Report on Programming Languages.

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OUTLINE

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- Methodology
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- Discussion
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EXECUTIVE SUMMARY

- To keep up with the rapid evolution of technology, we have to stay updated on the future of databases and technology
- We will be looking over various sources that will present us the trends of programming languages, jobs, demographics, and databases, all of which pertains to IT
- This presentation will include charts and dashboards from various sources including
  - Microsoft Excel
  - Matplotlib (Python)
  - IBM Cognos Analytics

INTRODUCTION

- Technology keeps improving each year, to keep up with the rapid evolution of technology, we have to stay updated on the future of databases and technology
- We will be looking over various sources that will present us the trends of programming languages, jobs, demographics, and databases, all of which pertains to IT
- What you will gain from this would be information from developers on their opinions of current and preferred technology like languages and databases

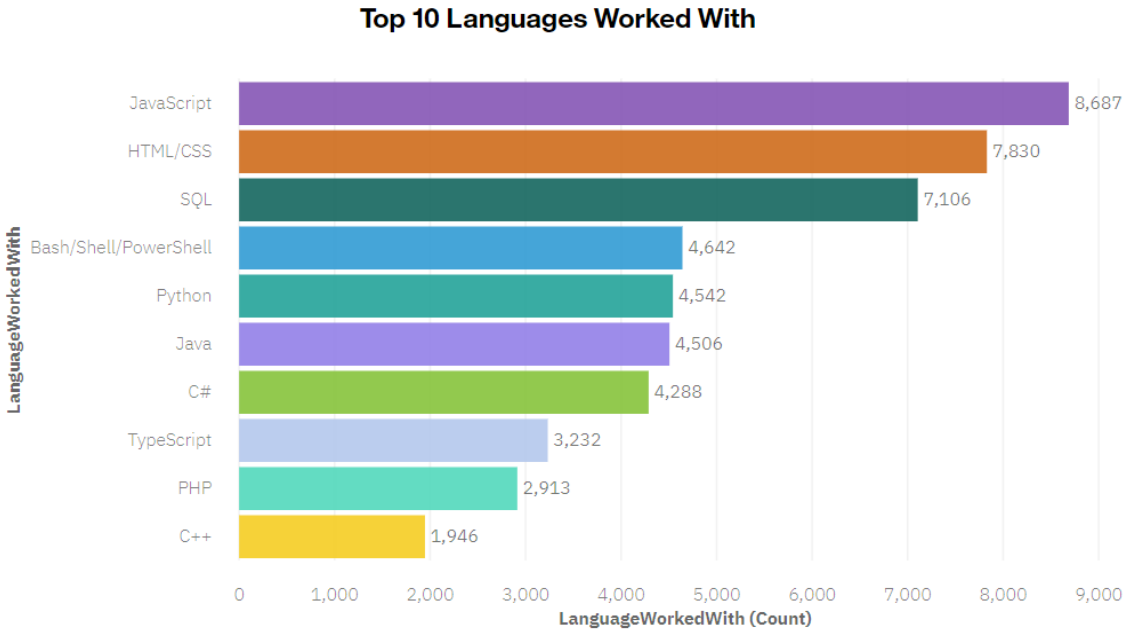
METHODOLOGY

- Our sources of data include public datasets from job postings, training portals and surveys
- I collected the data using techniques such as csv files, API's, web scraping, and retrieving data from databases
- I then "wrangled" the data using Pandas, removing all irrelevant information to get ready for analysis
- Later in the presentation you will see visualizations along with their impact on this case study

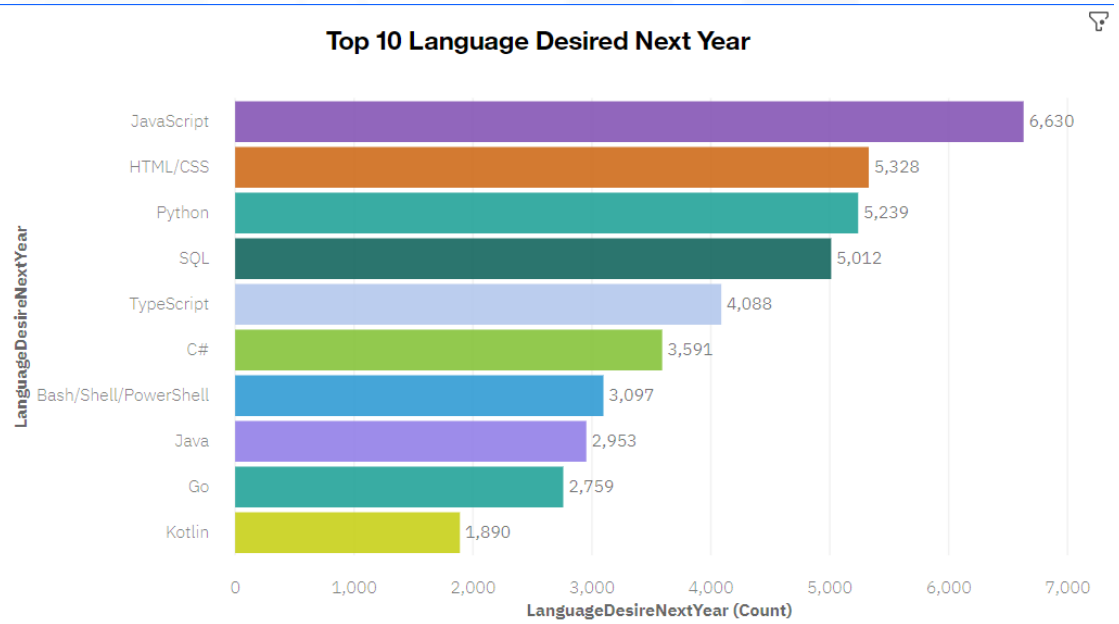
Results Section

PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

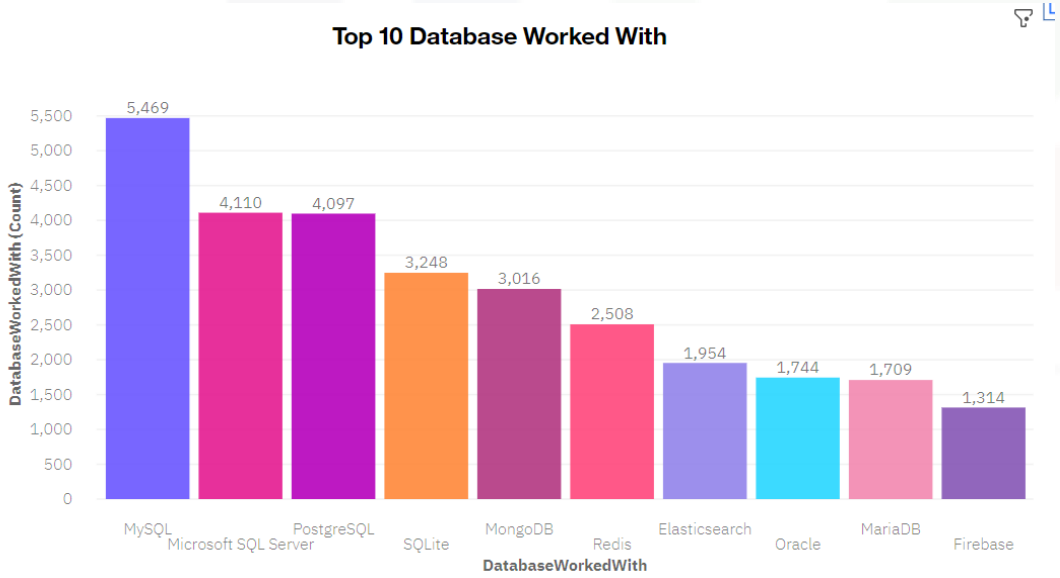
- JavaScript & HTML/CSS are still most desired language
- TypeScript rose in popularity from 8th rank to 5th
- New languages like GO and Kotlin appeared in the next year graph, replacing PHP and C++

Implications

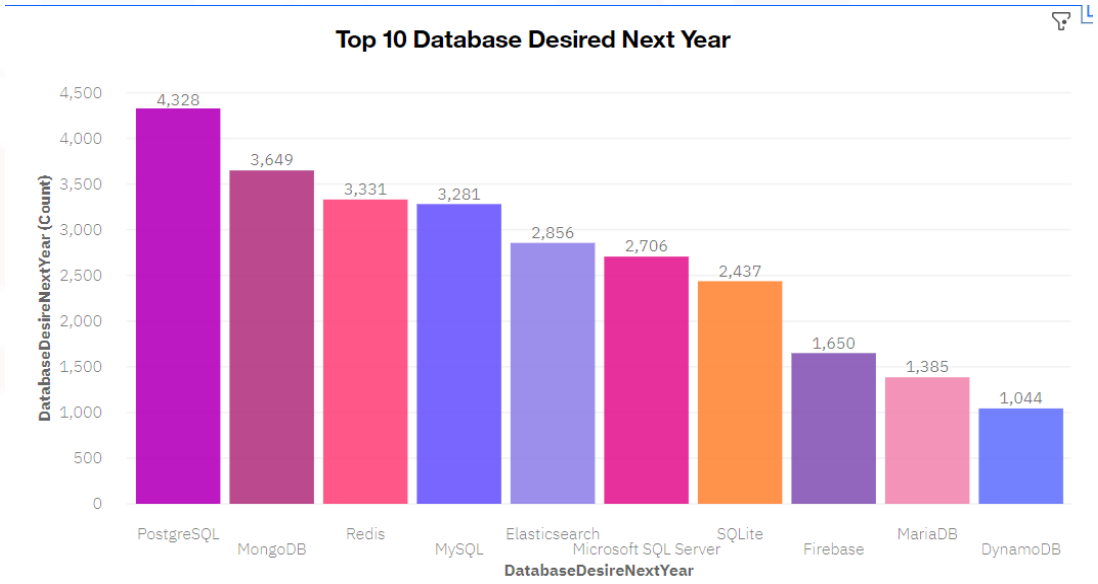
- JavaScript and HTML/CSS are still the backbone of web-based development
- TypeScript is rising because of its similarity to JavaScript and its ease of use
- New technology is being created every year, this also means newer and better languages are being developed

DATABASE TRENDS

Current Year



Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL got replaced as most desired language in the next year chart by PostgreSQL
- MariaDB and Firebase are still at the bottom in the next year chart
- Oracle got completely replaced by DynamoDB in next year chart

Implications

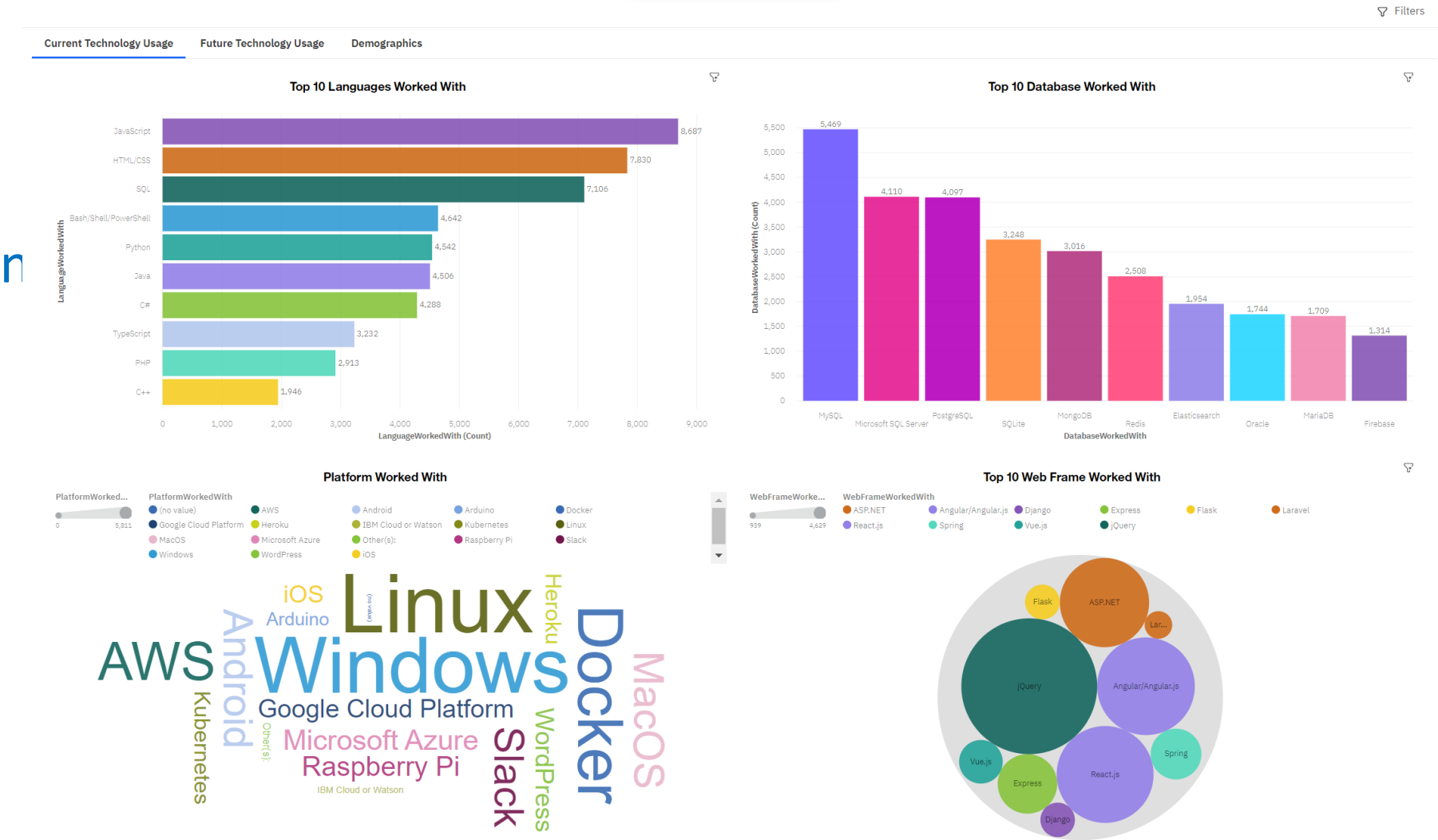
- More people are liking to style and tools that are associated with PostgreSQL
- People are still not liking MariaDB and Firebase DB because they are not fully developed yet
- Oracle stopped getting better, why DynamoDB improved enough to be in the top 10

DASHBOARD

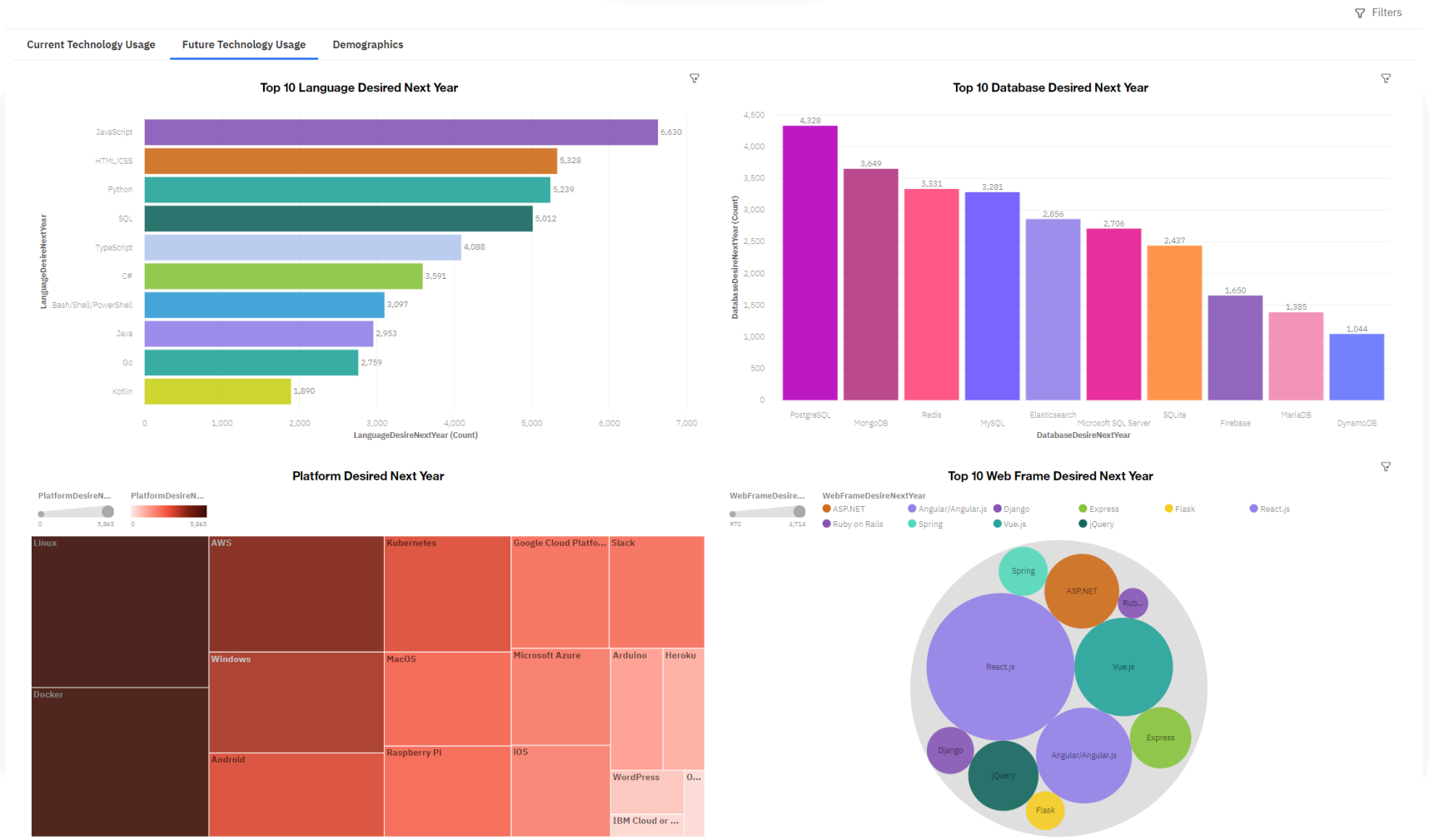
DASHBOARD LINK CLICK HERE

DASHBOARD TAB 1

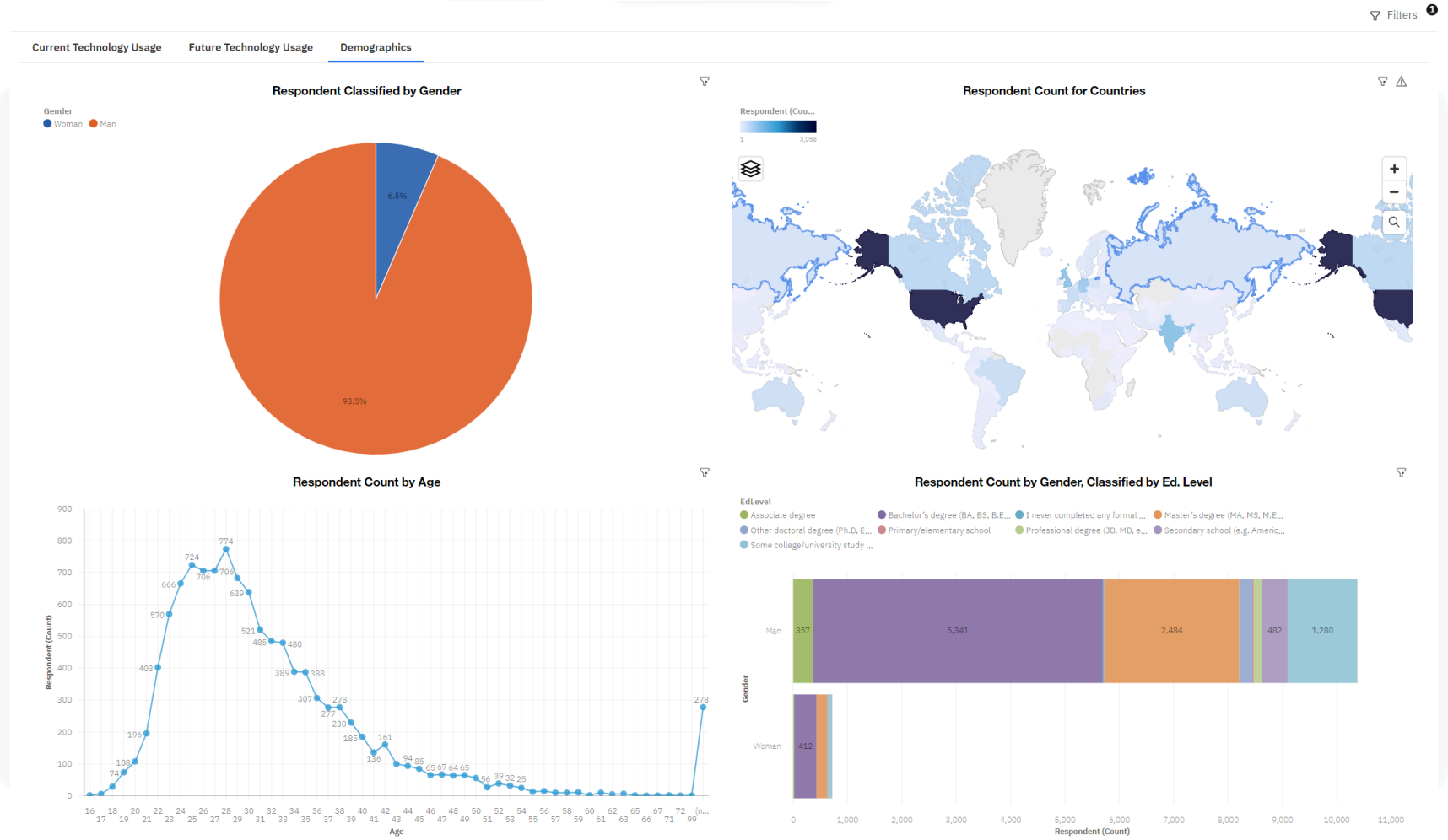
Screen



DASHBOARD TAB 2



DASHBOARD TAB 3



IBM Developer

powered by IBM Cloud Pak for Data

SKILLS NETWORK

DISCUSSION SECTION

OVERALL FINDINGS & IMPLICATIONS

Findings

- JavaScript and HTML/CSS are still the most preferred languages
- Preferred Databases keep changing by year, but MariaDB and Firebase are still at the bottom
- When it comes to programming languages, there is little change in preference through years

Implications

- JavaScript and HTML/CSS are the most preferred languages for web-based
- New changes in technology, specifically in databases, allow for newer database programs to develop
- The main languages are fully fleshed out. Less common ones are being replaces by newer languages that

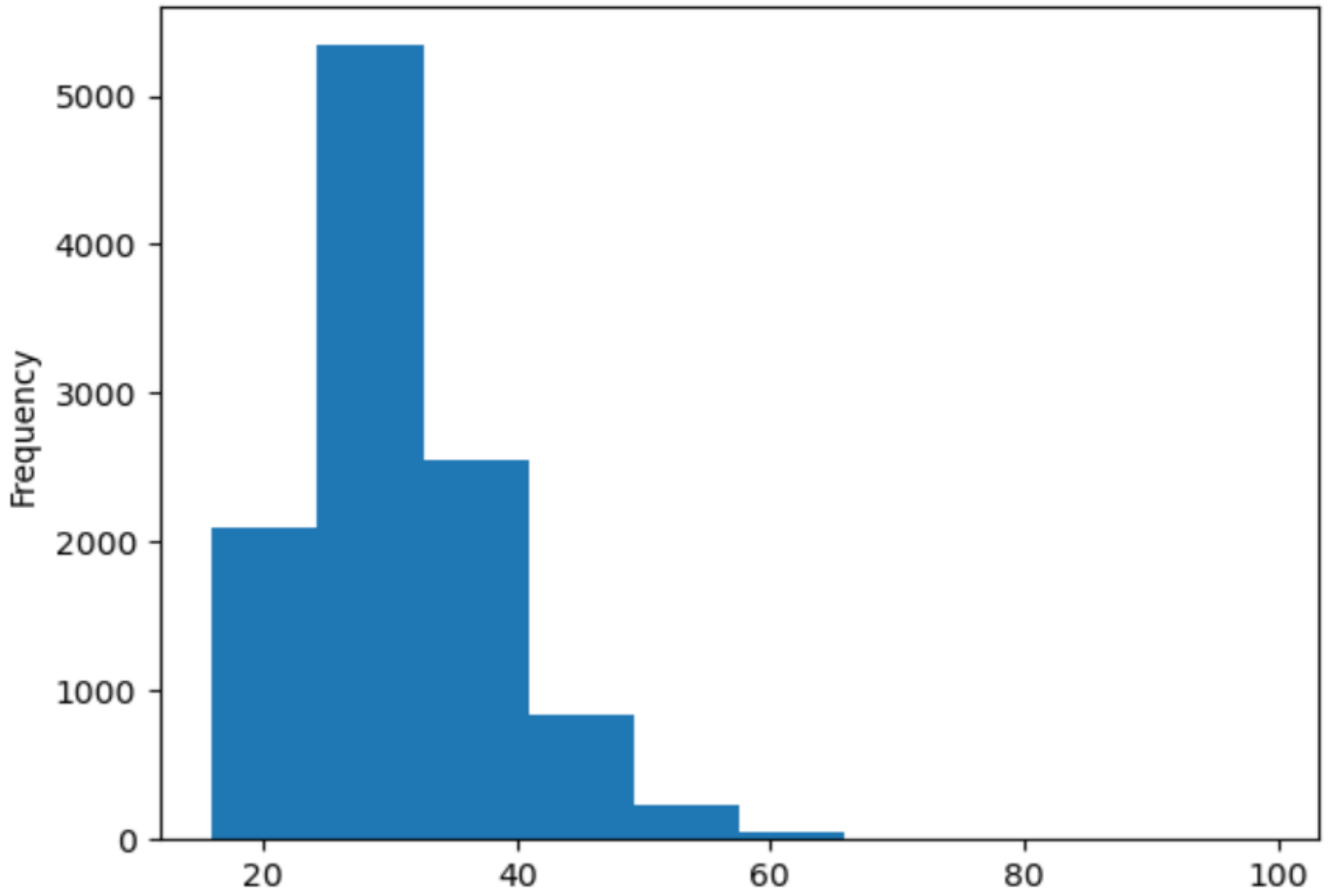
CONCLUSION

- JavaScript and HTML/CSS will stay in the top 10 for years to come because every web-based app uses them
- Databases will continue to fluctuate in preference among developers because of rapid change in technology
- The survey we used comprised mainly of women, with most of the people who responded living mainly in U.S.A.
- The age of the respondents were primarily in the age range of 20-40

APPENDIX

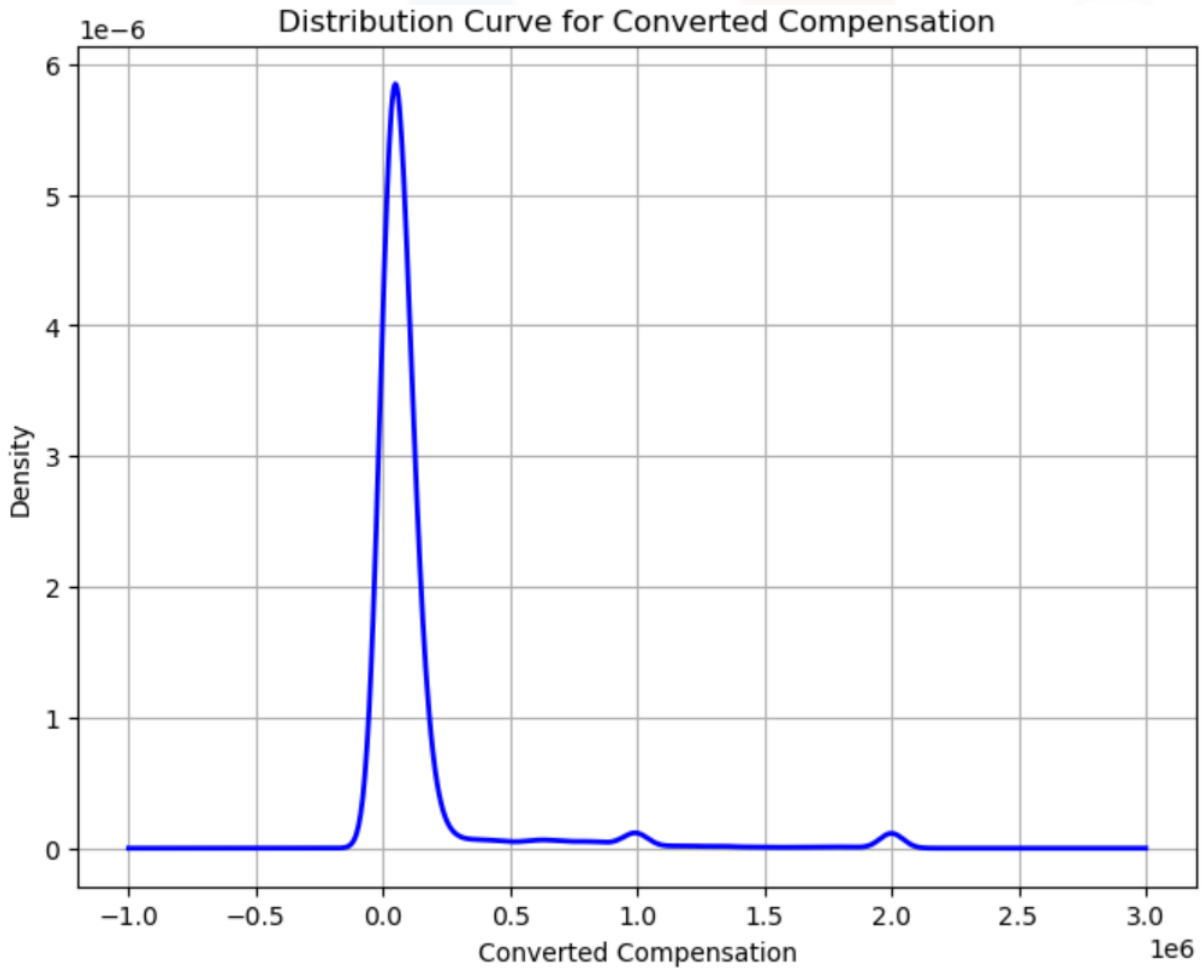
- Distribution of converted compensation

Age Histogram



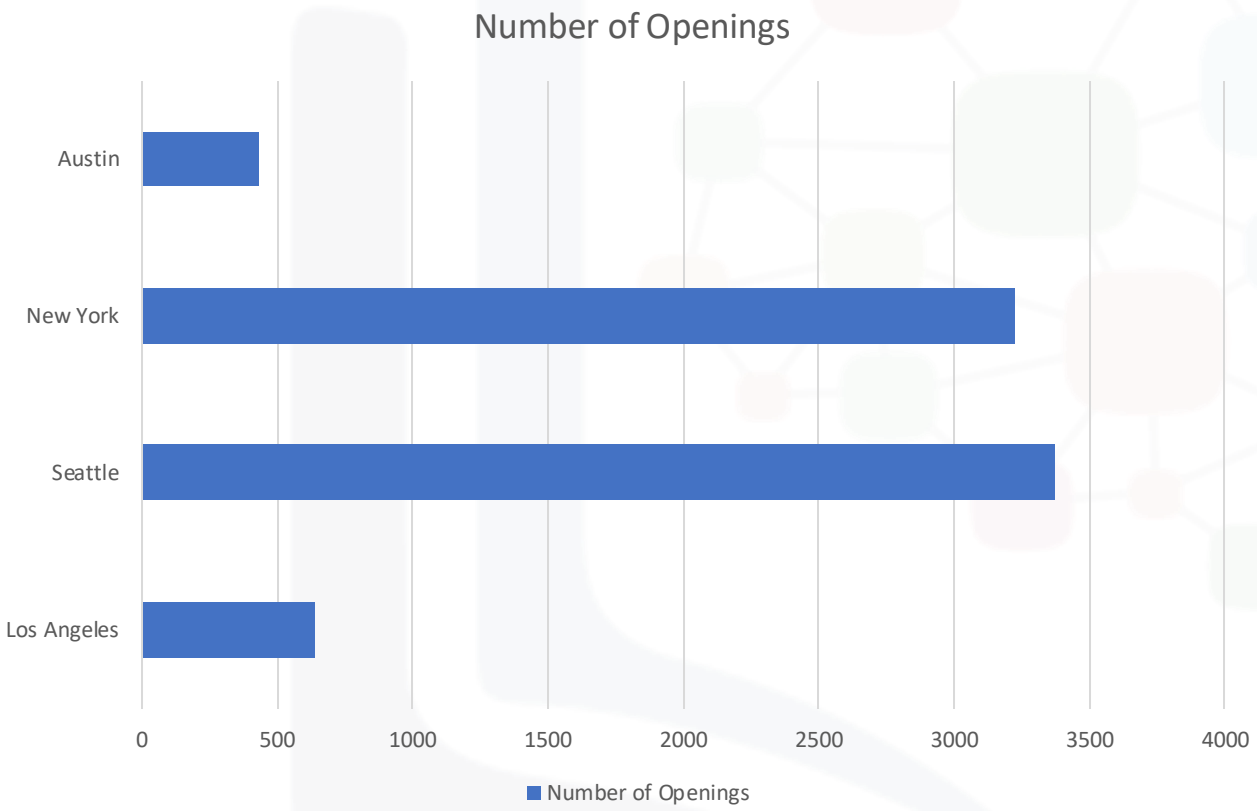
- Distribution of Age from survey

Converted Comp. Curve



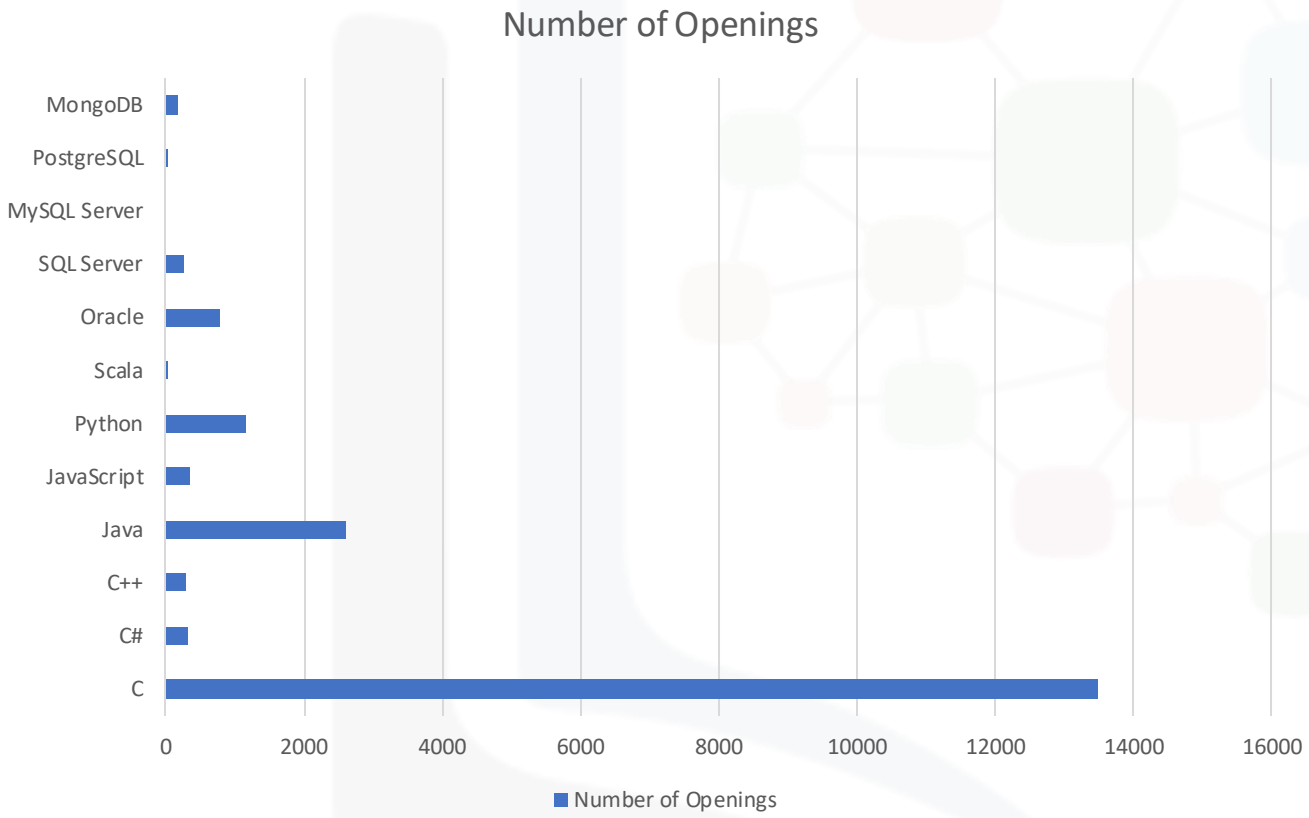
- Distribution of converted compensation

JOB POSTINGS



- Number of Job openings in popular cities

POPULAR LANGUAGES



- Number of Job openings for popular languages/databases