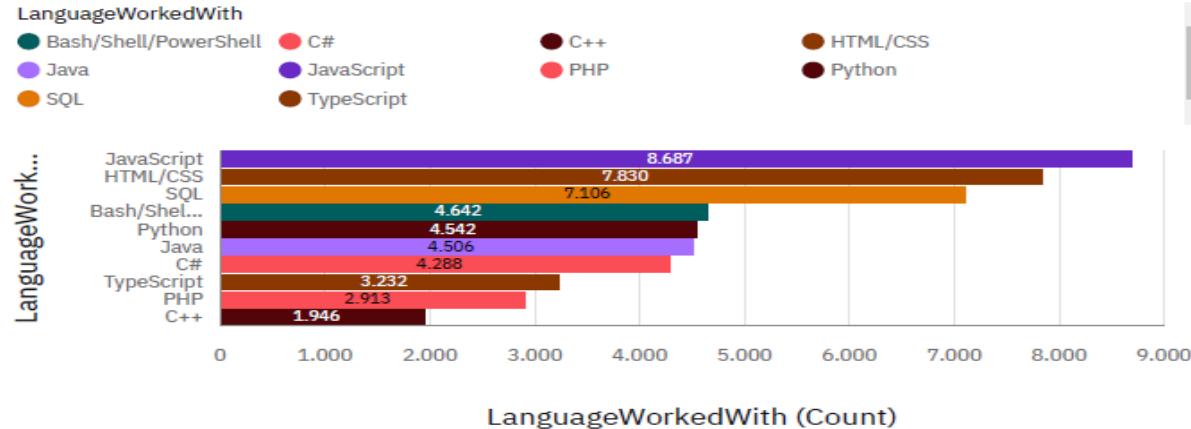
GitHub project link:

<https://github.com/DannyG-Alstom/IBM-Data-Analyst-Capstone-Project/blob/36b636d0f5f5279c52a8db6585afc51799a31242/Building%20A%20Dashboard%20With%20IBM%20Cognos%20Analytics.pdf>

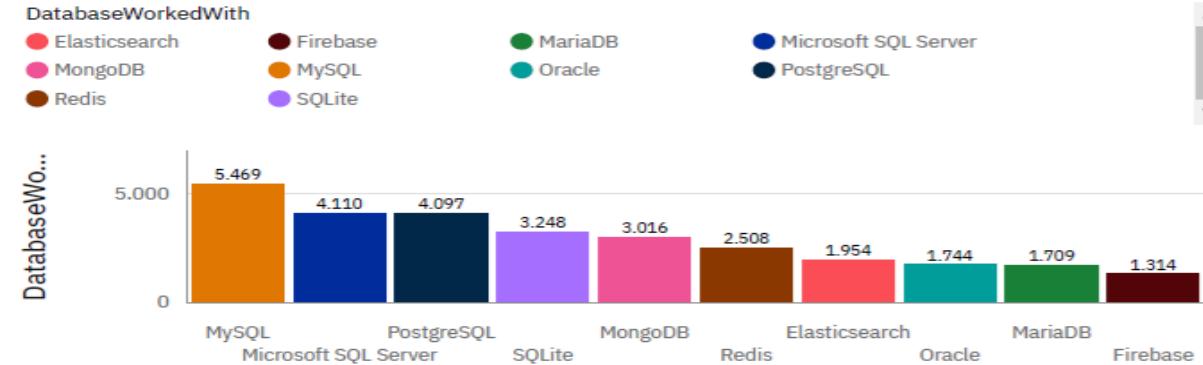
DASHBOARD CURRENT TECHNOLOGY USAGE

Current Technology Usage

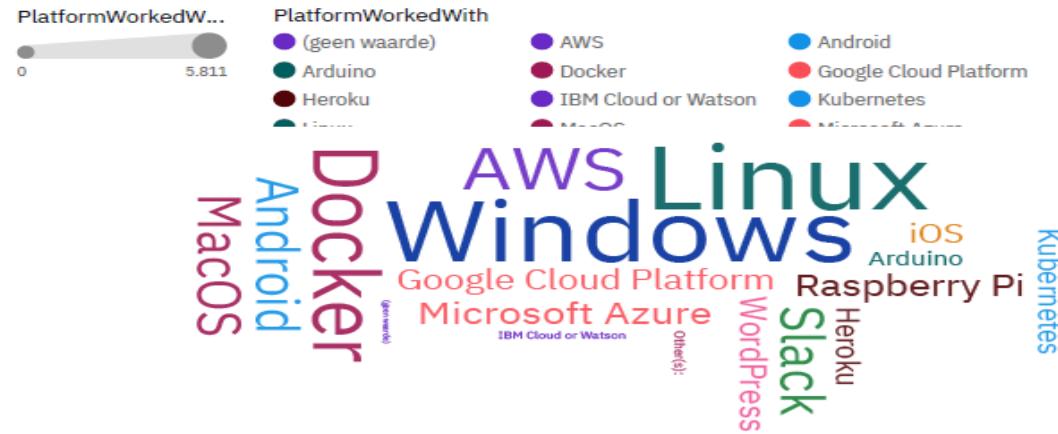
Top 10 Languages worked with



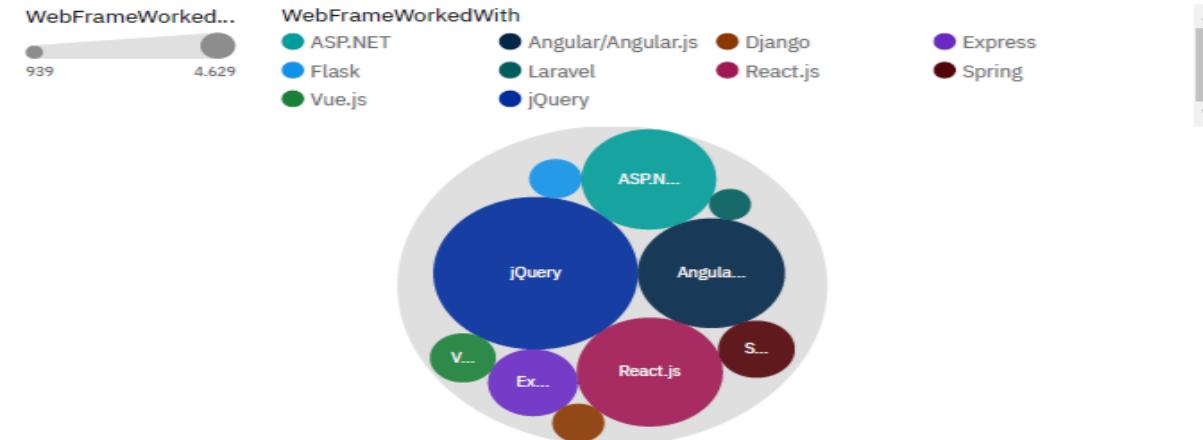
Top 10 Databases worked with



Platforms worked with



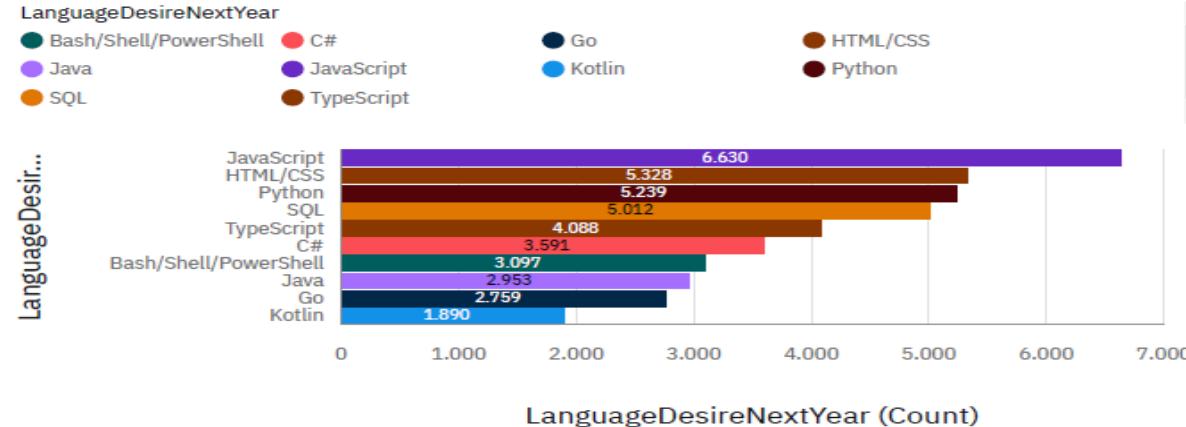
Top 10 Web frames worked with



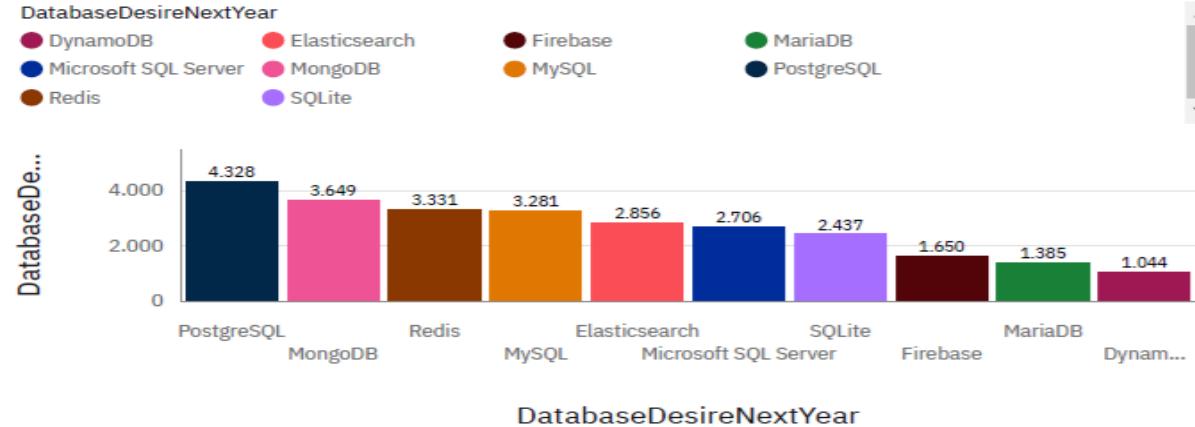
DASHBOARD FUTURE TECHNOLOGY TREND

Future Technology Trend

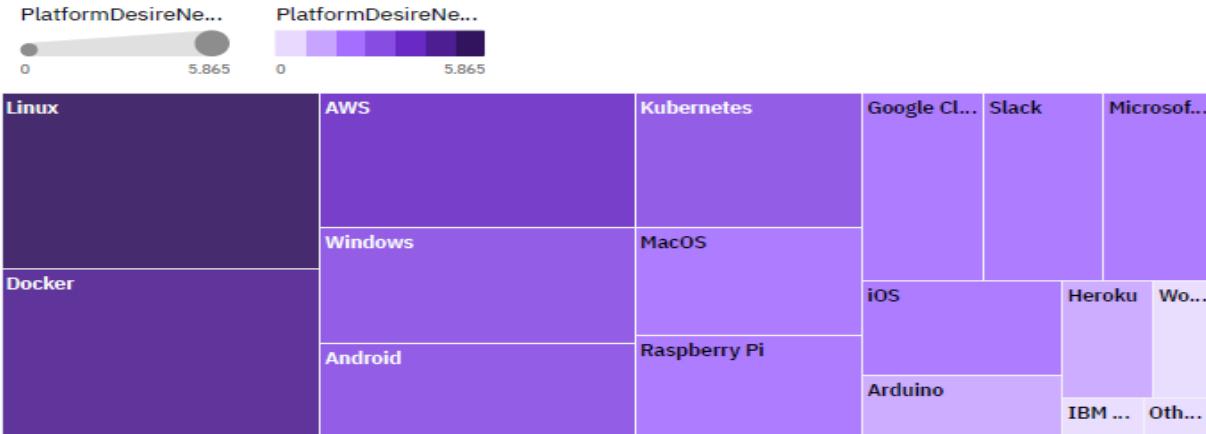
Top 10 Language Desire Next Year



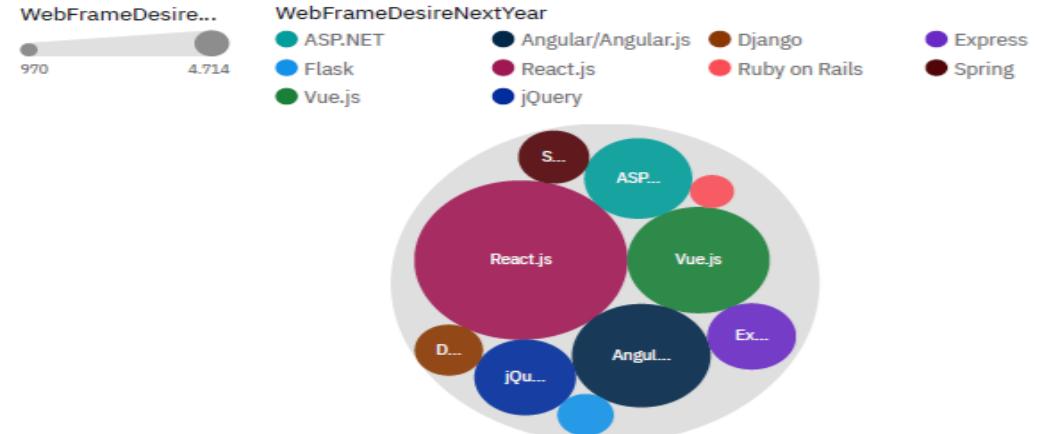
Top 10 Database Desire Next Year



Platform Desire Next Year



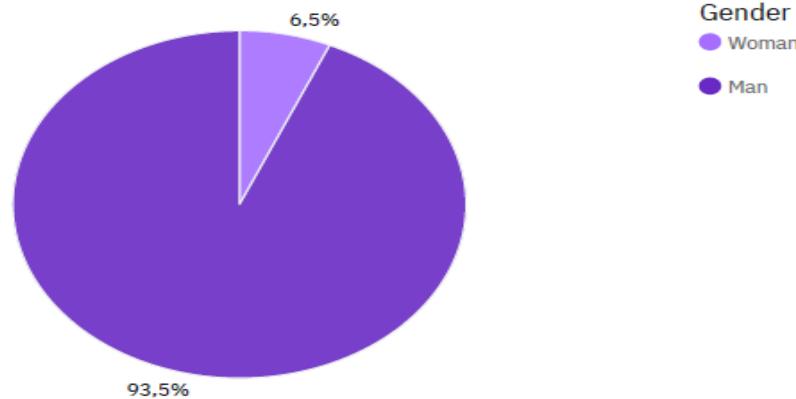
Top 10 Web Frame Desire Next Year



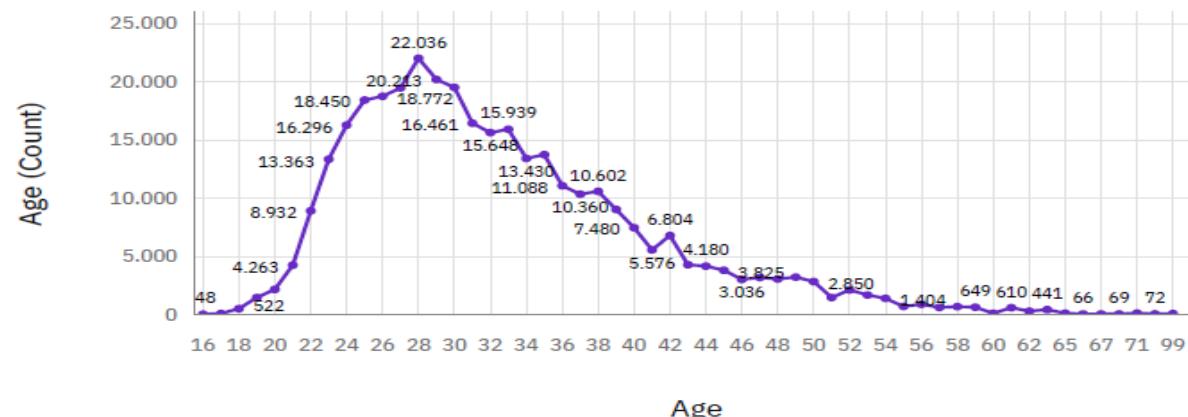
DASHBOARD DEMOGRAPHICS

Demographics

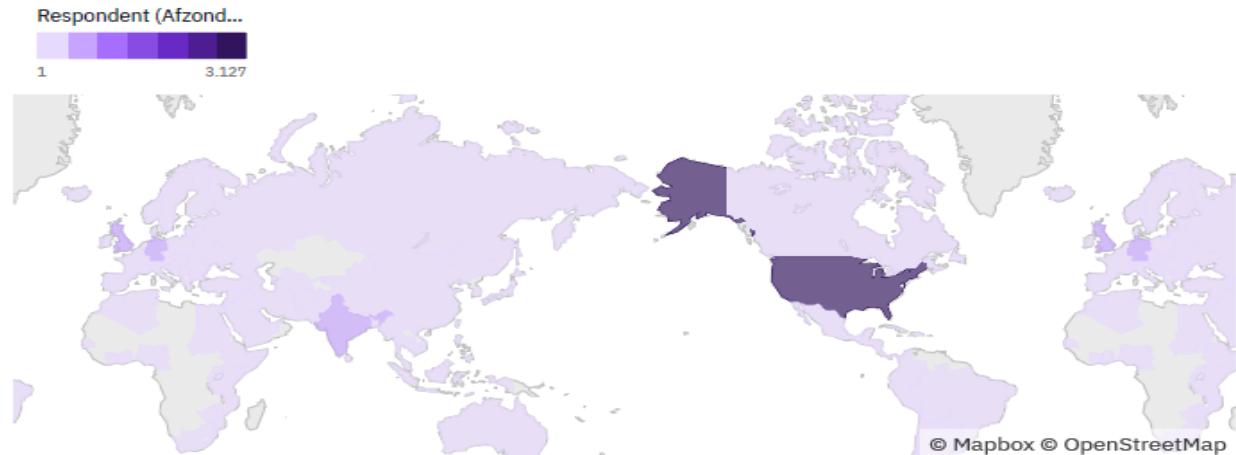
Respondent Classified by Gender



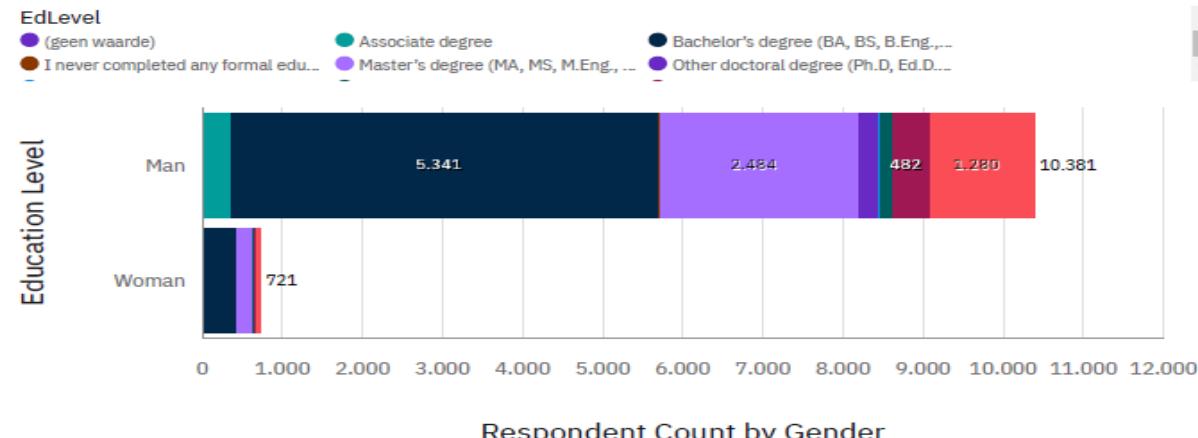
Respondent count by Age



Respondent Count for Countries



Respondent Gender count classified by Education Level



DISCUSSION



- ❖ Will opensource DB's, platforms and languages be the only technology available in the future ?
- ❖ How do we attract more women to the tech industry which is now mostly dominated by men.

OVERALL FINDINGS & IMPLICATIONS

Findings

- ❖ JavaScript still popular but losing ground to TypeScript
- ❖ The programming world is still mostly dominated by men from developed countries.
- ❖ Opensource databases like PostgreSQL, MongoDB, Redis are becoming more popular

Implications

- ❖ JavaScript Developers should also educate themselves into TypeScript to keep up with the new demand.
- ❖ Make the industry more interesting for women and people from less developed countries
- ❖ Companies should look to move their DB's over to the opensource databases in time

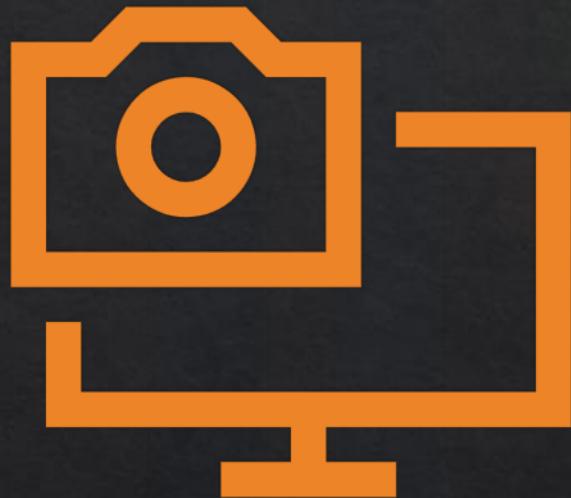
CONCLUSION



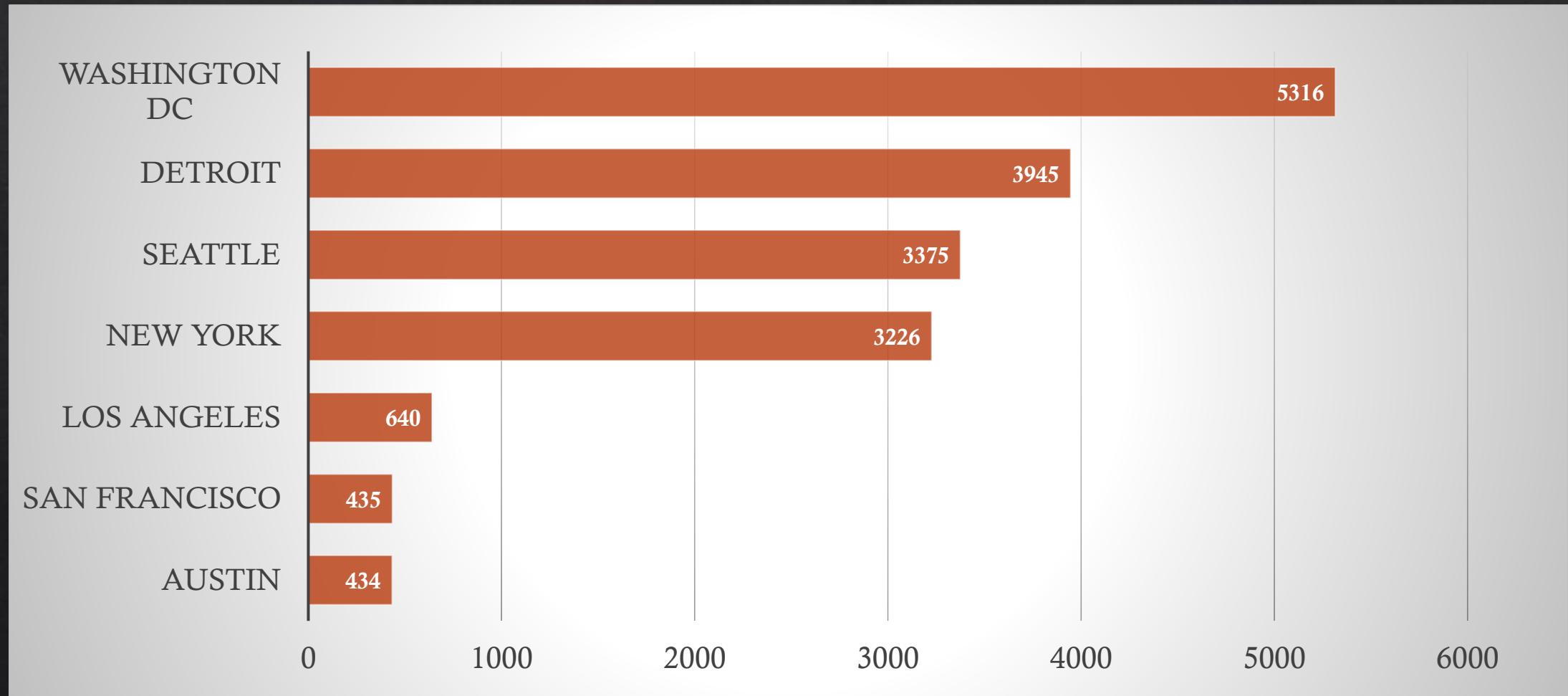
- ❖ To stay relevant in the technology field, it's important to learn web-based language & non-relational database.
- ❖ Opensource DB's is the right direction for future IT investment in expanding data systems
- ❖ TypeScript probably will overtake JavaScript in the future.

APPENDIX

- ❖ In the next slides you will find some useful information about job postings in the Major cities of the USA. And average salary for different program languages.



JOB POSTINGS MAJOR CITIES



POPULAR LANGUAGES AVERAGE SALARY

