



Technology Trend Analysis

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OUTLINE



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- Discussion
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- Conclusion
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EXECUTIVE SUMMARY



- Current and Future Trends in programming languages and databases
- Technological gap in countries worldwide
- Gender gap in job roles
- Demographic survey

INTRODUCTION



- About: Analyzing the Trends in Software Development among developers around the world.
- Purpose of the Analysis:
 - Identifying Future skill requirement.
 - Top Programming languages currently in demand.
 - Top Database Skills currently in demand.
 - Identify Human resource gap in the industry.
 - What are popular Web frame and IDE's?
- Audience
 - Human Resource
 - IT Industry Leaders

METHODOLOGY



- Data Collection (Sources)
 - Stack Overflow Developers 2019 Survey
 - Github Job postings
 - Programming Languages Annual Salary
- Data Exploration
- Data Cleaning
- Data Visualization
 - IBM Cognos Analytics (for Dashboard)
 - Python Matplotlib etc (for Charts like bar, histogram etc)
- Presentation

RESULTS

	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

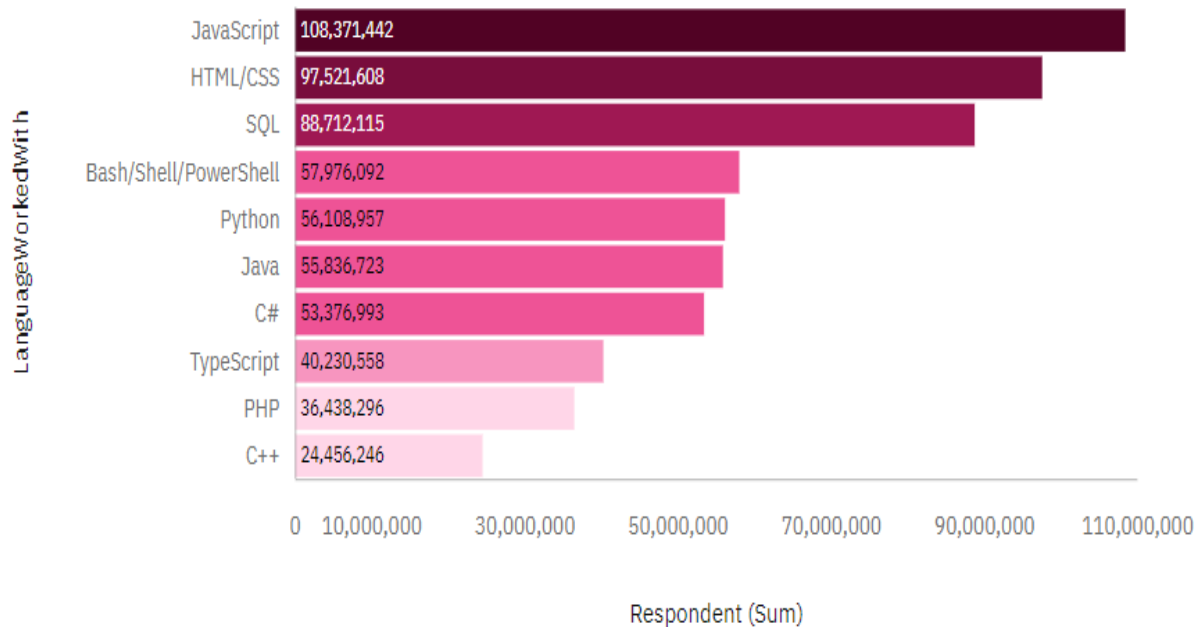
Top 10 Language Worked With



Respondent (Sum)



24,456,246 108,371,442



Next Year

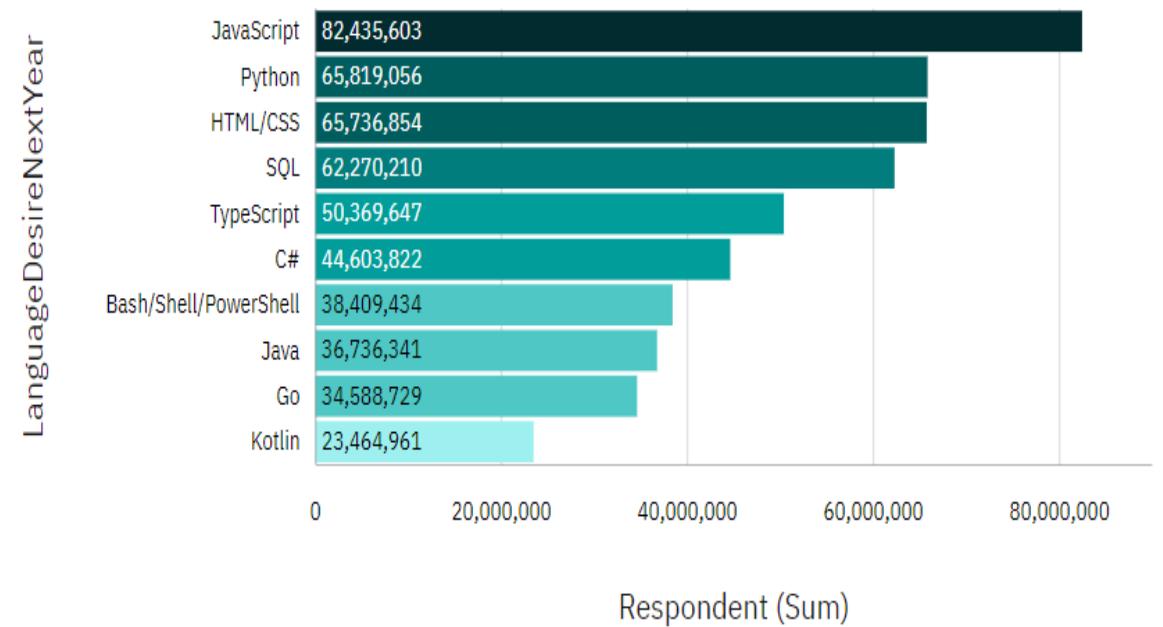
Top 10 Language Desire Next Year



Respondent (Sum)



23,464,961 82,435,603



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- Top 3 spots are occupied by JavaScript, HTML/CSS, and SQL.
- Next in line are Python and Typescript.
- In near future PowerShell will be edged out.

Implications

- Web Development is still in high demand.
- Big Data Technology still requires SQL to serve it's purpose.
- Due to rise in AI/ML demand for Python has also raised.

DATABASE TRENDS

Current Year

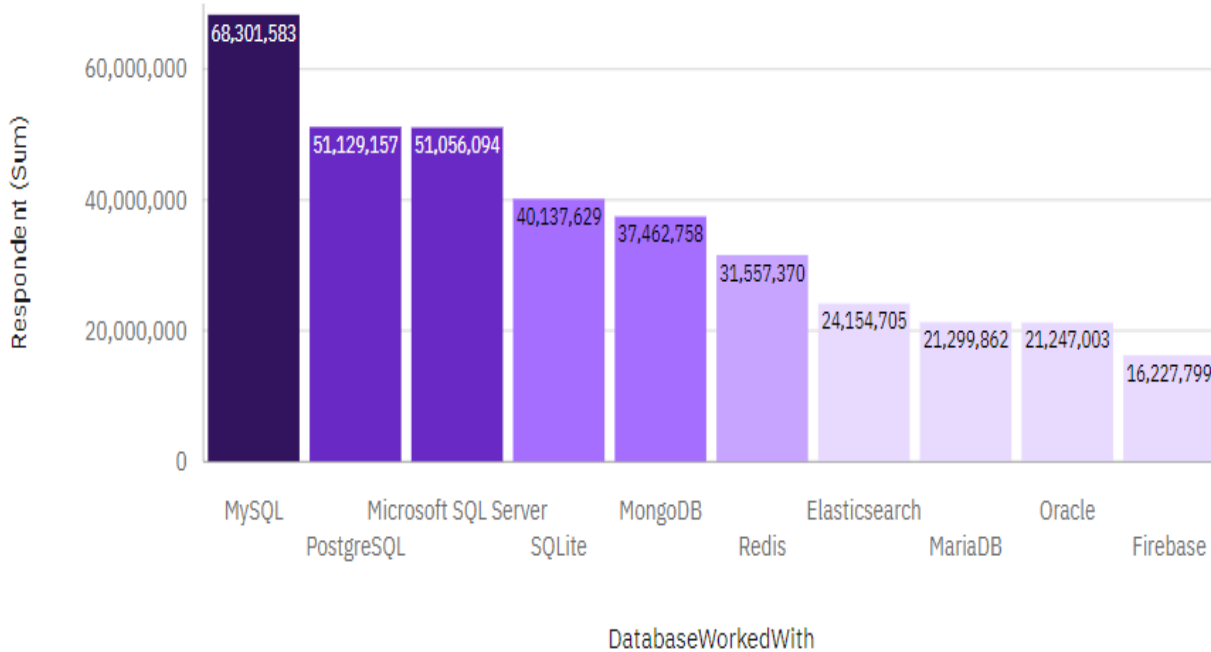
Top 10 Database Worked With



Respondent (Sum)



16,227,799 68,301,583



Next Year

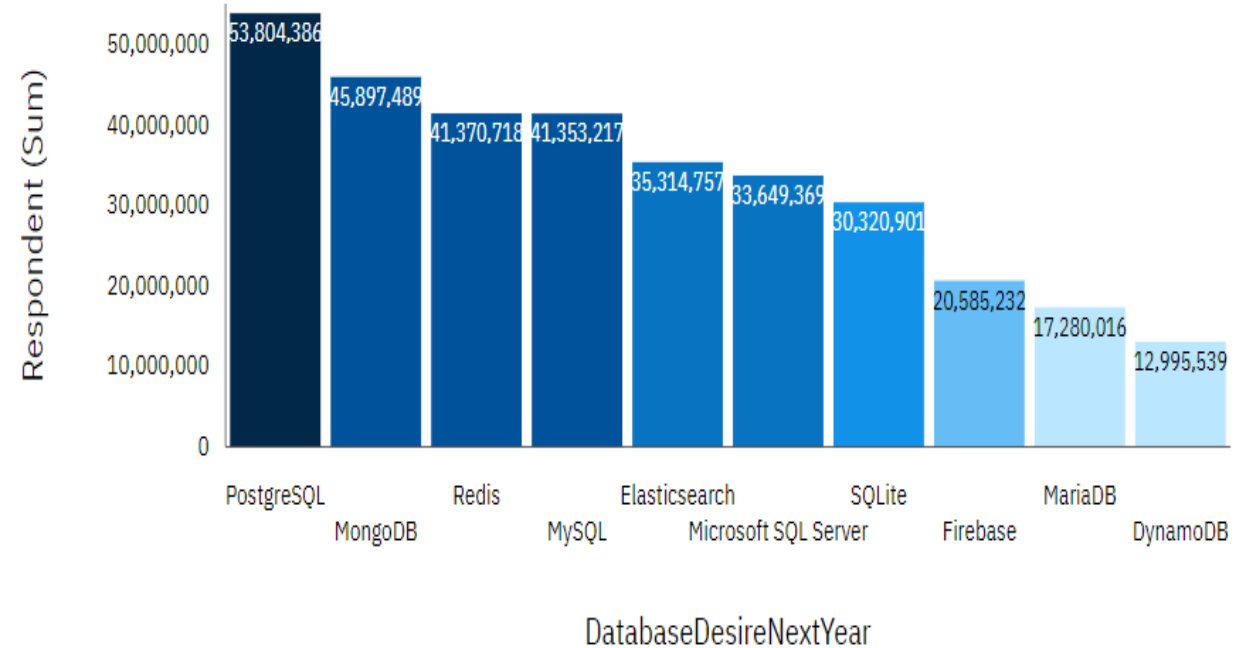
Top 10 Database Desire Next Year



Respondent (Sum)



12,995,539 53,804,386



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL is the most popular.
- Followed by Microsoft SQL
- MongoDB and Redis popularity is rising.
- Latest entry : Elasticsearch

Implications

- Open source databases are still preferable in companies
- NoSQL databases will be apt for storing non relational data.
- Redis support abstract data types, pre-tuned website search, app or ecommerce store.

DASHBOARD



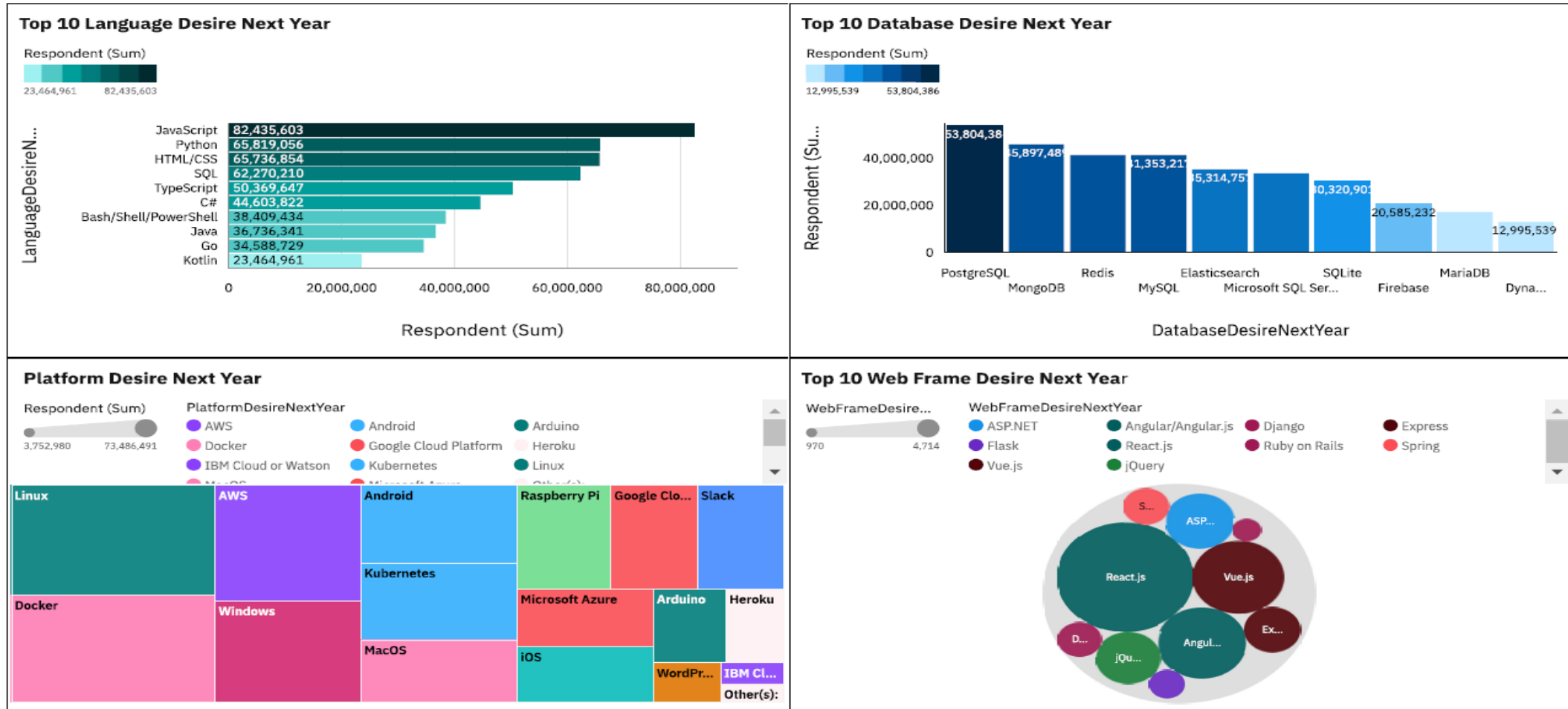
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Future Technology Trends

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Future Technology Trend

Tab 1

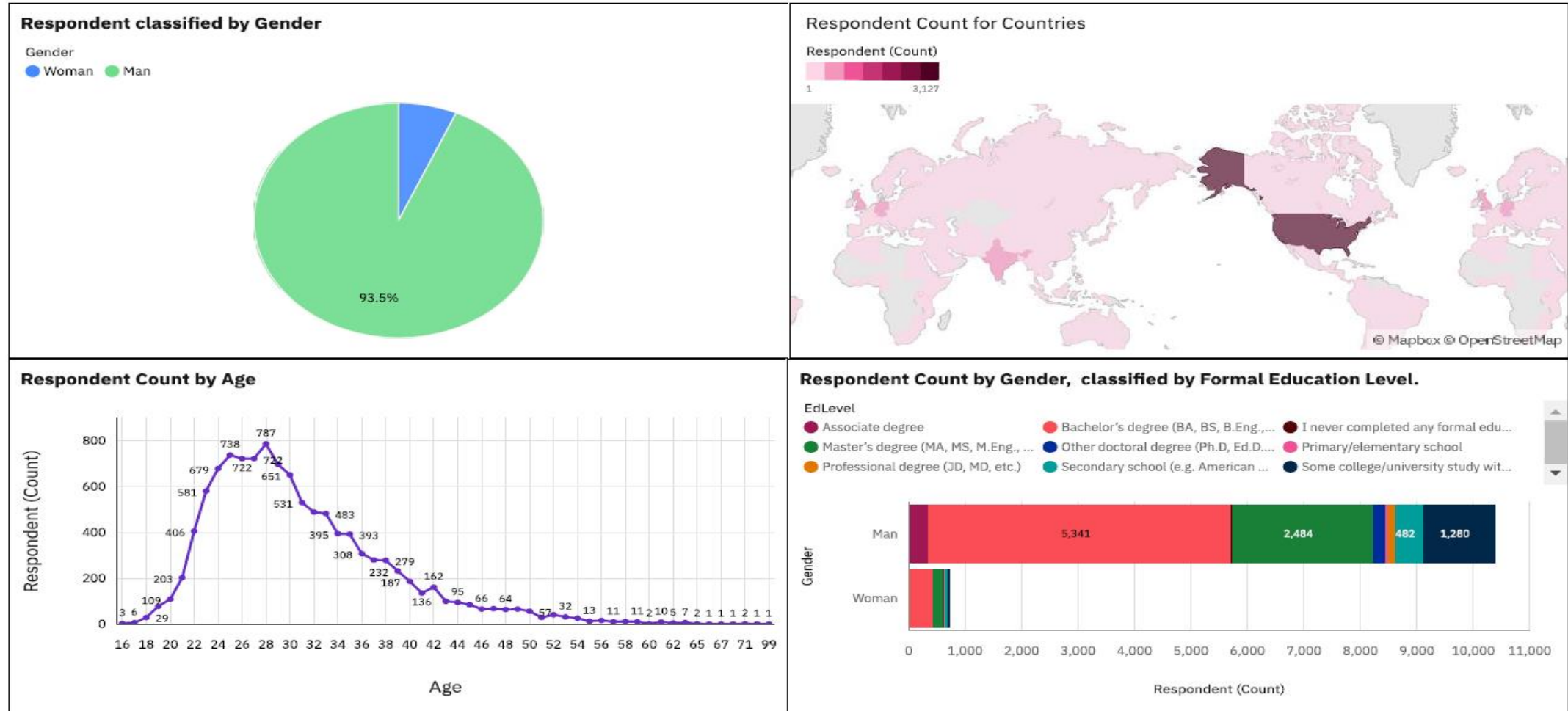


Demographics

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Demographics

Tab 1



DISCUSSION



- Technology Trends now and future.
- Training and Reskilling workers.
- Female participation in Technology Field.
- Bridging the division of technology gaps in developing countries.
- Elimination of age and education discrimination in employment.

OVERALL FINDINGS & IMPLICATIONS

Findings

- Fast changing technology every year.
- Concentration on several countries like USA and India.
- Platform like Docker and AWS are growing.

Implications

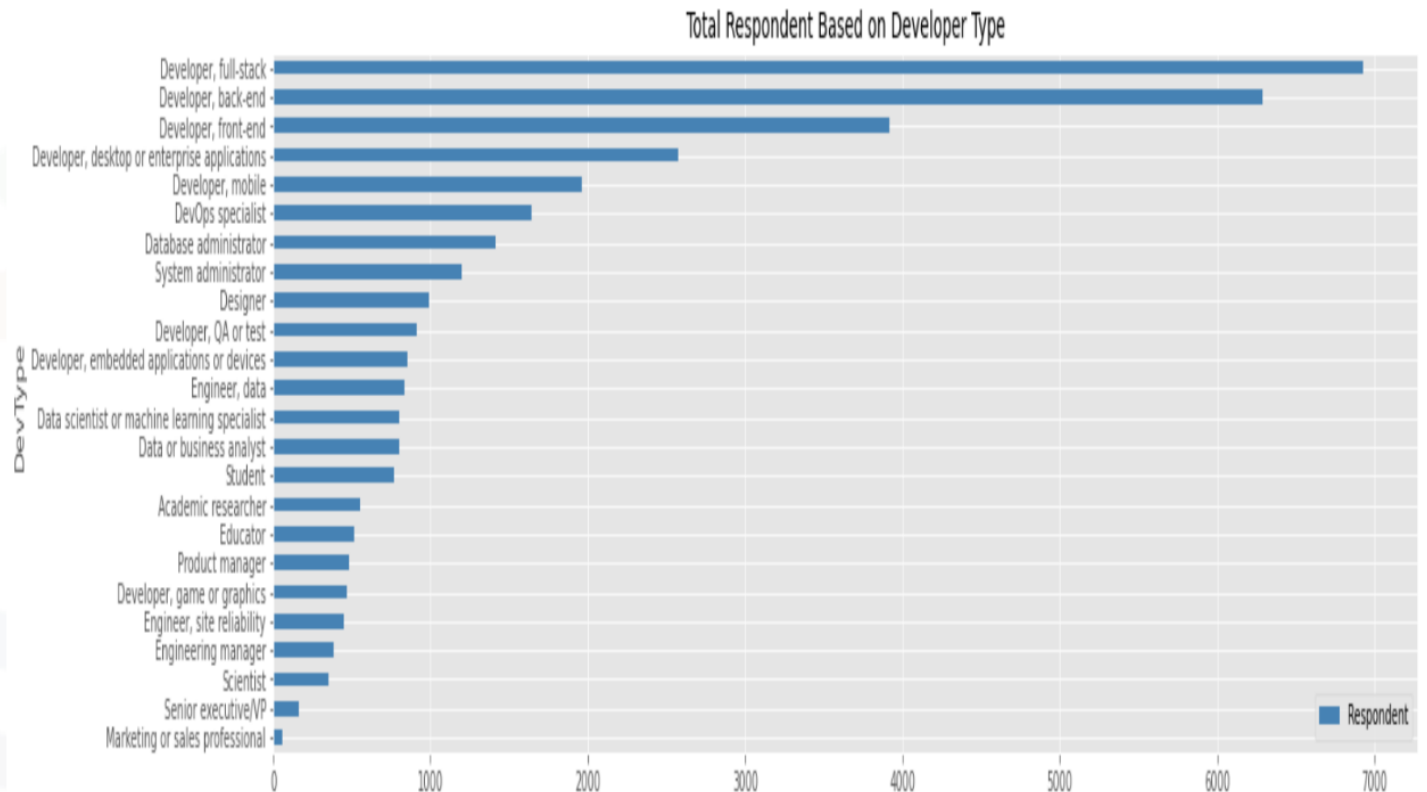
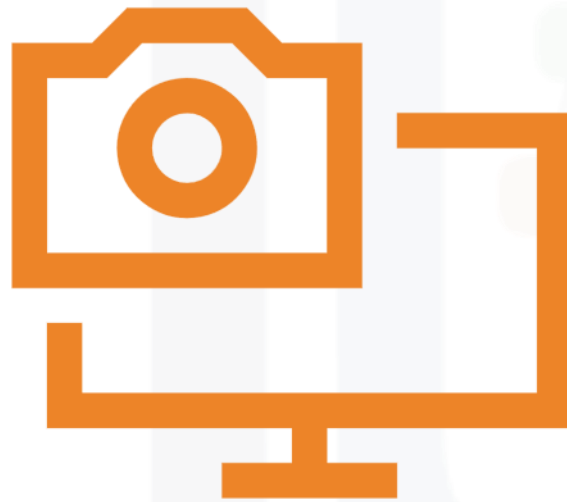
- To accommodate changes companies need to be flexible.
- Need to spread technology out to lagging countries.
- Shift to faster app deployments and cloud services.

CONCLUSION

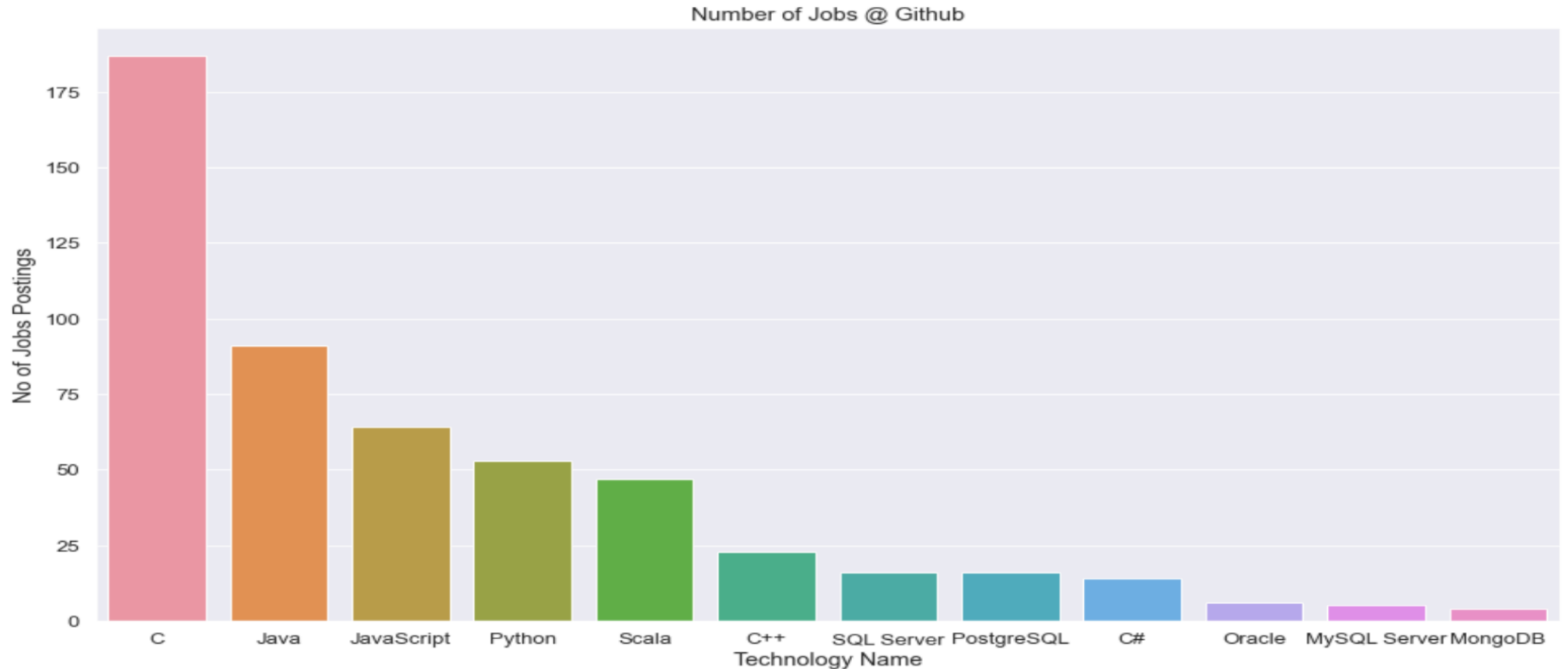


- Technology Trends for current and next year
- Programming languages, Databases and Platform overview.
- Demographic Overview.
- Actions to be taken.
- Incorporation of AL/ML to predict trends and salaries.

APPENDIX



JOB POSTINGS



POPULAR LANGUAGES

