STACK OVERFLOW DEVELOPER SURVEY 2019 REPORT

Neaha Bijo

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IBM Developer

SKILLS NETWORK

OUTLINE

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

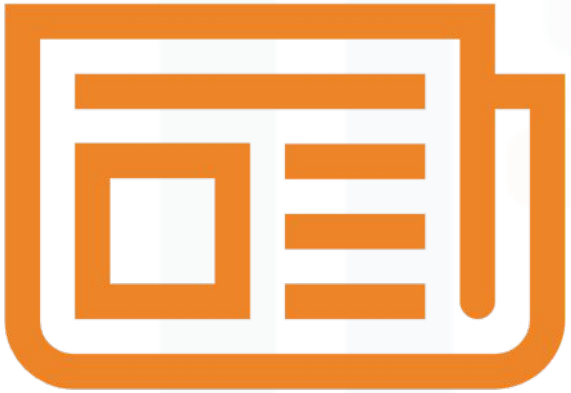
EXECUTIVE SUMMARY

- Data contextualization and analysis goal
- Data Methodology description
  - Data Gathering and Cleansing
  - Data Analysis
  - Data Visualization
- Results presentation
- Overall findings discussion and implications
- Final Conclusion

INTRODUCTION

- Stack Overflow, a popular website for developers, conducted an online survey of software professionals across the world.
- The survey data was later open sourced by Stack Overflow and has 90,000 responses.
- This report is based on the subset of the original dataset and does not represent all developers evenly. (1/10th of original dataset)
- Trends developed to predict what developers prefer now and in the future.

METHODOLOGY



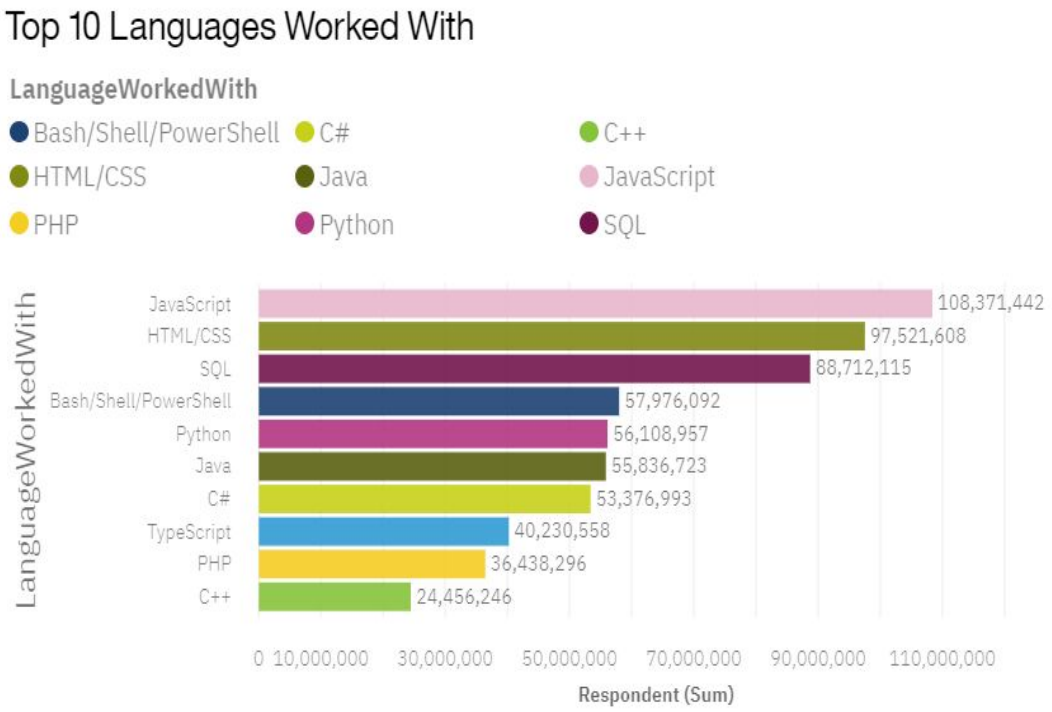
- Collect survey data and explore its contents
  - Web Scraping
  - APIs
- Data Wrangling
- Exploratory Data Analysis
  - Analyzing data distribution
  - Handling Outlier
  - Correlation
- Data Visualization
- Dashboards

RESULTS

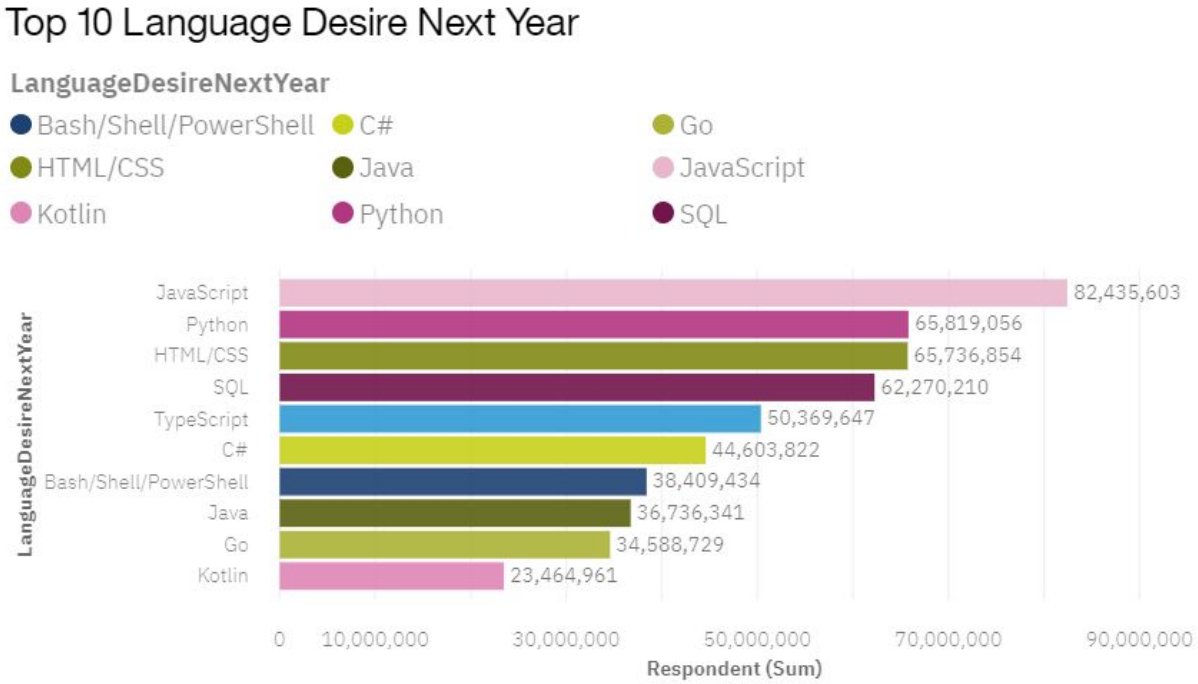
https://dataplatform.cloud.ibm.com/analytics/notebooks/v2/31853631-8cb5-4141-acac-905e4acca8dd/view?access_token=82e8ceee6cf589a4dae4b05d364eaaa028b0a7c397074f6526bc184465a29685&context=cpdaas

PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

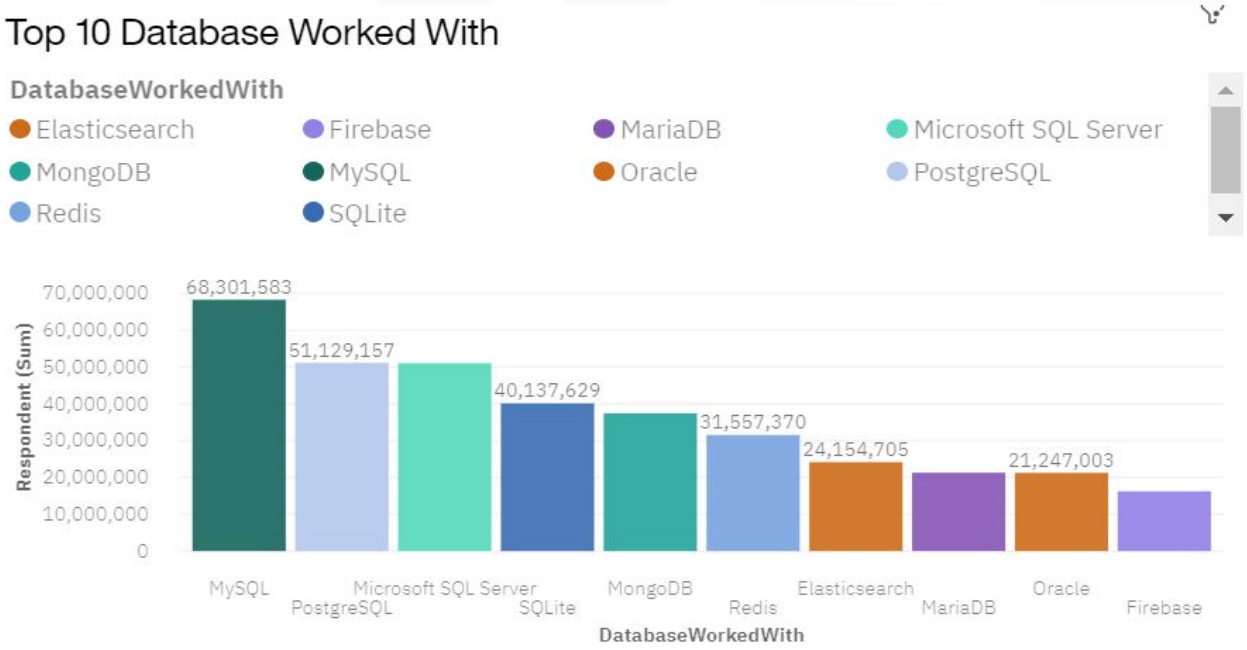
- JavaScript keeps its position as the preferred language for developers to use
- Python is the fastest growing language and the preference of HTML CSS has decreased
- Preference of C# and C++ decreases

Implications

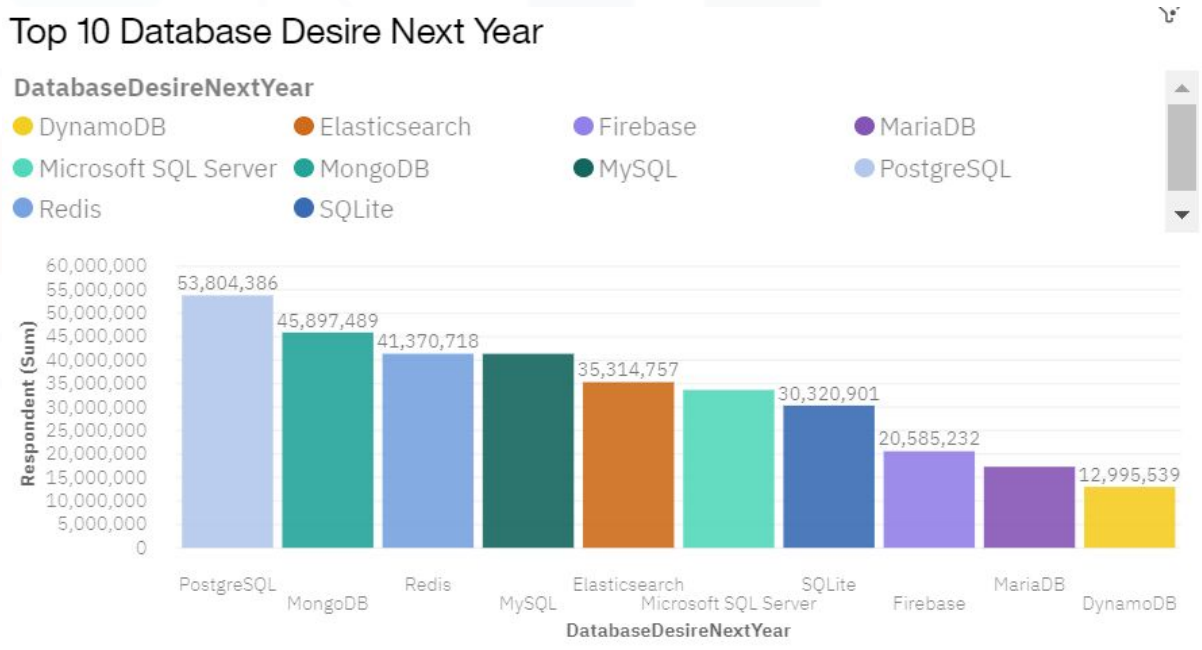
- Possible developers migrate from HTML CSS to python

DATABASE TRENDS

Current Year



Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL is the most used database.
- Interest in Microsoft SQL Server and SQLite is decreasing.
- Increasing interest in PostgreSQL and MongoDB.

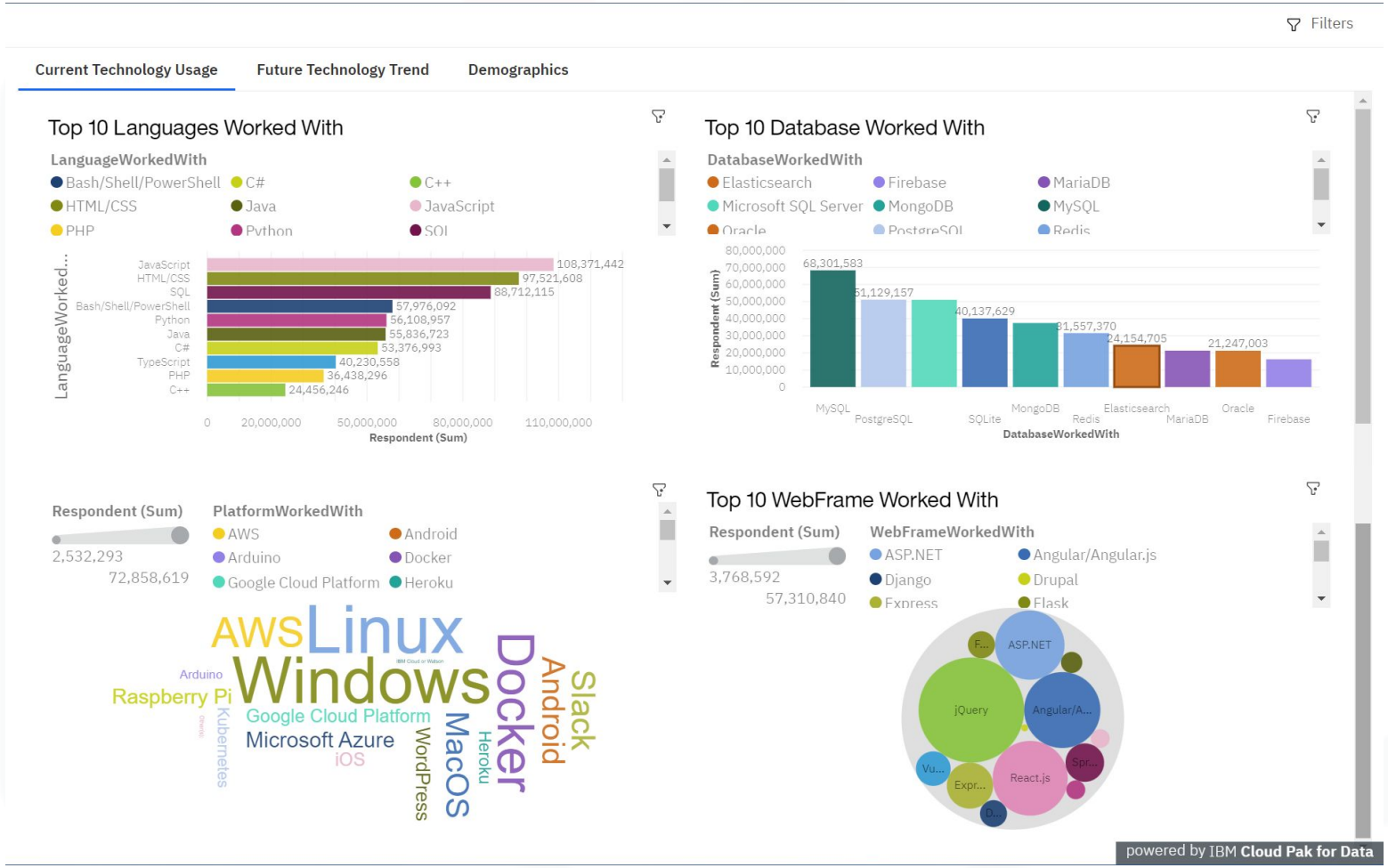
Implications

- Microsoft SQL Sever and SQLite will become redundant.
- PostgreSQL and MongoDB establishment in the market.

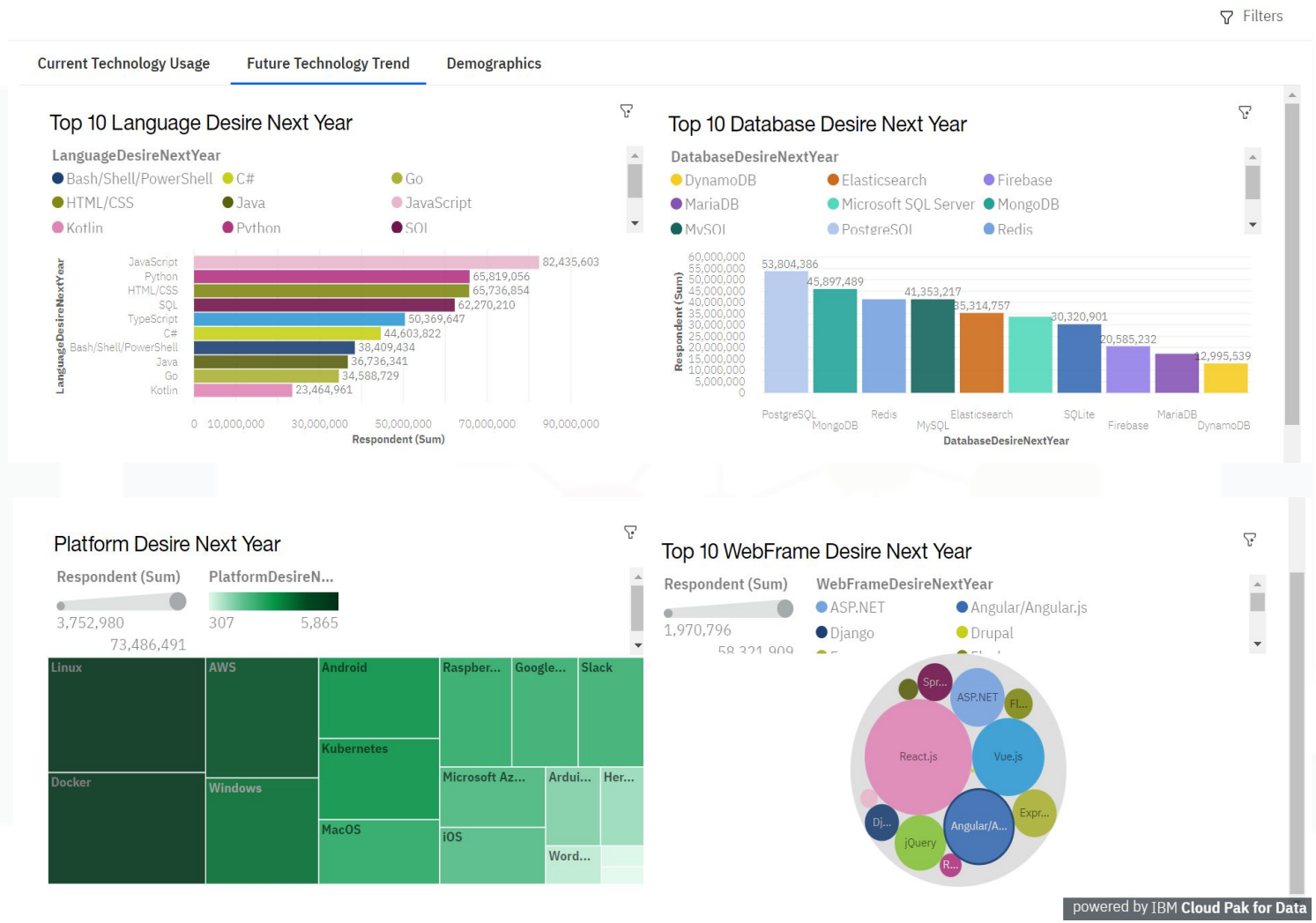
DASHBOARD

https://dataplatform.cloud.ibm.com/dashboards/db3109bc-702e-48a6-b1c6-0fc2c7ede4ce/view/0436dd0c14b06ed25ee7dce407cf2c057963200cb1bbd602d5857b490b312397a8684591c87e1a0fd2145131a5be135dce

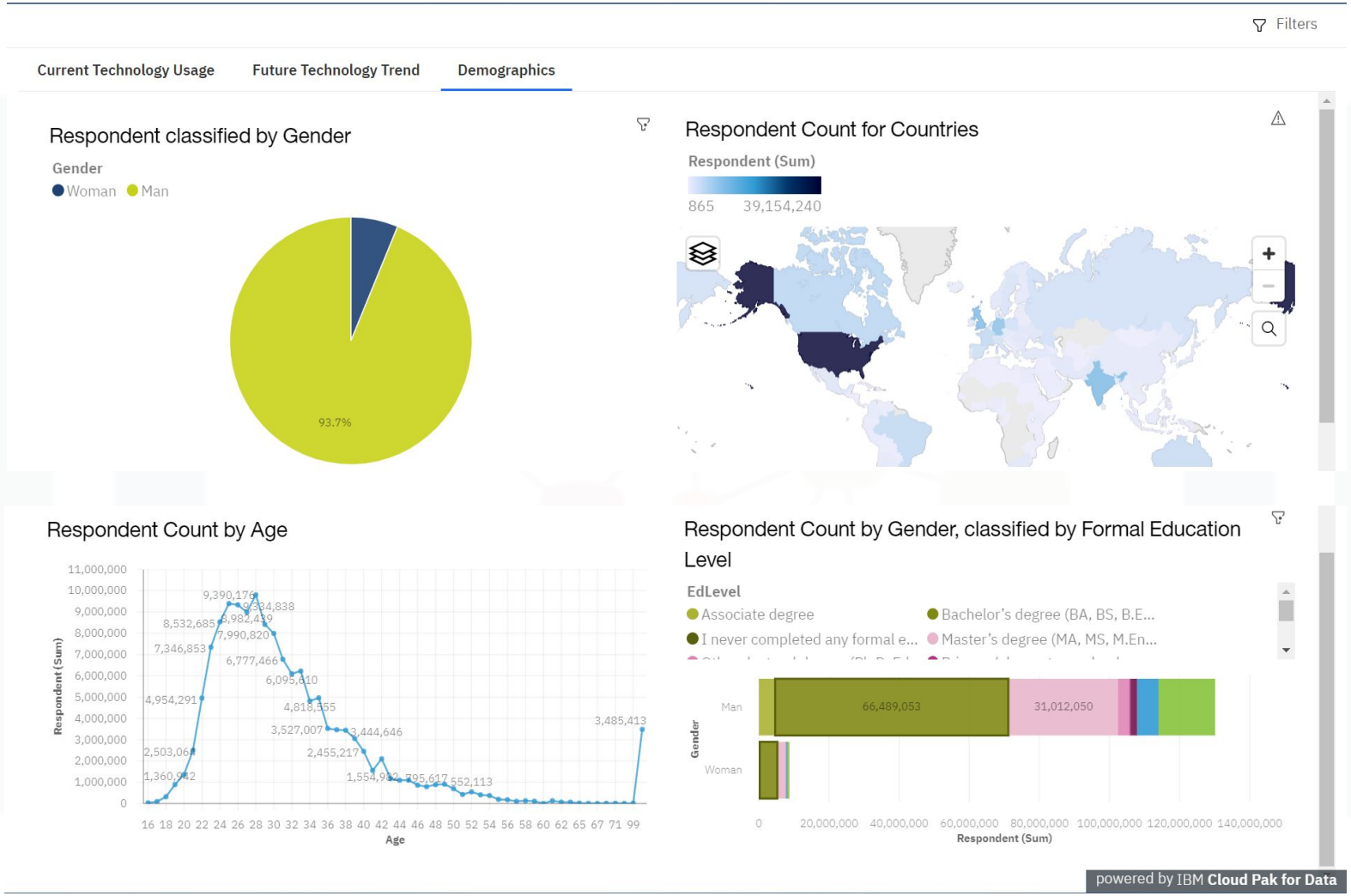
CURRENT TECHNOLOGY TREND



FUTURE TECHNOLOGY TREND



DEMOGRAPHICS



DISCUSSION

OVERALL FINDINGS & IMPLICATIONS

Findings

- JavaScript is widely used and Python is getting popular
- Over 90% of developers are male
- Developers are mainly located in developed countries

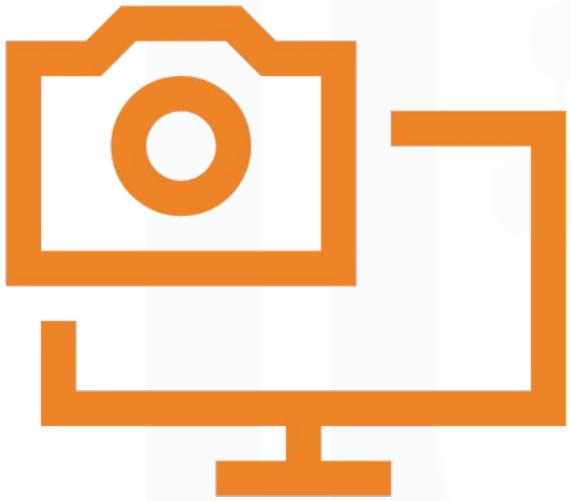
Implications

- JavaScript and Python web frames gaining followers
- Global divergence of developers locations and gender
- Developers without post grad study are a majority

CONCLUSION

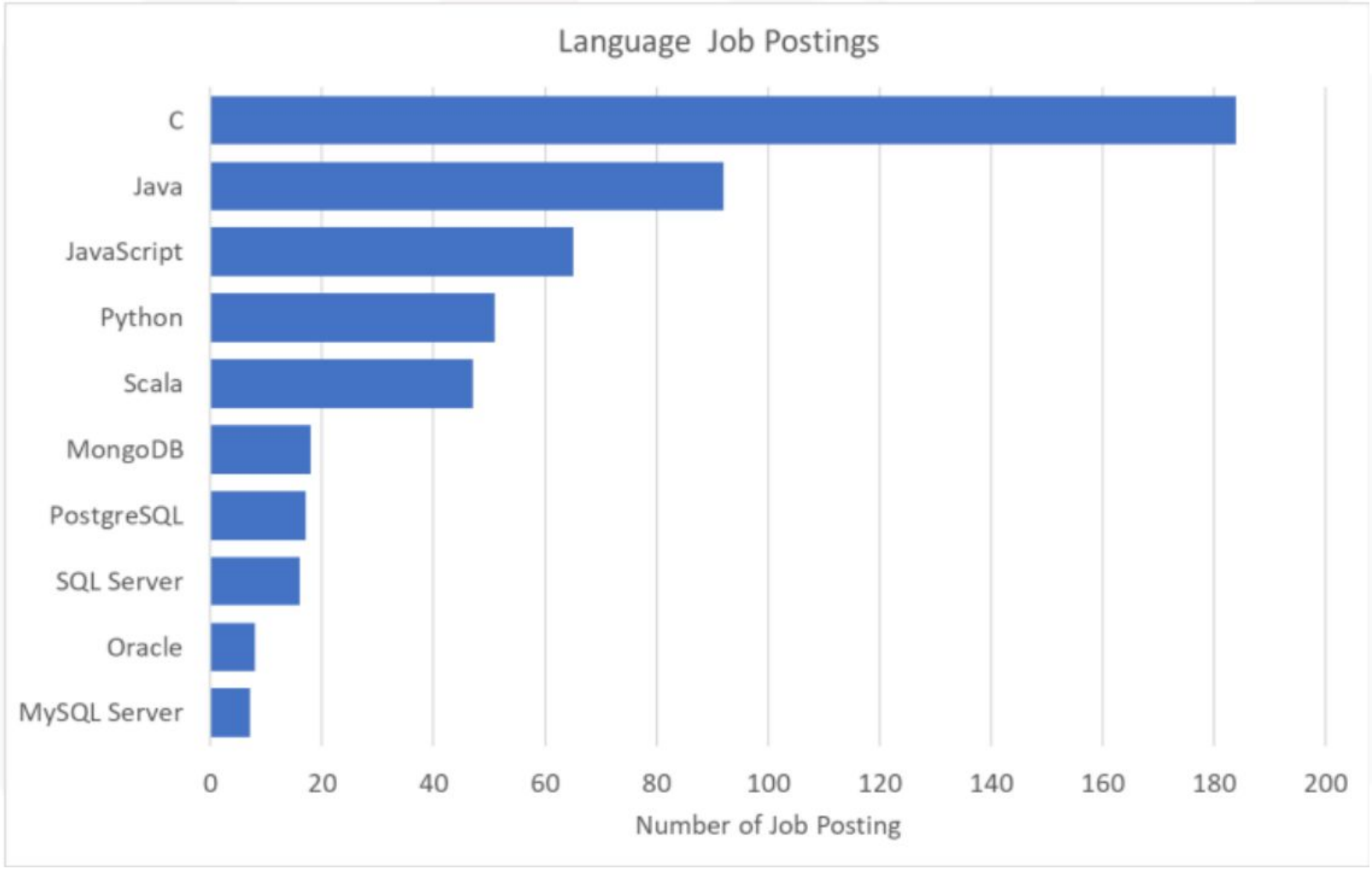
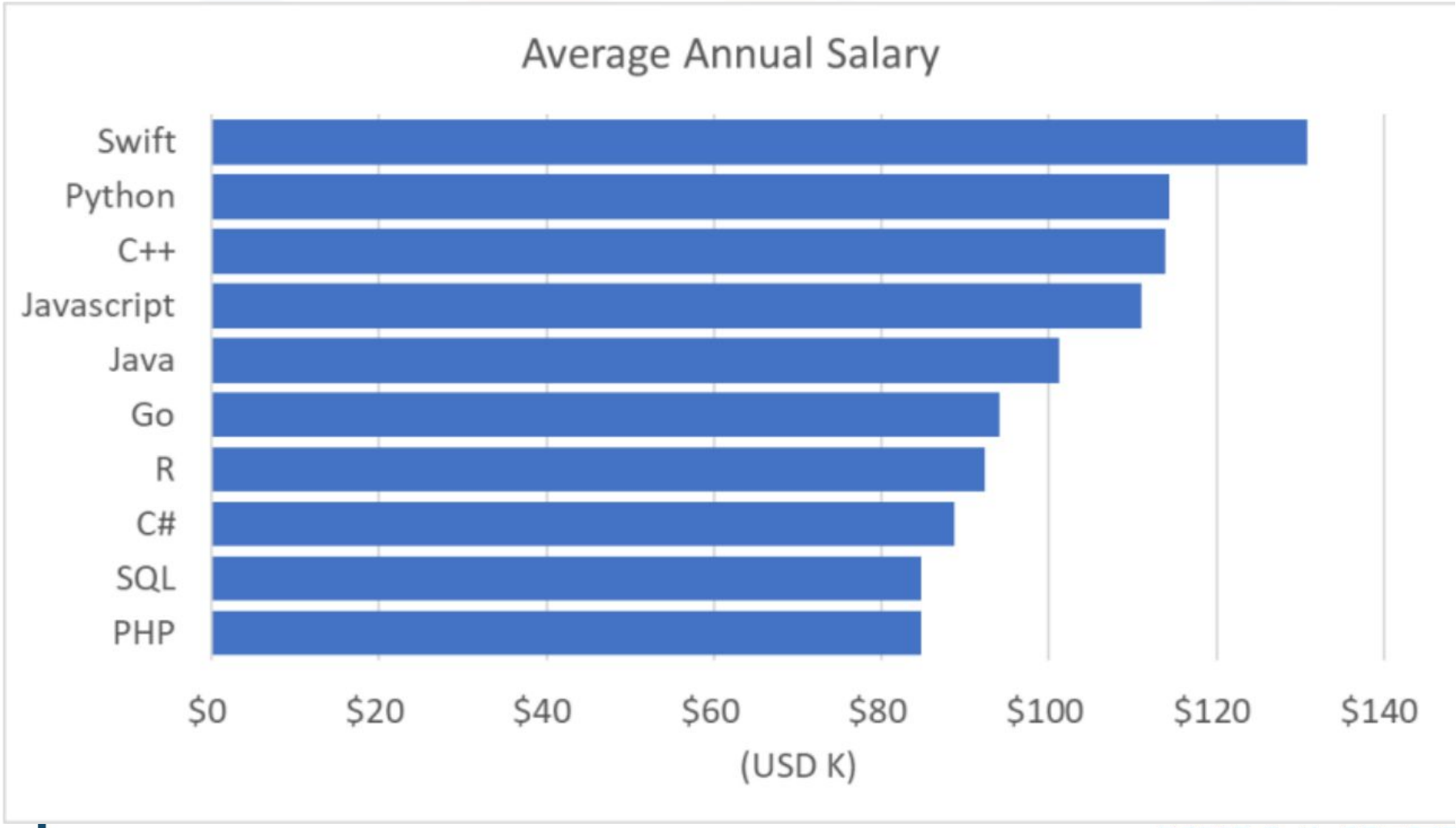
- Developers have distinct characteristics and background
- A clear idea of popularity trends of different tools, platforms, and languages can be obtained.
- Encouragement must be provided for Women in the field of developers.

APPENDIX



- Include any relevant additional charts, or tables that you may have created during the analysis phase.

JOB POSTINGS



POPULAR LANGUAGES