



STACK OVERFLOW DEVELOPER SURVEY 2019

Crovella, Francesco Pio

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OUTLINE



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- *Introduction*
- *Methodology*
- *Results*
 - *Visualization – Charts*
 - *Dashboard*
- *Discussion*
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- *Conclusion*
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EXECUTIVE SUMMARY



- *This survey is the most important analysis in the world about developers*
- *It reveals developer's favorite languages and technologies*
- *This presentation report shows the trend as follows:*
 - *Programming Languages*
 - *Databases*
 - *Platforms*
 - *WebFrames*
- *The aim of this analysis is to identify the current and future technological hard skills that modern developers have and want*

INTRODUCTION



- *This report has been produced for coders and companies with regards to the current IT world and the related future*
- *This results will help people identify future hard skills in the tech/digital market*
- *Recommendations will be presented in the next slides*

METHODOLOGY



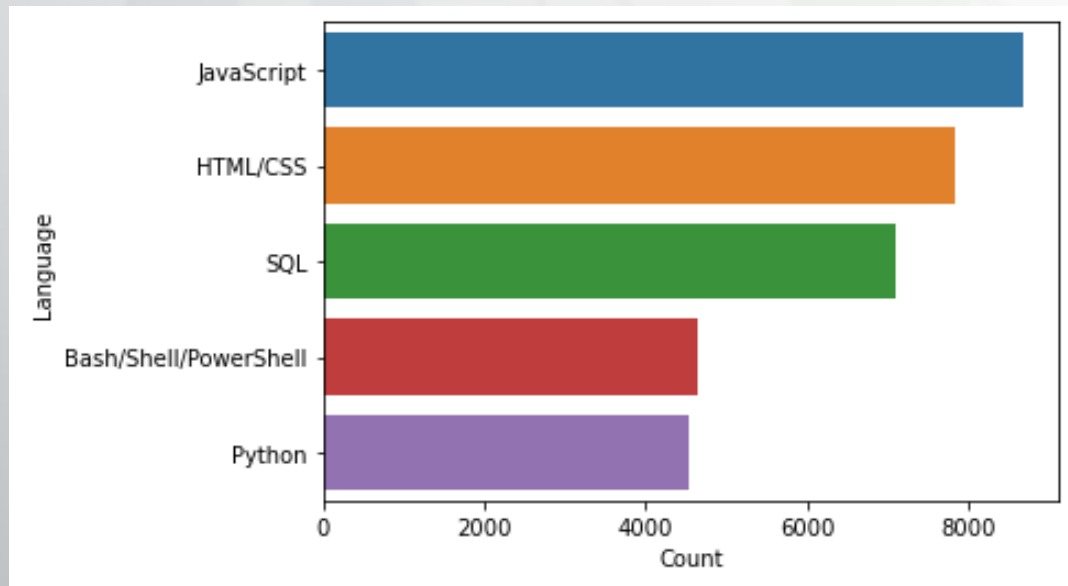
- For this analysis, a modified subset of the survey has been used. The different data analysis phase are the following:
 1. Data Wrangling → for removing duplicates, managing missing values and normalizing data
 2. Exploratory Data Analysis → for finding data distribution, eventual outliers and correlation
 3. Data Visualization → for visualizing the different results and distributions
 4. Dashboarding → for creating a dynamic web dashboard
- The first three steps have been carried out by using *Python* language and *Jupyter Notebooks*
- The dashboarding phase has been carried out by using *IBM Cognos Dashboard Embedded (CDE)*

RESULTS

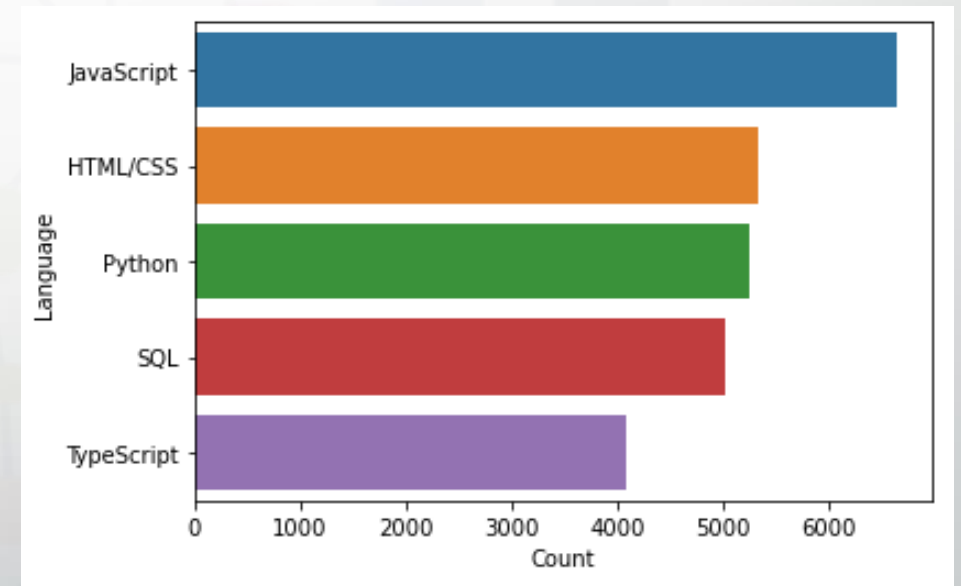


PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

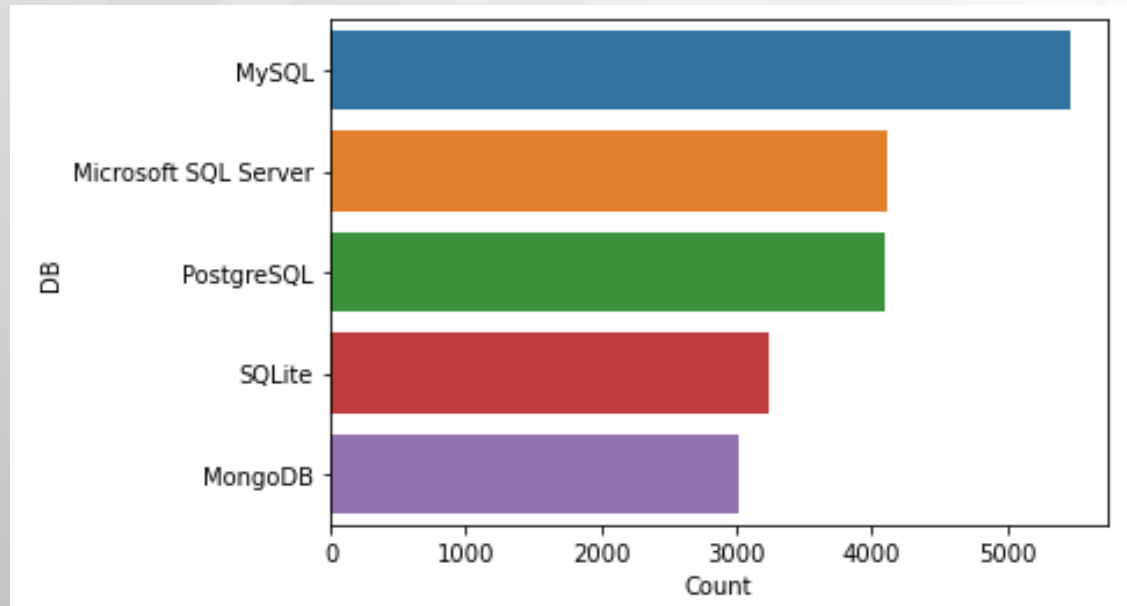
- Both JavaScript and HTML/CSS are the top 2 most popular languages for this year and next year
- Python and TypeScript have obtained more interest for next year
- Bash/Shell/PowerShell and SQL have obtained less interest for next year

Implications

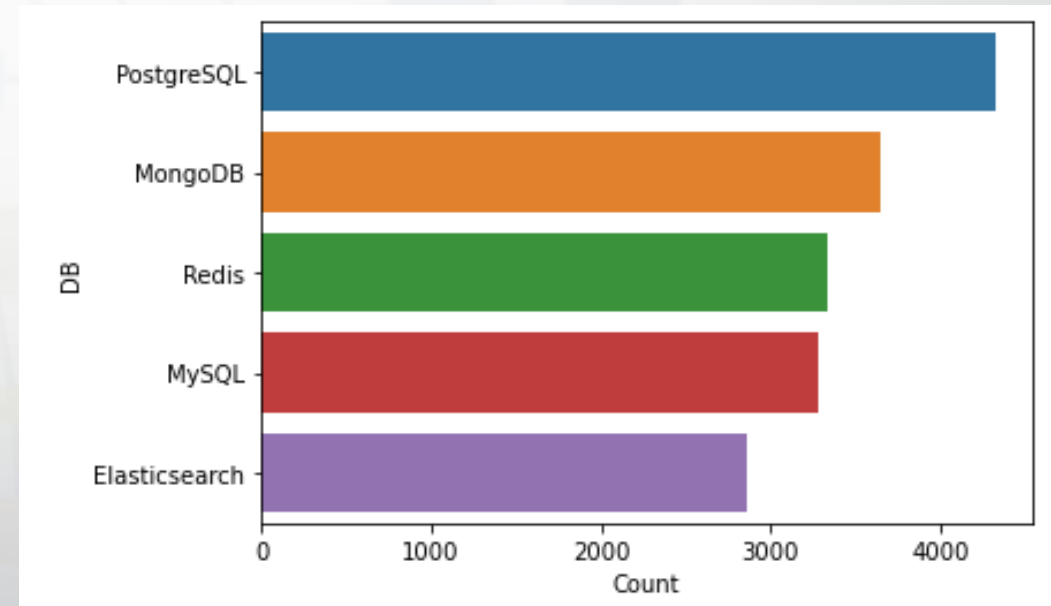
- Employ coders skilled in JavaScript and HTML/CSS
- Employ more coders skilled in Python and TypeScript
- Employ less coders skilled in SQL and Bash/Shell/PowerShell

DATABASE TRENDS

Current Year



Next Year



DBATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- PostgreSQL and MongoDB have obtained more interest for next year
- MySQL, Microsoft SQL Server and SQLite have obtained less interest for next year
- Redis and Elasticsearch have obtained new interest for next year

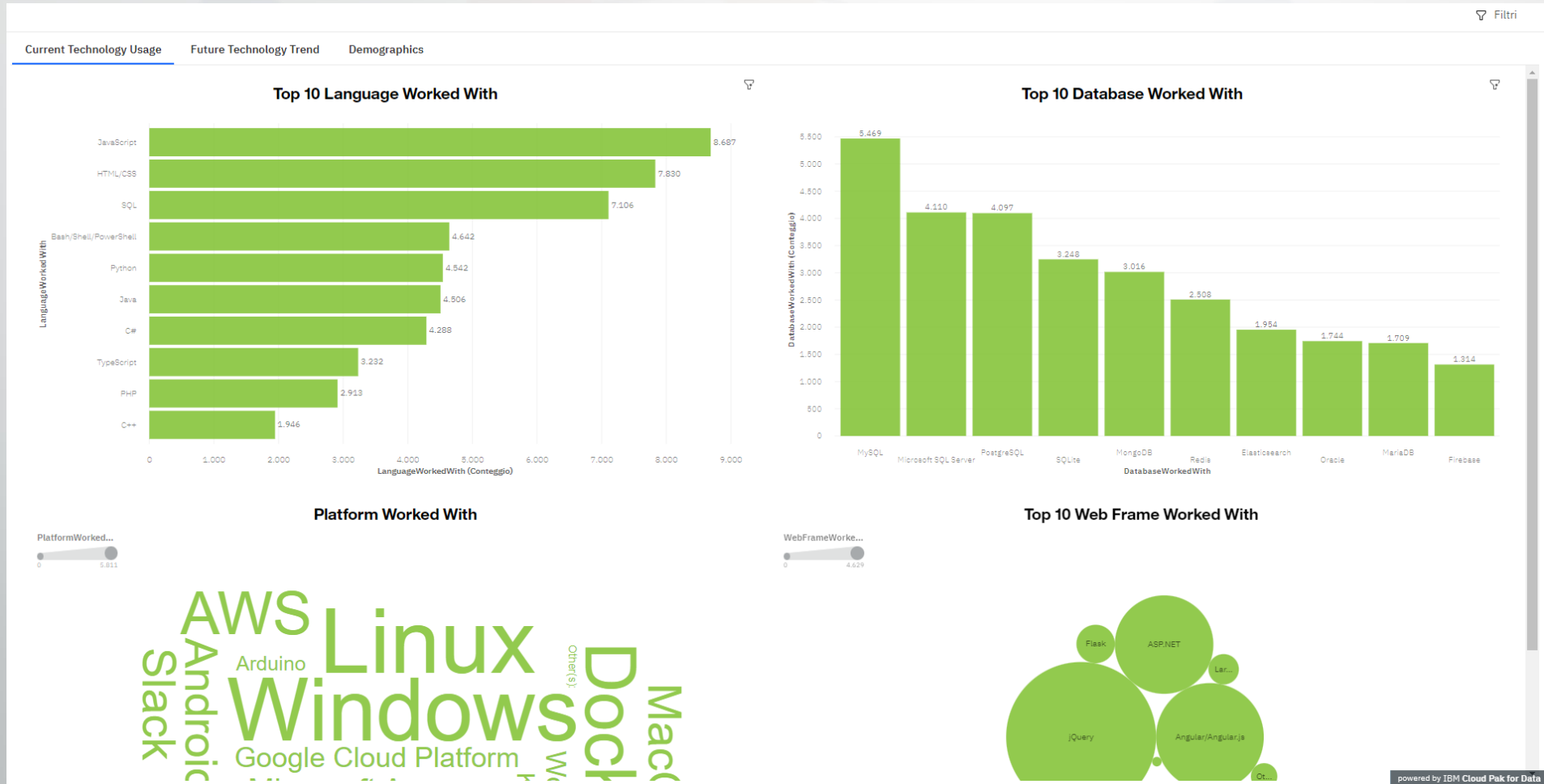
Implications

- Employ more coders skilled in PostgreSQL and MongoDB
- Employ less coders skilled in MySQL, Microsoft SQL Server and SQLite
- Employ more coders skilled in Redis and Elasticsearch

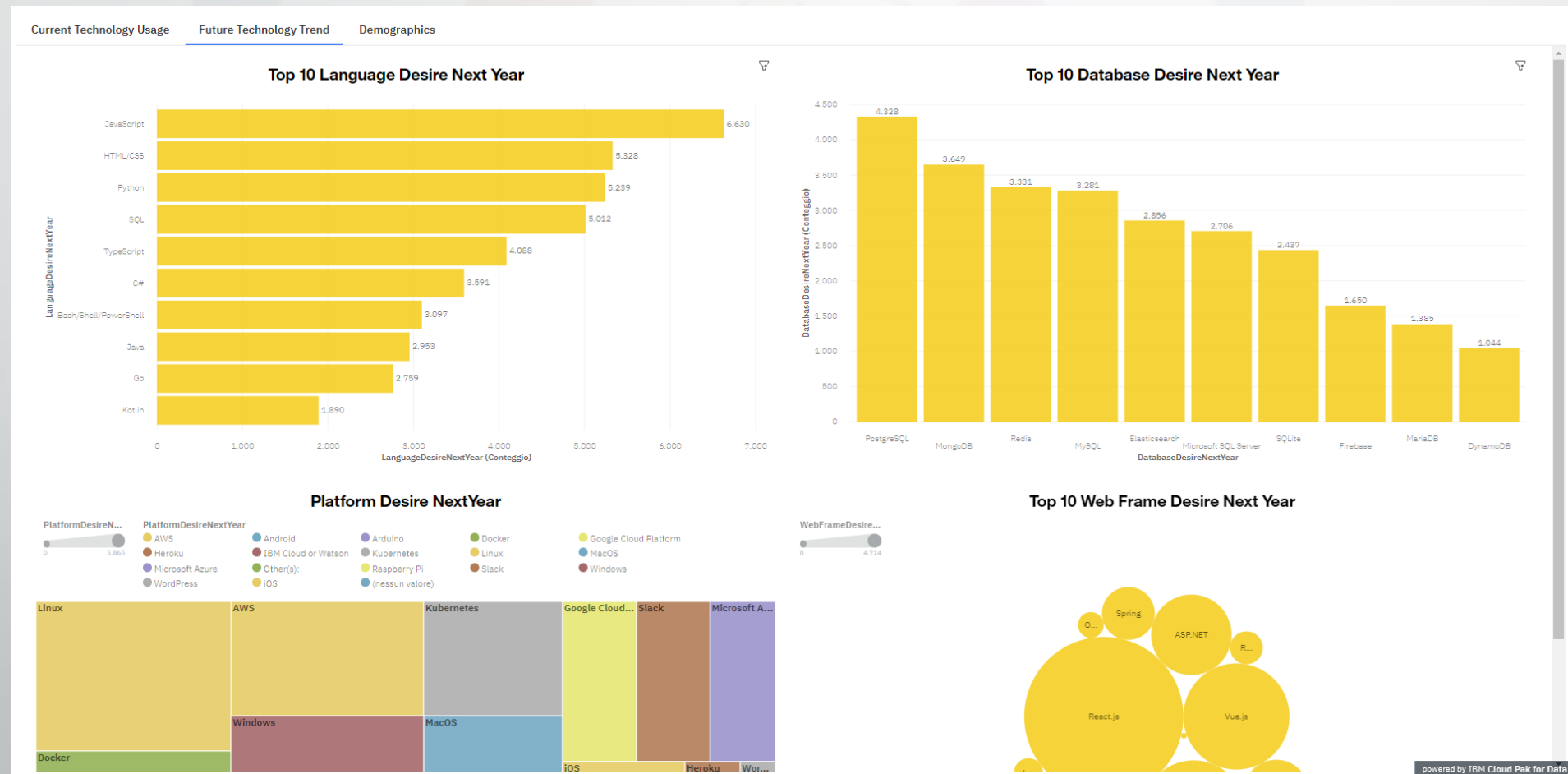
DASHBOARD

Click [here](#) for the IBM Cognos dashboard

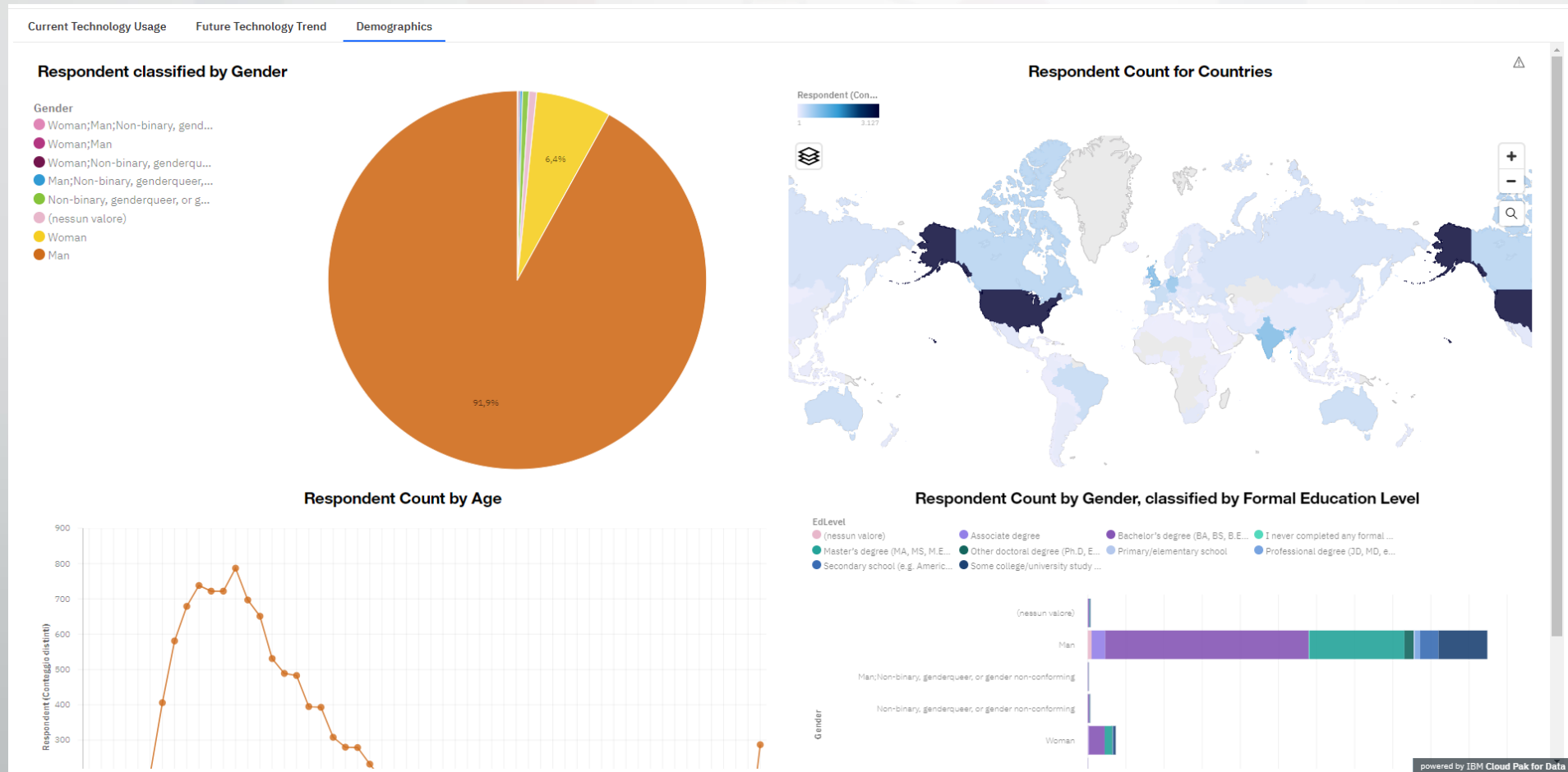
DASHBOARD TAB 1



DASHBOARD TAB 2



DASHBOARD TAB 3



DISCUSSION



OVERALL FINDINGS & IMPLICATIONS

Overall findings

- Interest in Python language is growing
- Redis, Elasticsearch, PostgreSQL and MongoDB are gaining more interest in the DBs world
- Windows and Docker are the most desired platforms
- React.js is the most desired web frame and Angular.js confirms the presence in the market

Implications

- Continue to employ coders skilled in JavaScript and HTML/CSS
- Employ more coders skilled in Python, TypeScript, Redis, Elasticsearch, PostgreSQL, MongoDB, React.js, Angular.js and Vue.js
- Continue to employ coders skilled in Windows, Linux, AWS, Docker and mobile world like Android

CONCLUSION

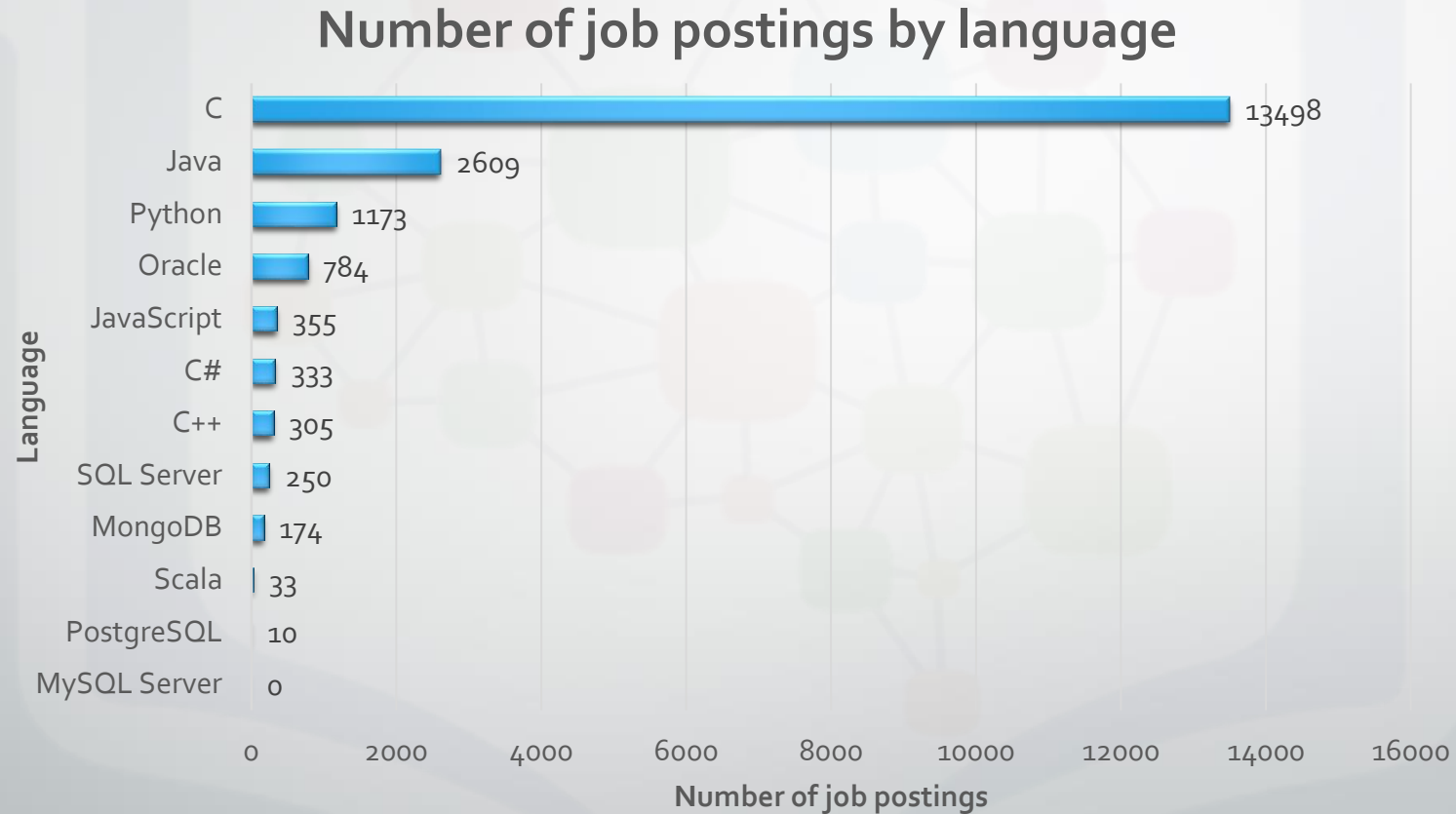


- *Invest more in hiring new human resources skilled in the new technologies*
- *Invest more in awareness and training about new technologies with the current human resources*
- *Define and increase the budget for new technologies*
- *Redefine the budget for the current year's technologies that have no longer interest for the future*

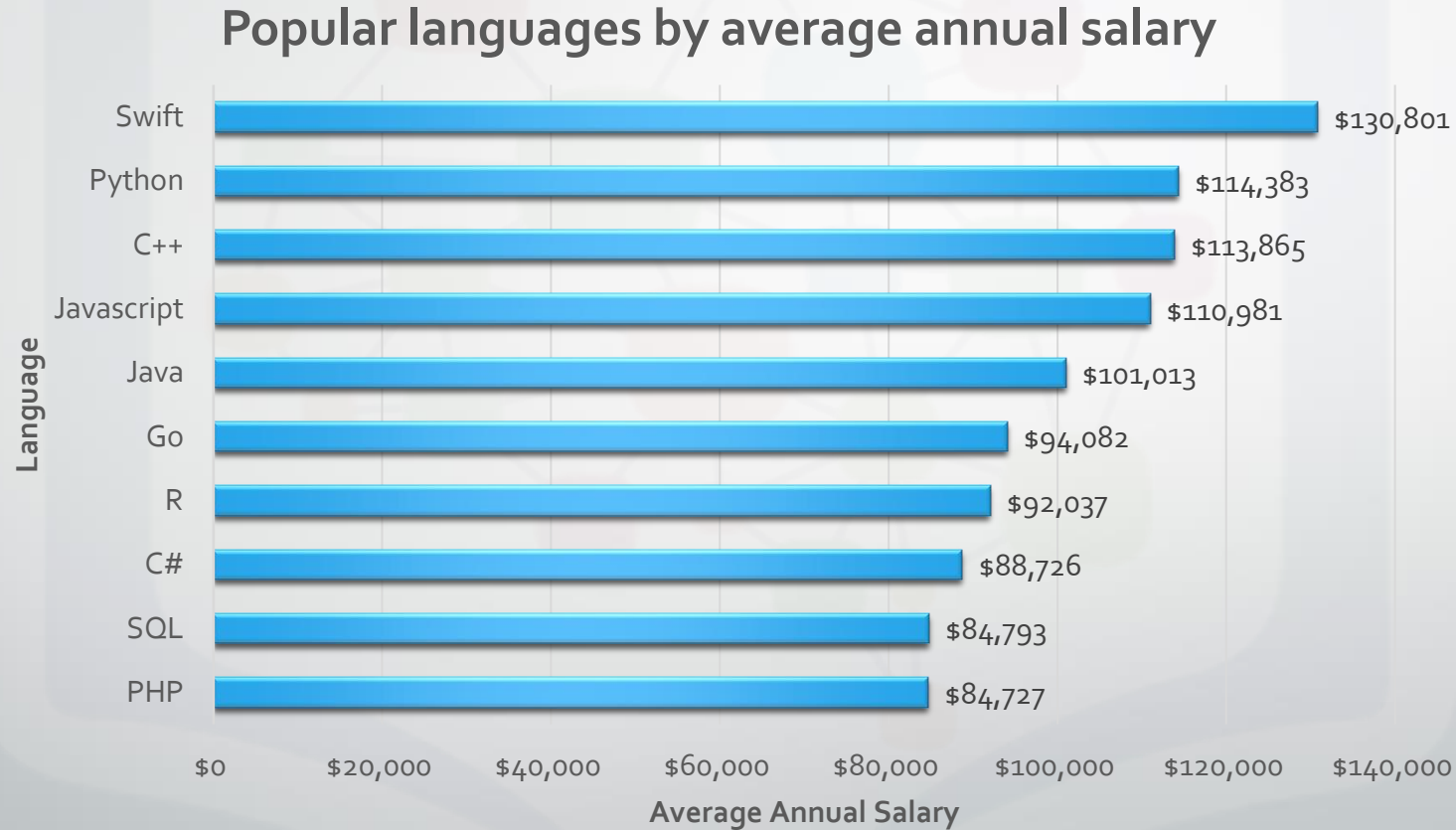
APPENDIX



GITHUB JOB POSTINGS

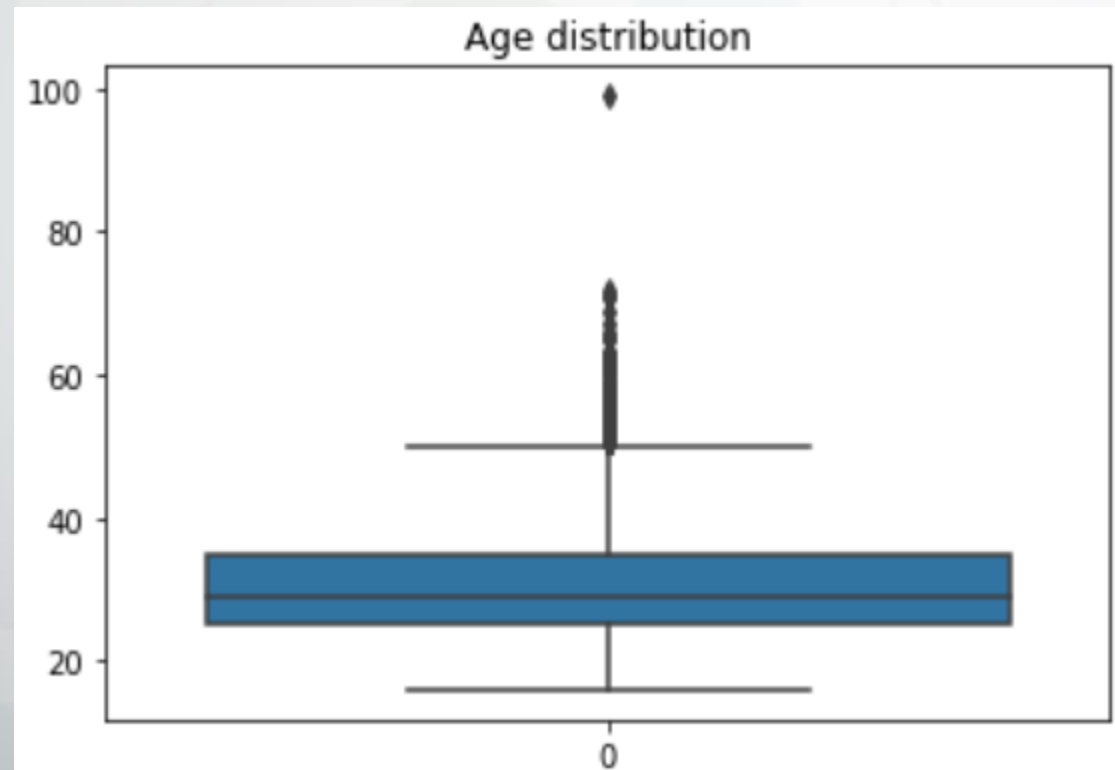


POPULAR LANGUAGES



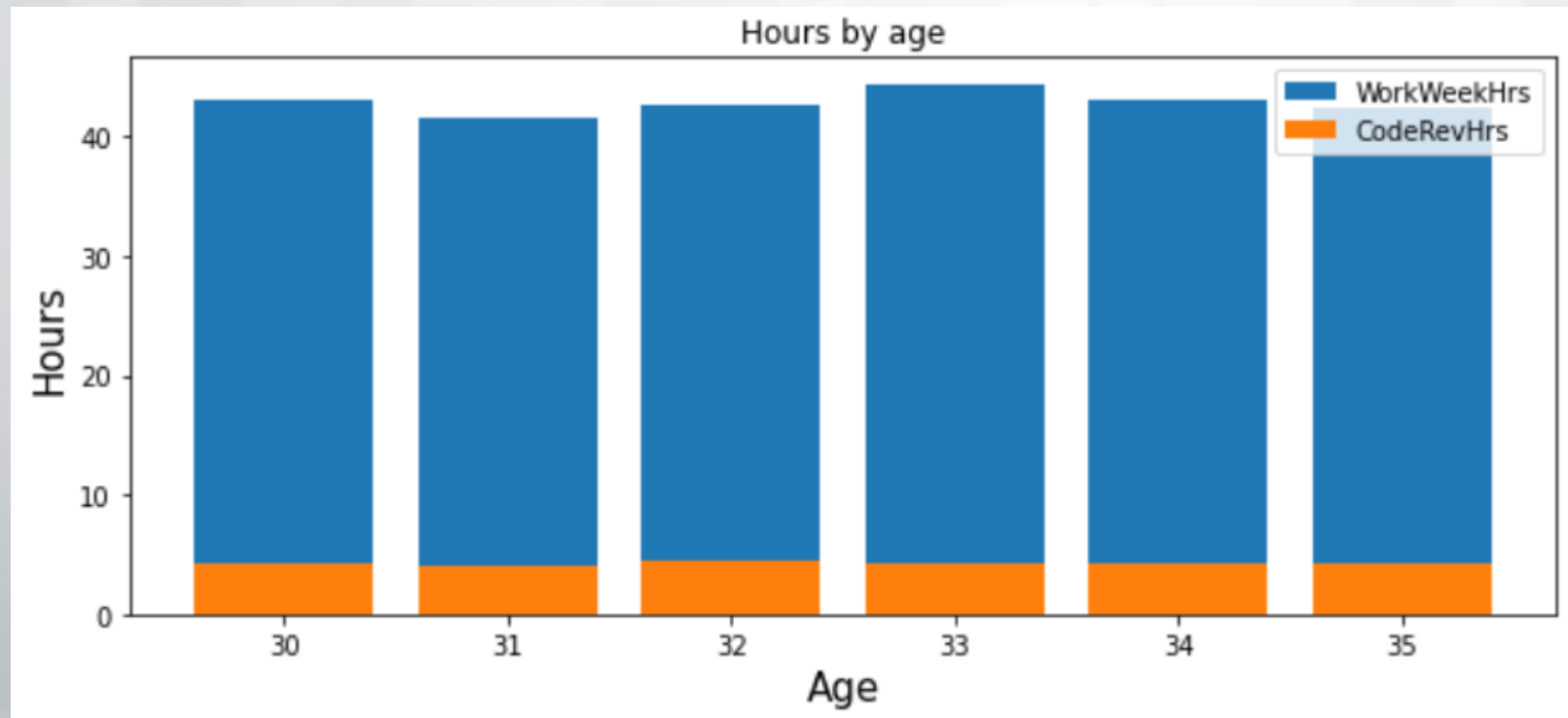
RELEVANT ADDITIONAL CHARTS

Age distribution of developers



RELEVANT ADDITIONAL CHARTS

Work hours distribution by age



RELEVANT ADDITIONAL CHARTS

Distribution of developers

