



Emerging Skills for Data Professionals

Zehra Zaheer

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EXECUTIVE SUMMARY



- ▶ Key skills for IT and data professionals are advancing and changing with time
- ▶ Following are all-time favorite programming languages and databases for IT and data professionals
 - ▶ Java Script, Python, C++
 - ▶ SQL, MongoDB
- ▶ New platforms such as Docker and AWS are gaining popularity
- ▶ Technological advancement seem to be concentrated in a few countries like USA and India
- ▶ Number of women involved in technology and data is not much promising

INTRODUCTION



About

Analyzing trends and emerging skills in data analysis

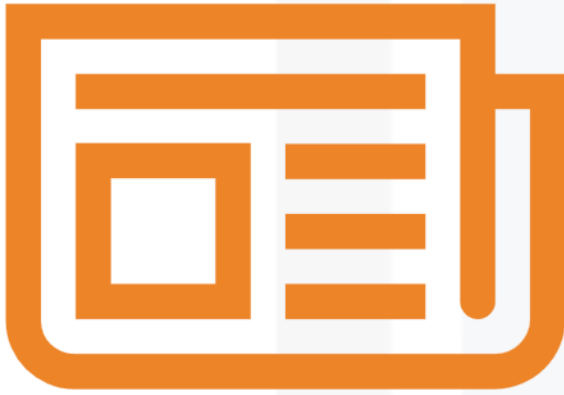
Objectives

- What are the top programming languages in demand?
- What are the top database skills in demand?
- What are the popular IDEs?

Targeted Audience

- Hiring managers
- IT companies
- IT and Data Professionals

METHODOLOGY



- ▶ Data about programming languages and databases in demand was collected from the following sources:
 - Job postings
 - Training portals
 - Surveys
- ▶ Collected data was cleaned and normalized
- ▶ Preprocessed data was explored to identify in-demand skills
- ▶ Explored data was visualized using different charts to identify
 - ▶ Top 10 programming languages in demand
 - ▶ Top 10 programming languages in demand
 - ▶ Platforms and web frames in demand

RESULTS

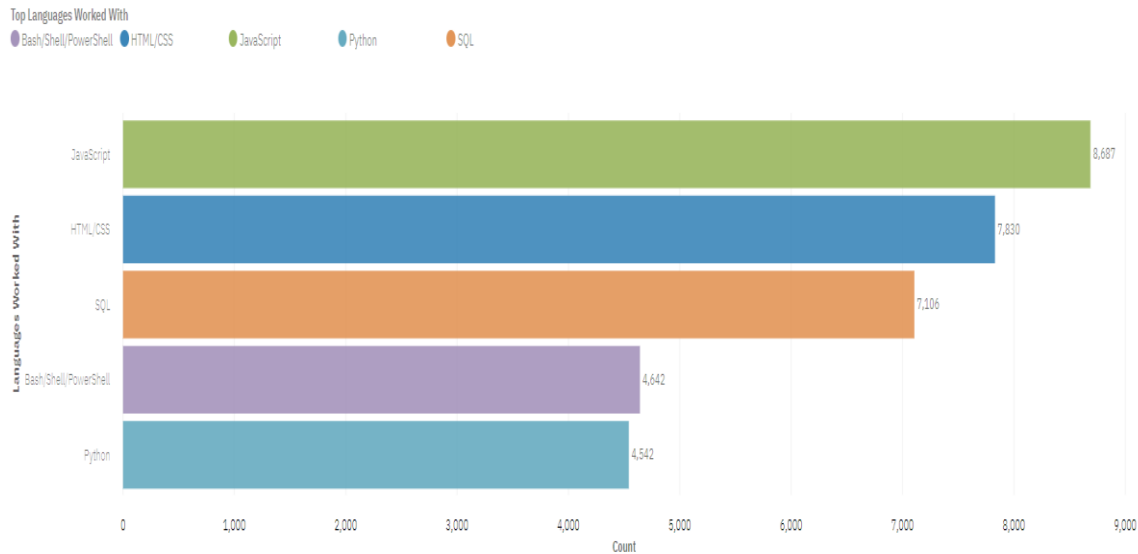
In-demand programming languages and databases that are being used currently and are desired for next year were identified as shown in the following charts

PROGRAMMING LANGUAGE TRENDS

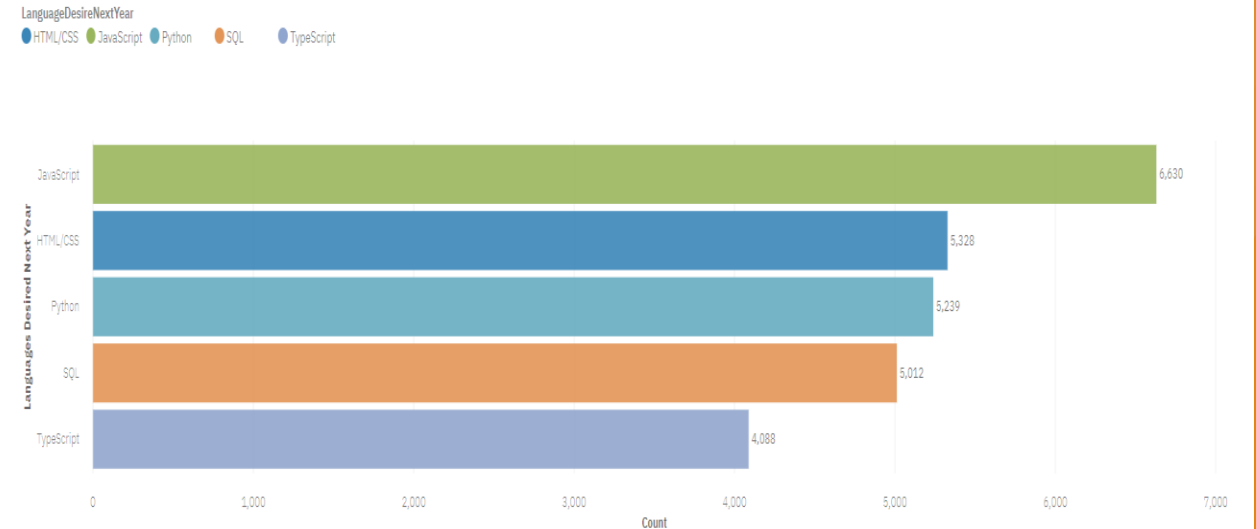
Current Year

Next Year

Top 5 Languages in Use



Top 5 Desired Languages



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- ▶ Java script, Html/CSS, Python and SQL remain to be among the top programming languages
- ▶ Type script language is getting popularity
- ▶ PowerShell seems to be less popular next year

Implications

- ▶ Data analysts should continue developing their skills in Python and SQL
- ▶ Data professionals should familiarize themselves with Type script
- ▶ Web development is in high demand

DATABASE TRENDS

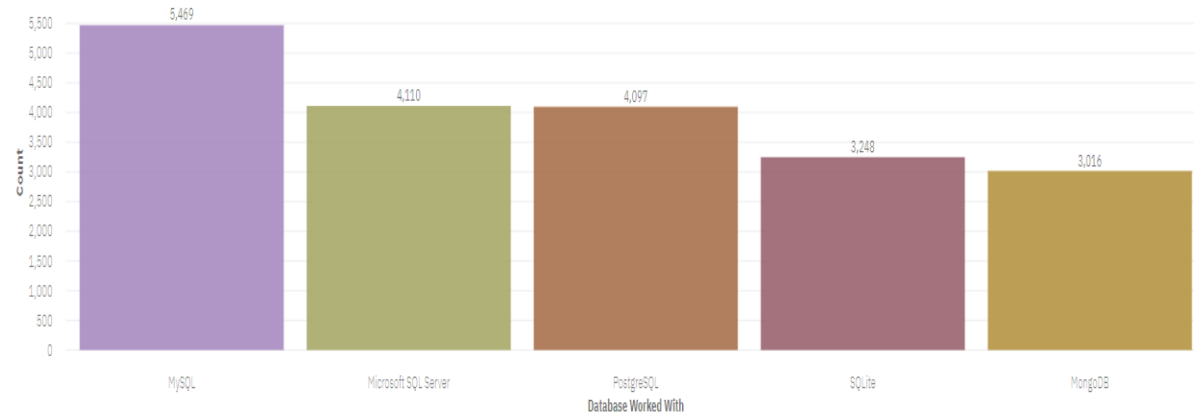
Current Year

Next Year

Top 5 Databases in Use

Top Databases Worked With

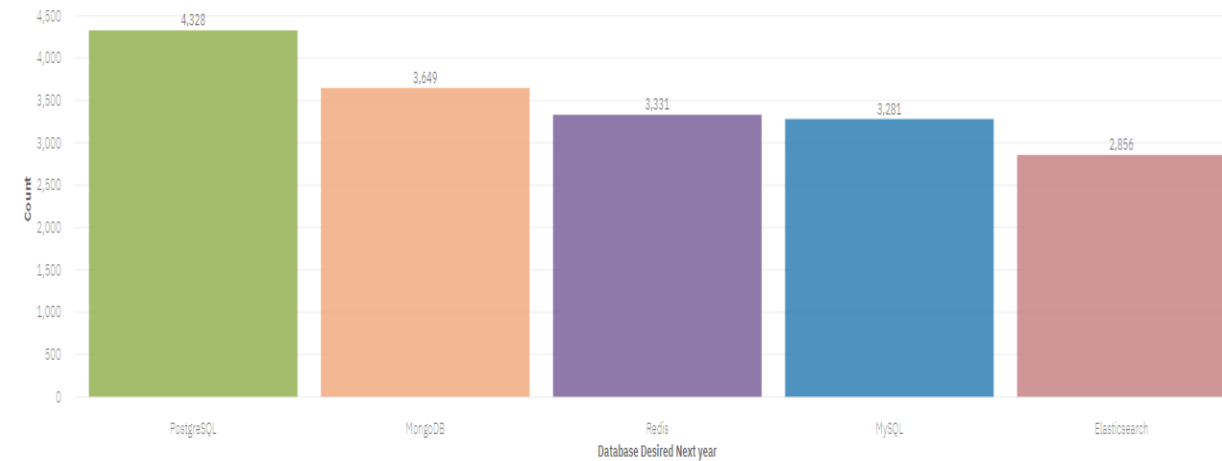
- Microsoft SQL Server
- MongoDB
- MySQL
- PostgreSQL
- SQLite



Top 5 Desired Databases

DatabaseDesireNextYear

- Elasticsearch
- MongoDB
- MySQL
- PostgreSQL
- Redis



DATABASE TRENDS - FINDINGS & IMPLICATIONS


Findings

- ▶ MySQL, PostgreSQL, and Mongo DB remain to be among the top databases
- ▶ Elasticsearch and Redis are new favorites
- ▶ SQLite and Microsoft SQL seem to be less popular next year

Implications

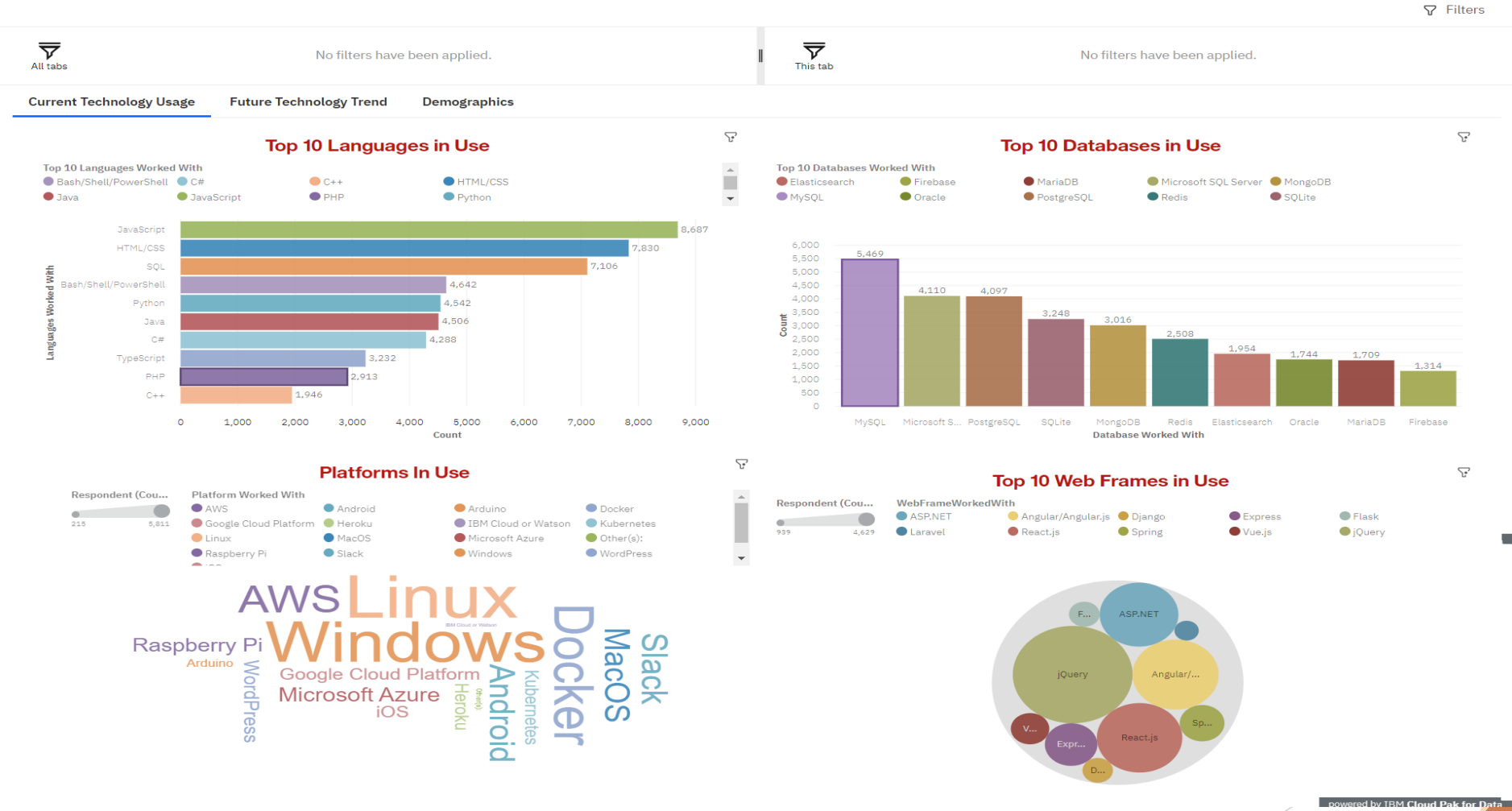
- ▶ Data analysts should continue developing their skills MySQL, PostgreSQL, and Mongo DB
- ▶ Data analysts should familiarize themselves with Elasticsearch and Redis databases
- ▶ Open source databases are still in high demand

DASHBOARD

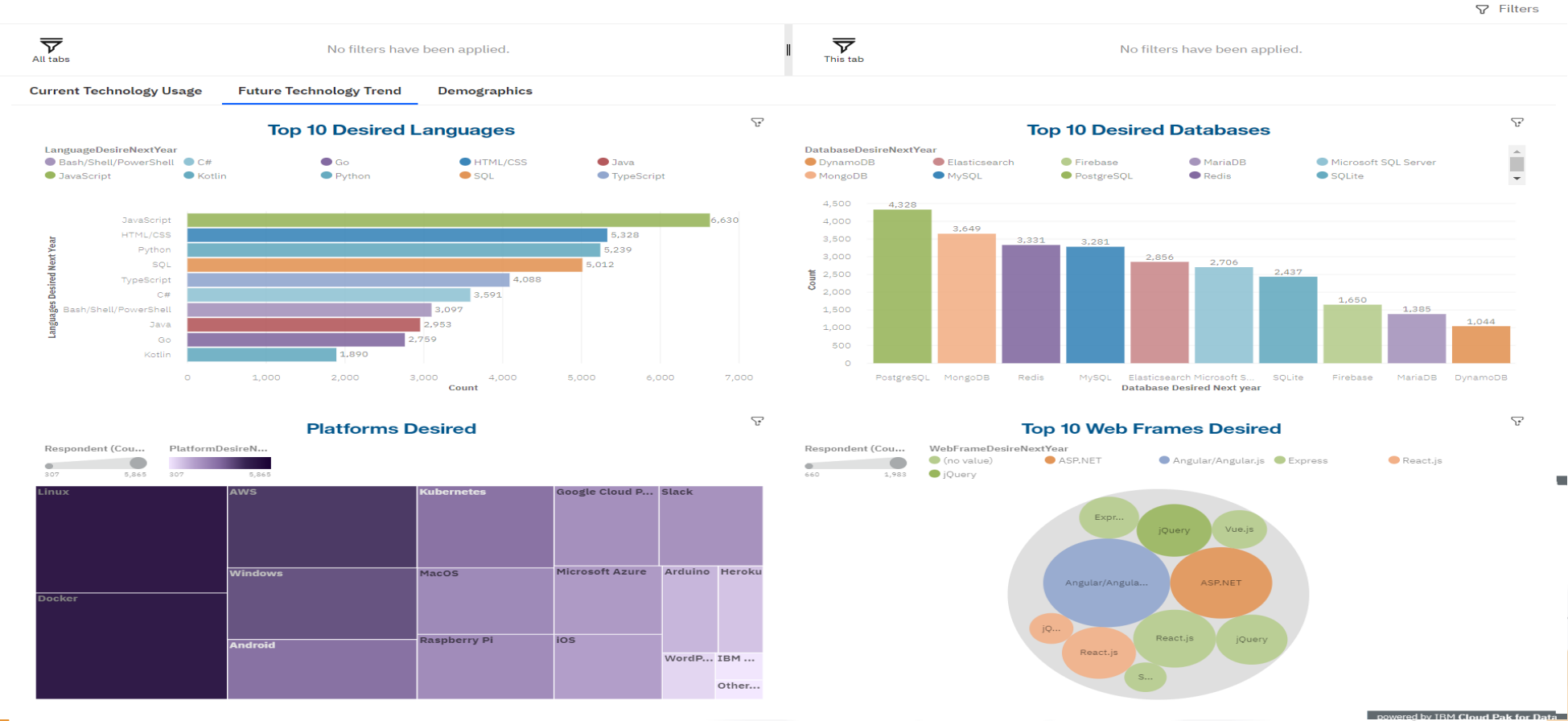


<https://dataplatform.cloud.ibm.com/dashboards/69bd63fb-47fc-4281-b301-6fc89a32fe5a/view/7931a11f348c6aff72f2c4e407902b042c31200bb1bb865783867b495d617297a9384797c82e1a0cd2160d64f2ef145d98>

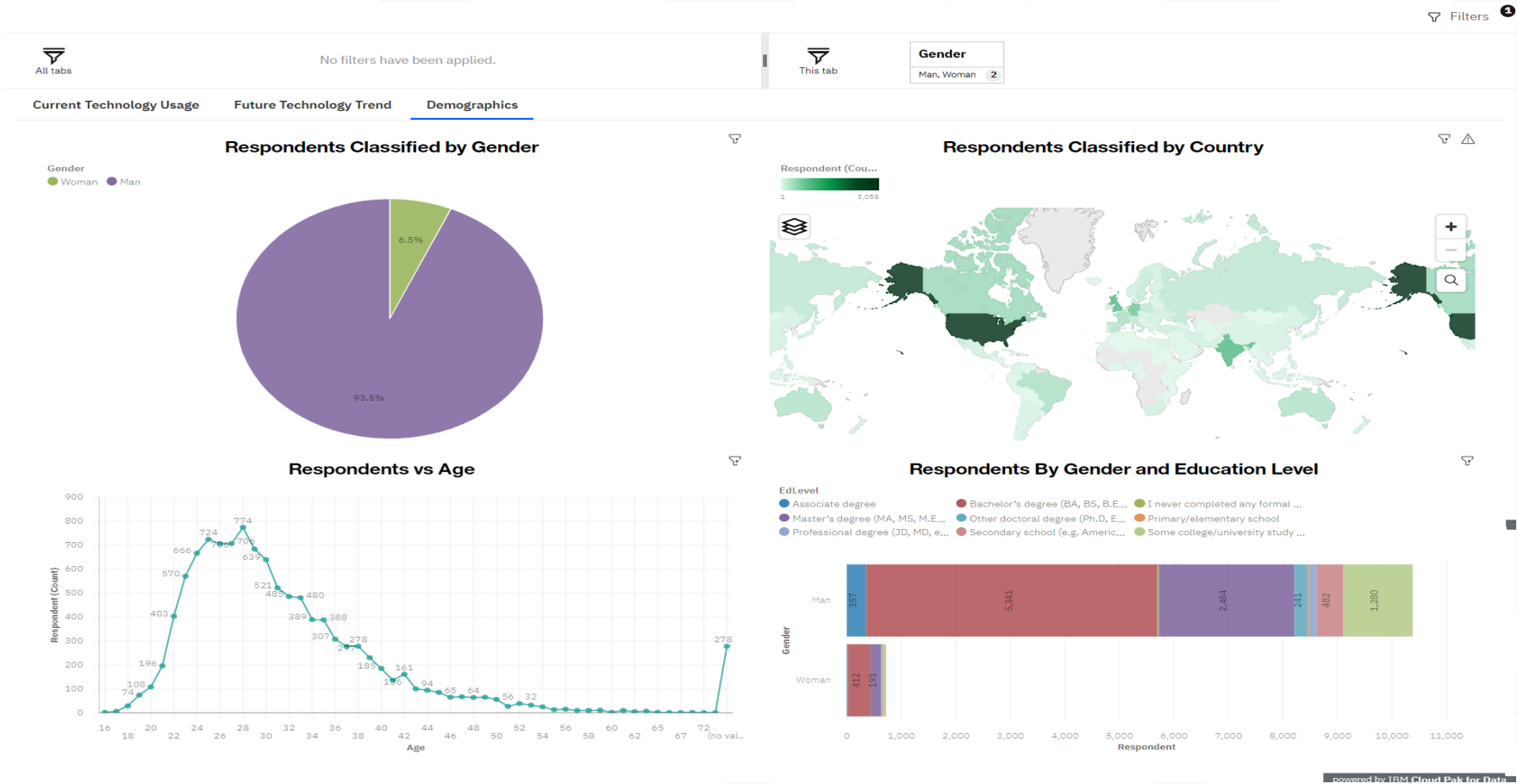
DASHBOARD TAB 1



DASHBOARD TAB 2



DASHBOARD TAB 3



DISCUSSION



- ▶ Trends in technology and emerging skills
- ▶ Training and upskilling of data analysts
- ▶ Participation of women in technology, data analysis, and data science
- ▶ Developing countries need to contribute more towards technology

OVERALL FINDINGS & IMPLICATIONS

Findings

- ▶ Technology keeps on developing and new skills begin to become popular
- ▶ Participation of women in technology is less
- ▶ Developing countries are contributing less toward technology development
- ▶ AWS and Docker are becoming popular

Implications

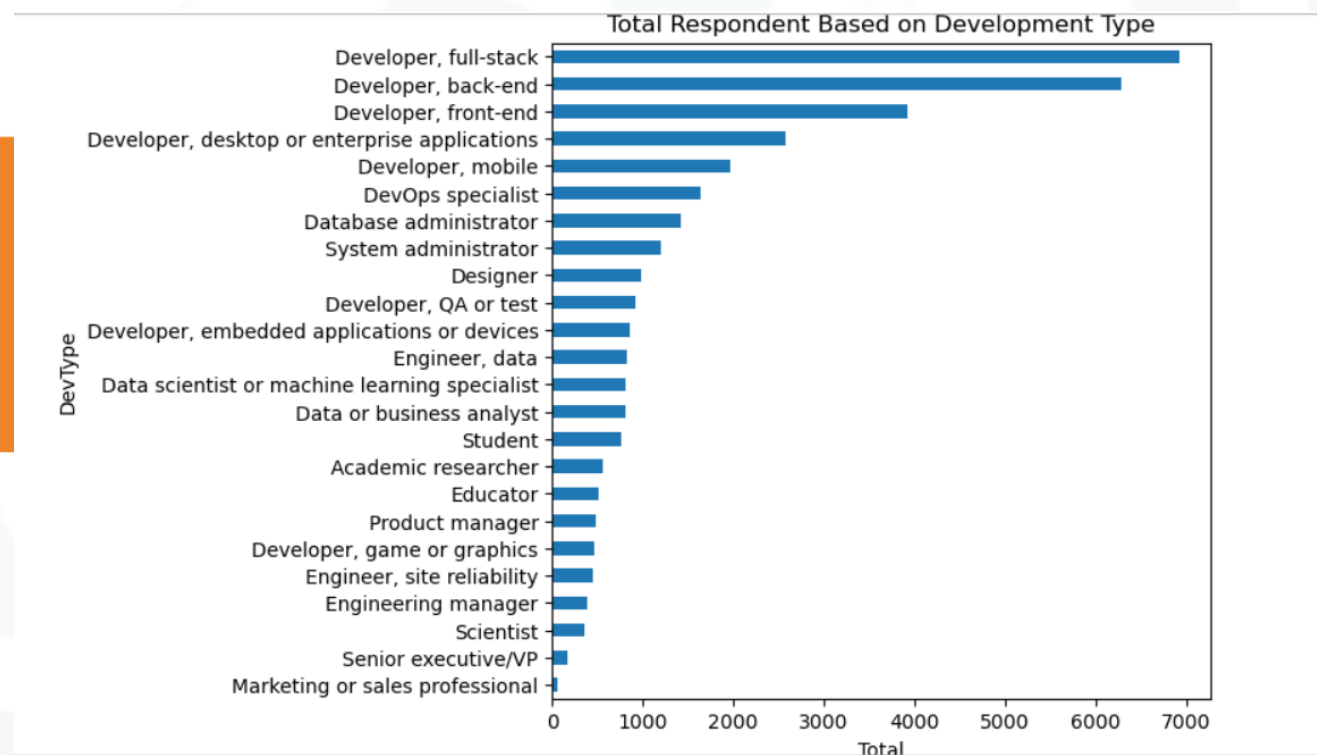
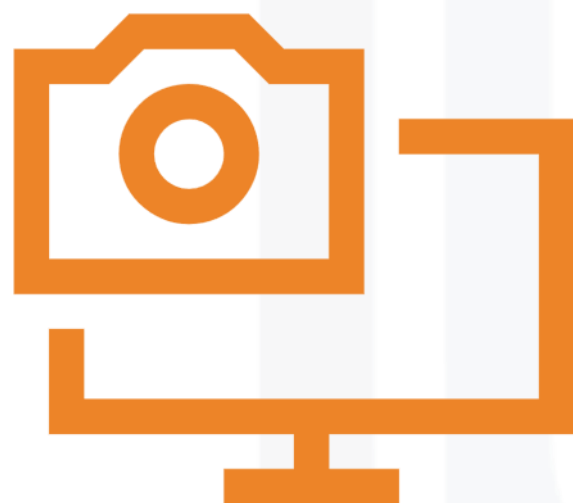
- ▶ Data analysts should constantly upskill themselves to develop emerging in-demand skills
- ▶ Gender biases should be removed to include more women
- ▶ Need to spread technology to developing countries
- ▶ Companies and data analysts must be flexible to learn and adopt new technologies

CONCLUSION

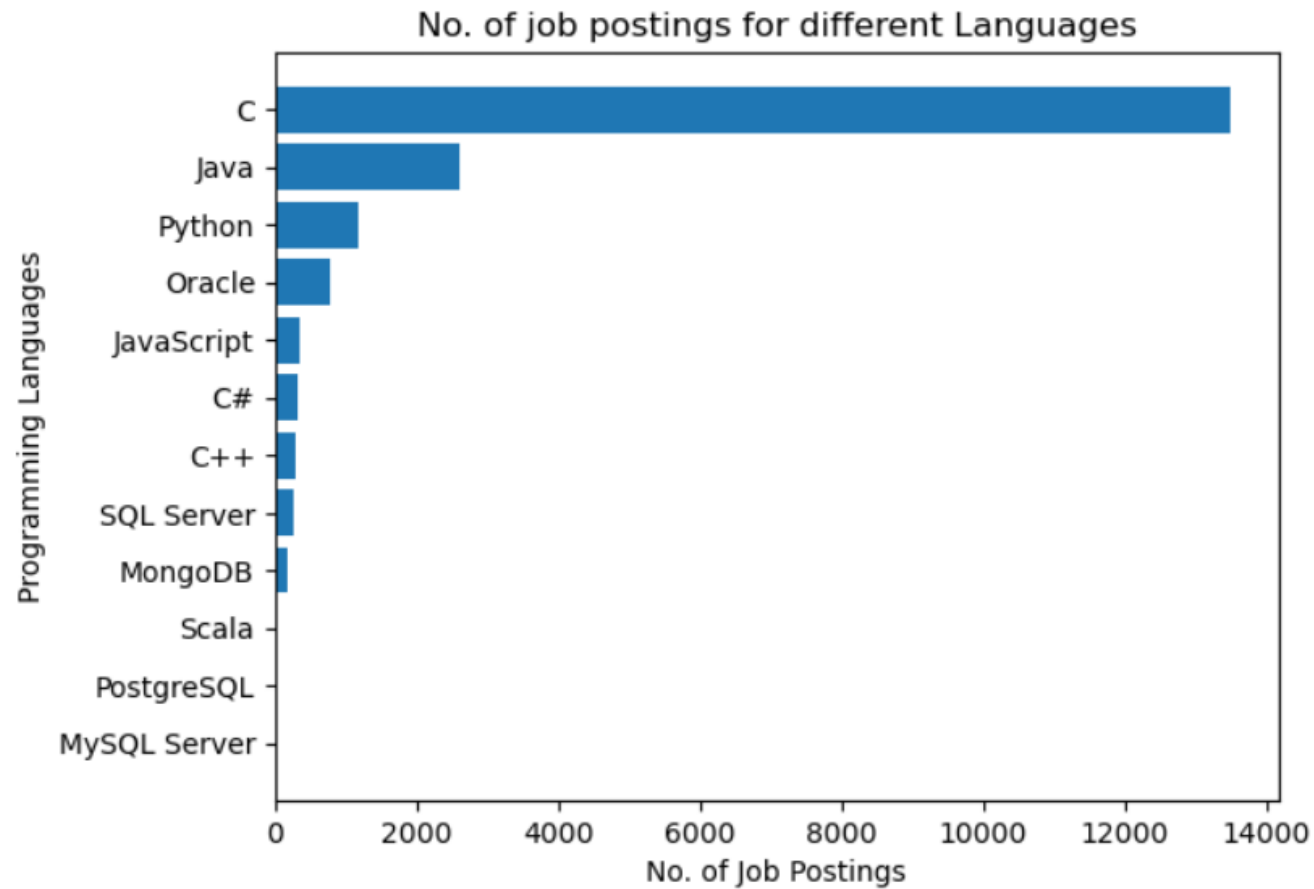


- ▶ Success of IT companies lies in being current and updated with the emerging technologies
- ▶ IT firms should invest in upskilling their IT professionals, data analysts, and data scientists
- ▶ Developing countries need to grow in technology
- ▶ Women's involvement in technology needs to be increased and gender biases need to be removed

APPENDIX



JOB POSTINGS



POPULAR LANGUAGES

