



Analysis in technological trends

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Jan. 22, 2024

OUTLINE



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EXECUTIVE SUMMARY



- Trends in programming languages and databases
- Demographics survey
- Technology gaps in countries
- Gender gap in jobs
- Male vs Female percentages

INTRODUCTION



- Topic: Analyzing trends in software development
- The Purpose:
 - Identify skill requirements for future
 - What are the top programming languages in demand?
 - What are the top database skills in demand?
 - What are the popular IDEs?
- The Audience: Human Resource and IT Head

METHODOLOGY



- Data Collection Sources
 - Stack Overflow Developer 2019 Survey
 - GitHub Job Postings
 - Programming Languages Annual Salary
- Data Exploration
- Data Cleaning
- Data Visualization
- Presentation

RESULTS

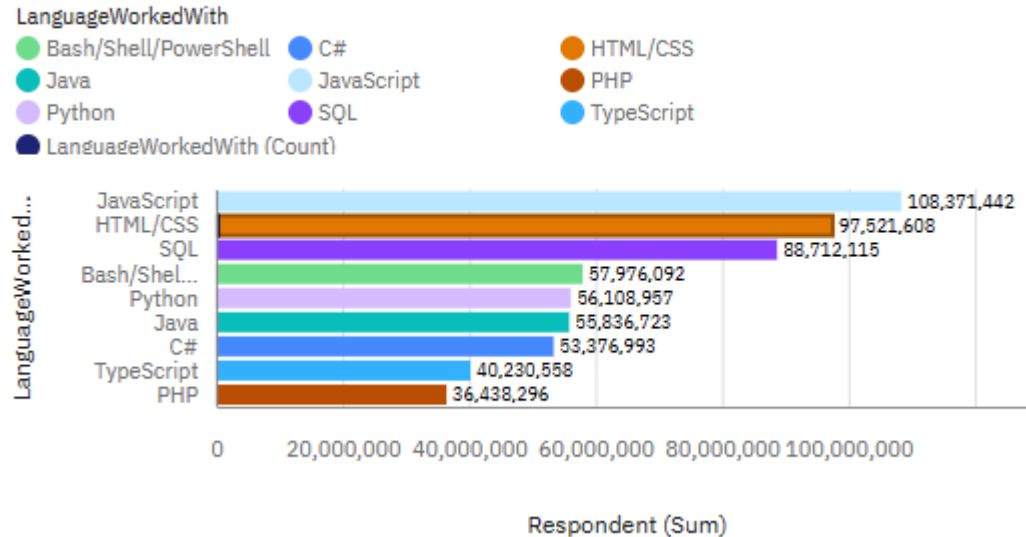
Results are based on this table:

	Respondent	LanguageWorkedWith	LanguageDesireNextYear	DatabaseWorkedWith	DatabaseDesireNextYear	PlatformWorkedWith
0	4	C	C	MySQL	MySQL	Linux
1	4	C++	C#	SQLite	SQLite	Windows
2	4	C#	JavaScript	NaN	NaN	NaN
3	4	Python	SQL	NaN	NaN	NaN
4	4	SQL	NaN	NaN	NaN	NaN
...
74584	25142	Go	Python	NaN	NaN	NaN
74585	25142	HTML/CSS	R	NaN	NaN	NaN
74586	25142	PHP	NaN	NaN	NaN	NaN
74587	25142	Python	NaN	NaN	NaN	NaN
74588	25142	R	NaN	NaN	NaN	NaN

PROGRAMMING LANGUAGE TRENDS

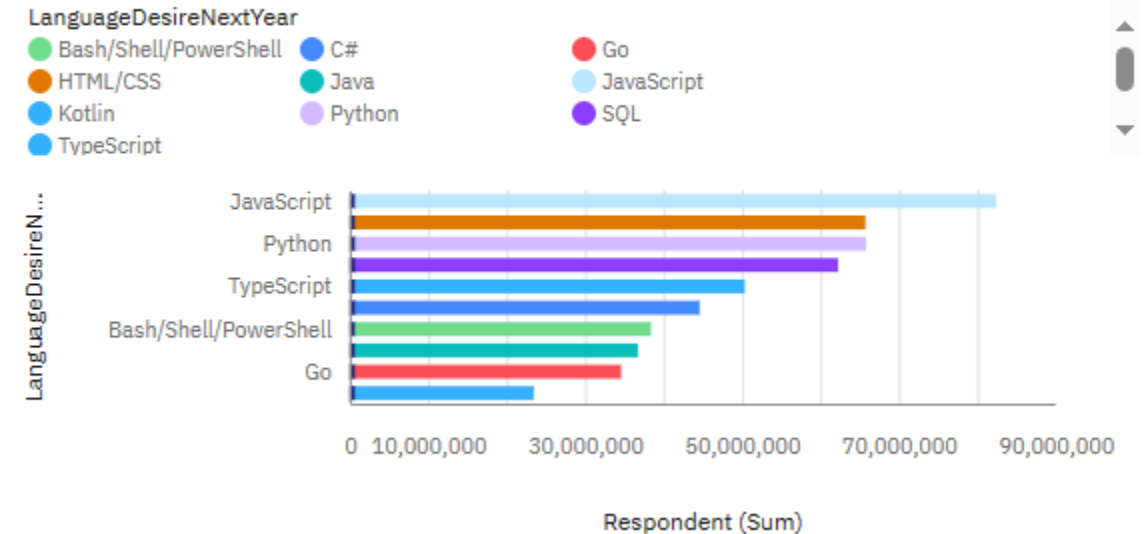
Current Year

Top 10 LanguageWorkedWith



Next Year

Top 10 LanguageDesireNextYear



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- The top 3 are JavaScript, HTML/CSS and SQL
- Python and Typescript becoming popular next year
- PowerShell less popular next year

Implications

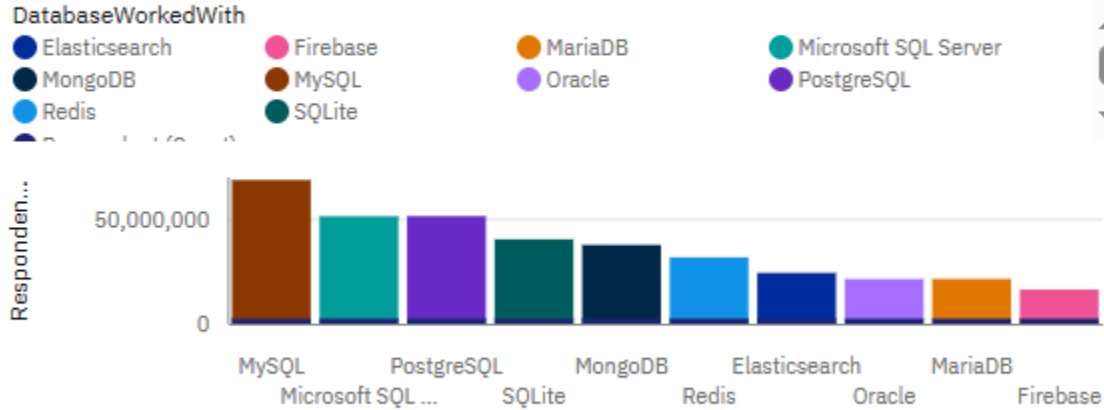
- Web development are still in high demand as per findings
- Big Data technologies still require SQL
- With AI and ML excellerating, Python is becoming first choice

DATABASE TRENDS

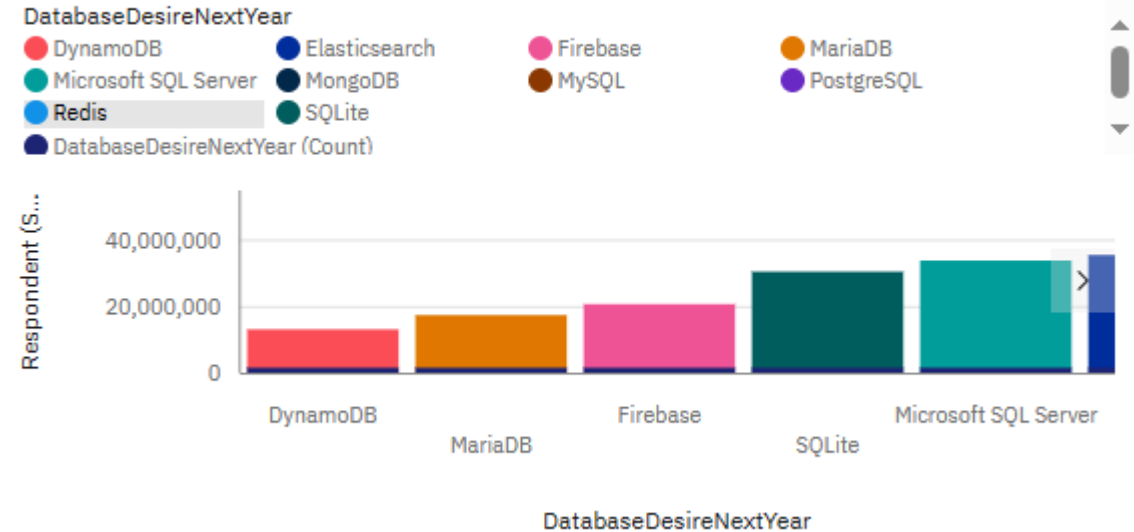
Current Year

Next Year

Top 10 DatabaseWorkedWith



Top 10 DatabaseDesireNextYear



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL is most popular
- Second is Microsoft SQL
- MongoDB and Redis are increasing in popularity
- New: Elasticsearch

Implications

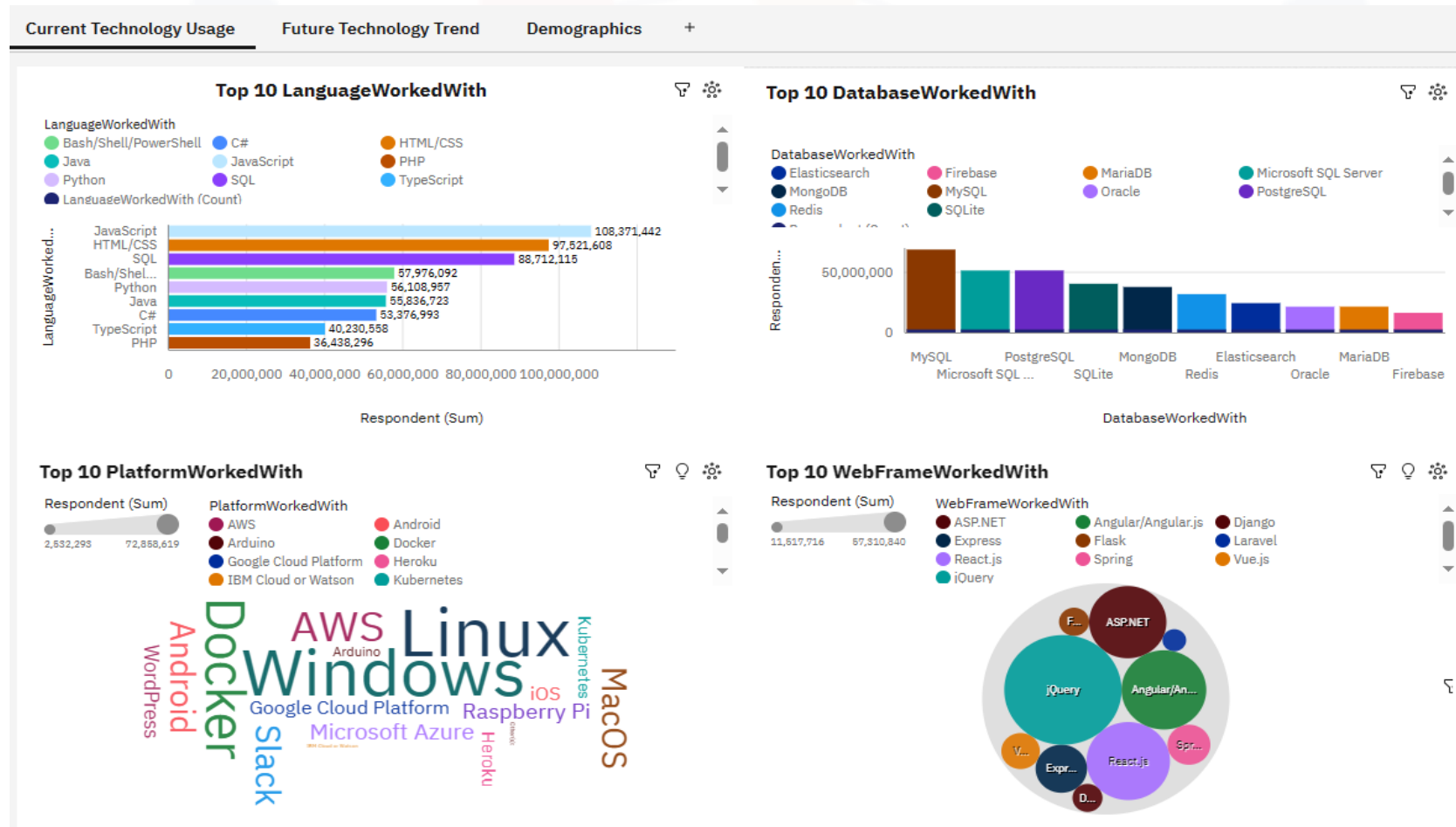
- Open-source databases are still preferred
- NoSQL databases will make an impact for storing non-relational data moving forward
- Redis supports abstract data types
- Pre-tuned search to website, app, or ecommerce store

DASHBOARD

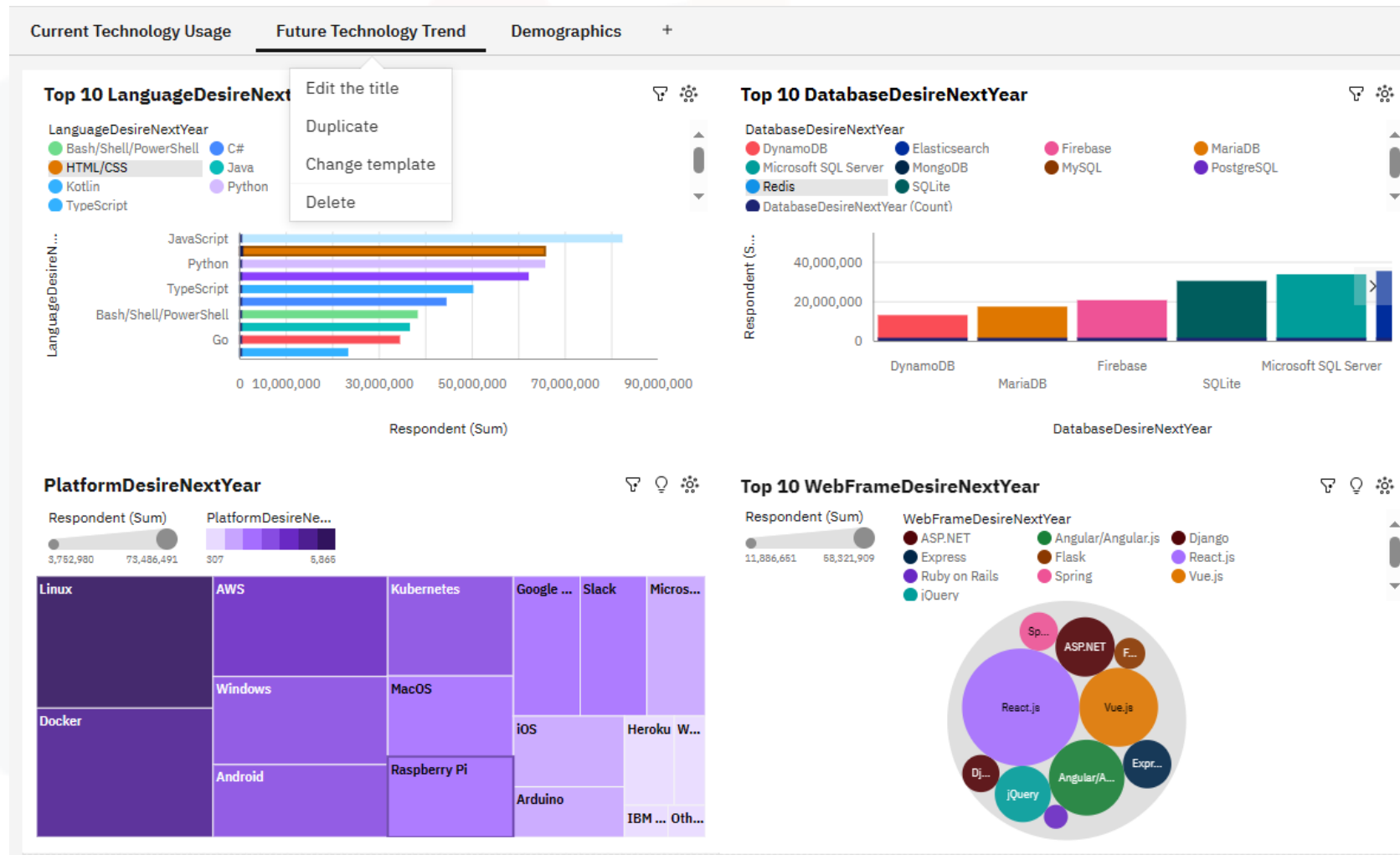


[testrepo/Building a dashboard with IBM Cognos Analytics.pdf at main · HCSTKEN/testrepo \(github.com\)](#)

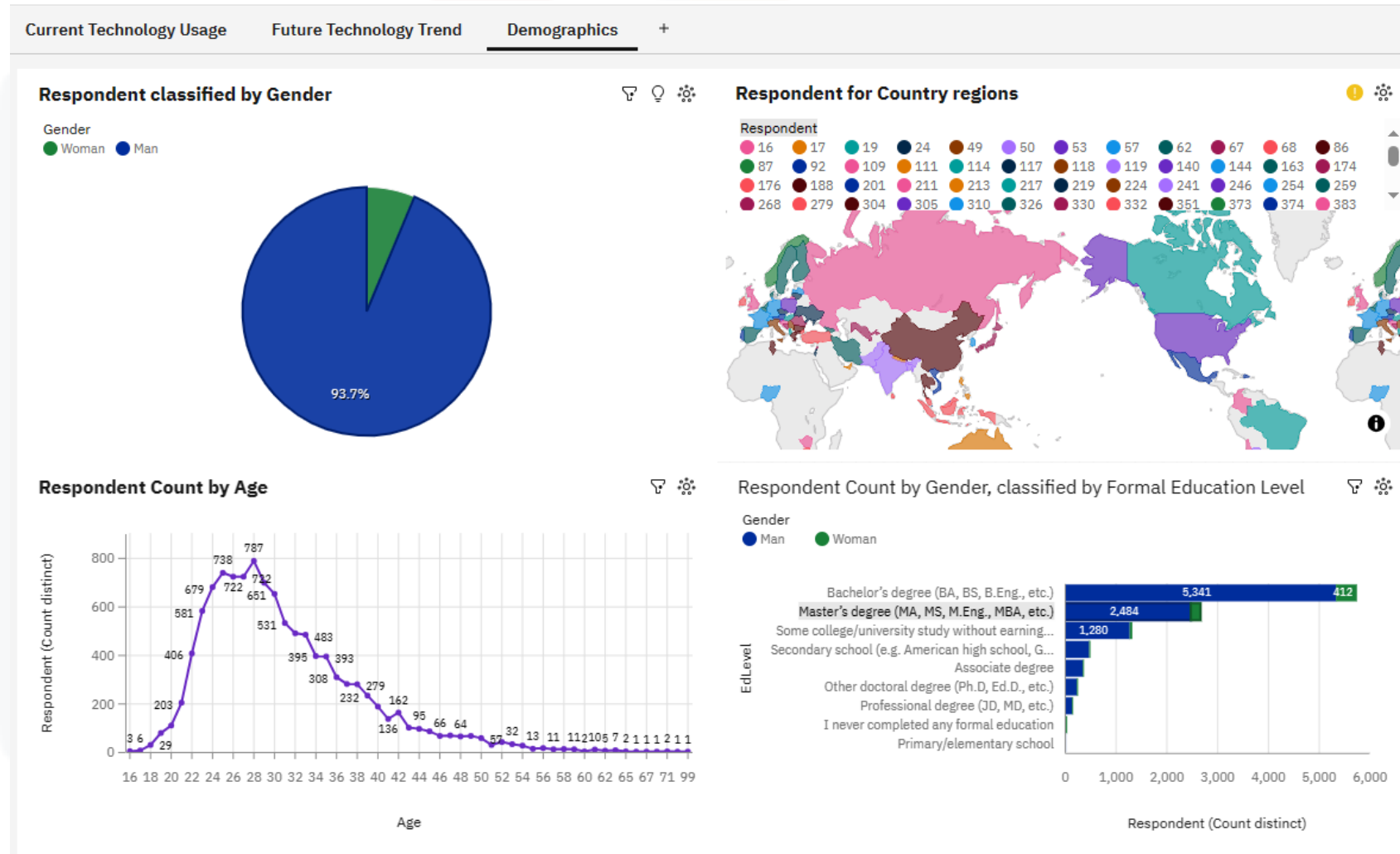
DASHBOARD Current Technology Usage



DASHBOARD Future Technology Trend



DASHBOARD Demographics



DISCUSSION



- Technology Trends for current and future year
- Programming Languages, Database and Platform
- Demographics overview
- Action Plan and outlook
- The future: AI & Machine Learning to be utilized to predict trends and salaries

OVERALL FINDINGS & IMPLICATIONS

Findings

- Fast changing technology every year
- Concentration on several countries like USA and India
- Gender gap in technology jobs
- Platforms like Docker and AWS are growing

Implications

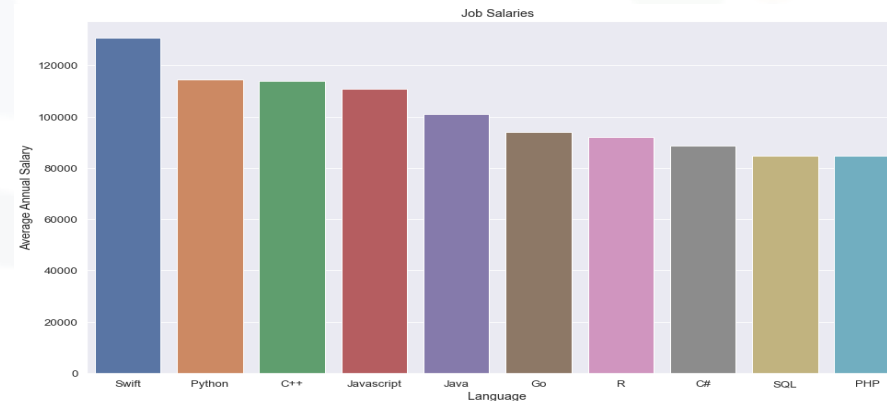
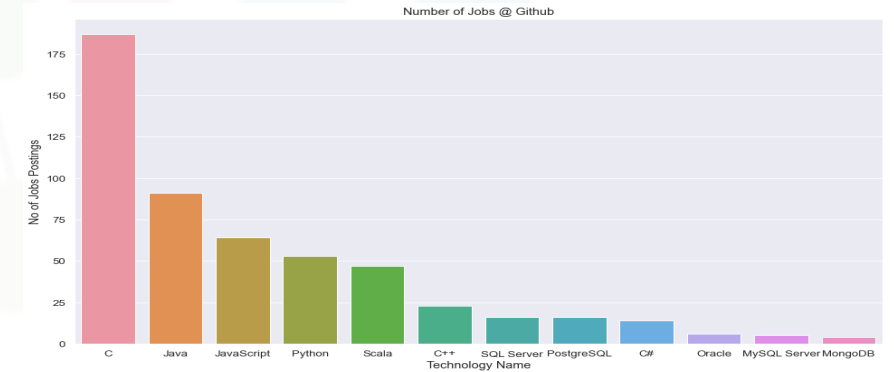
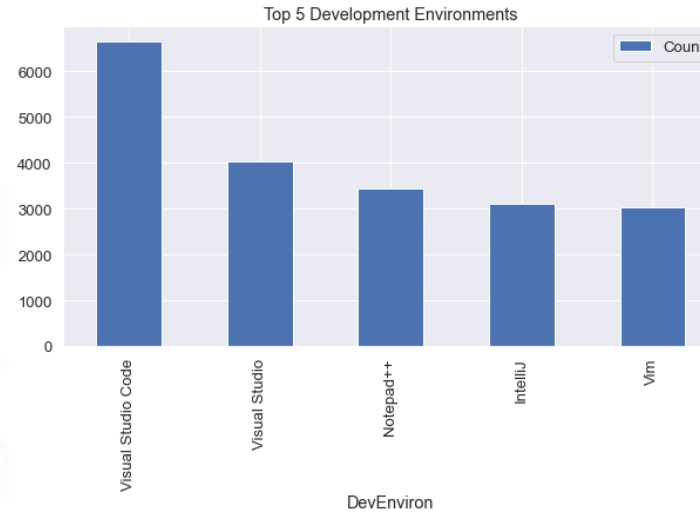
- Companies need to be flexible and adjust to rapid changes
- Need to spread technology out to lagging countries
- Impact of job hiring's
- Shift to faster app deployments and cloud services in future

CONCLUSION



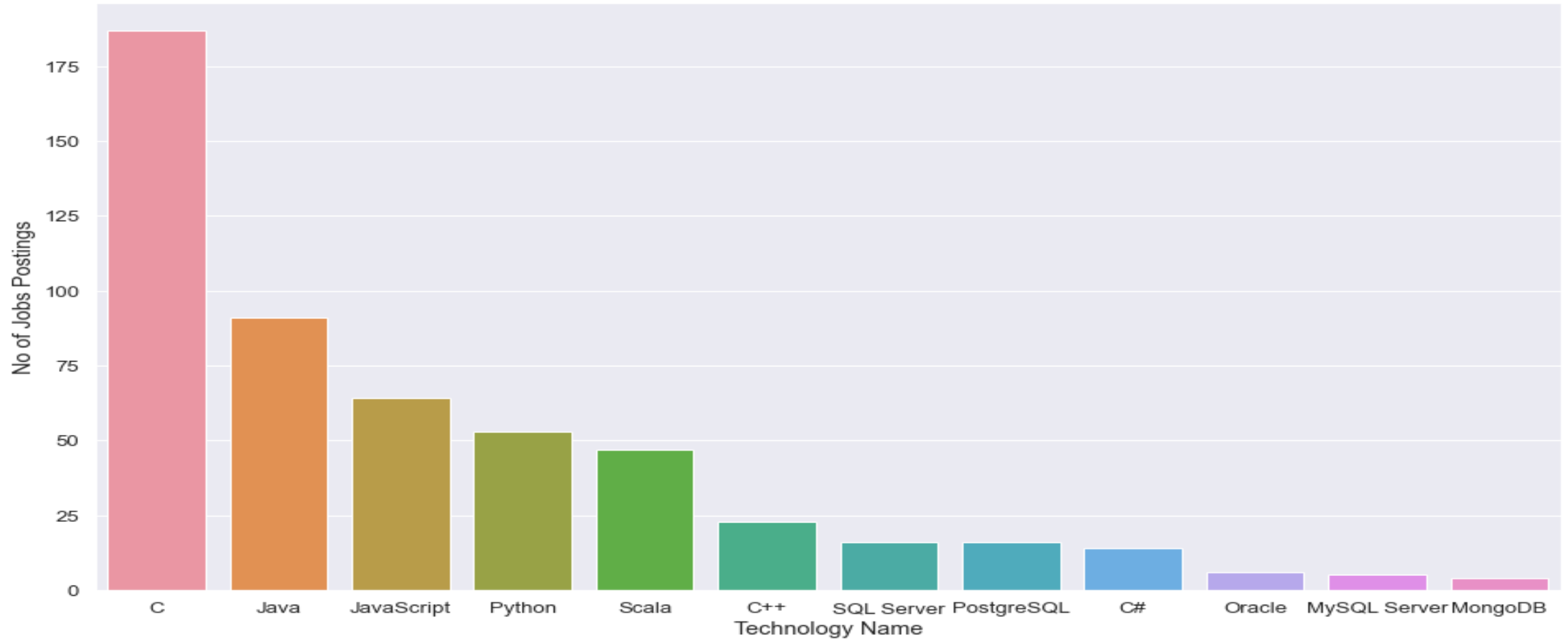
- Current and future technological trends
- Importance of Training and Reskilling current and future workers
- Increase female participation in the Technology field (only account for 6.3%)
- Bridge divide of technology gaps in developing countries as well in gender
- Eliminate age and education discrimination in employment

APPENDIX



JOB POSTINGS

Number of Jobs @ Github



POPULAR LANGUAGES

