



CAPSTONE PROJECT

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OUTLINE



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

EXECUTIVE SUMMARY



- Data contextualization and analysis goal.
- Methodology description.
- Data gathering.
- Data analysis.
- Data visualizations.
- Results presentation supported with graphs and trends.
- Discussion of overall findings and implications regarding the results previously exposed.
- Final conclusions of the carried-out research.

INTRODUCTION



- Stack Overflow's Developer Survey, an extensive annual initiative, stands as the largest and most comprehensive survey of global coding communities.
- It's important to note that the survey results do not offer a perfectly even representation of the entire developer community.
- The survey encompasses insights from nearly 90,000 developers.
- The survey aims to identify trends that provide predictive insights into the trajectory of developer preferences and practices.
- It serves as a characterization of developers worldwide, offering a comprehensive view of their demographics, preferences, and behaviors.

METHODOLOGY



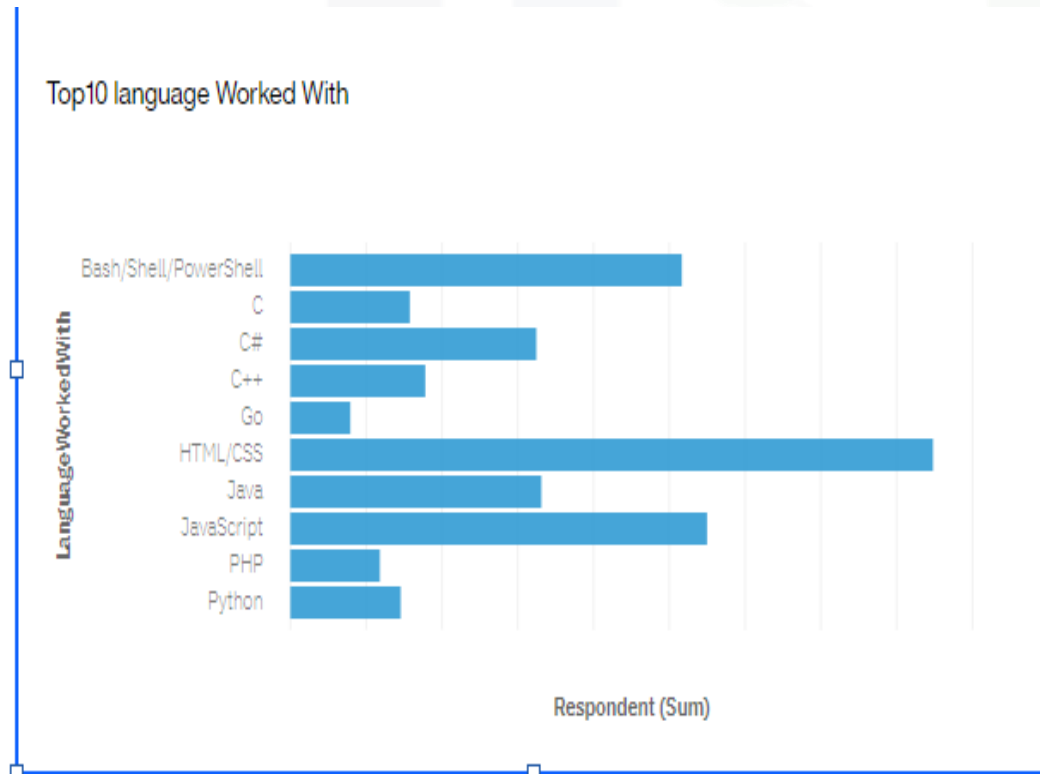
- Gather survey data and explore its contents using methods like web scraping and APIs, leveraging tools such as the Request library.
- Perform data wrangling to clean and prepare the data for analysis.
- Conduct exploratory data analysis, including analyzing data distribution, handling outliers, and exploring correlations.
- Utilize data visualization techniques to highlight the distribution of data, relationships, and comparisons.
- Develop dashboards to present and communicate key insights derived from the data.

RESULTS

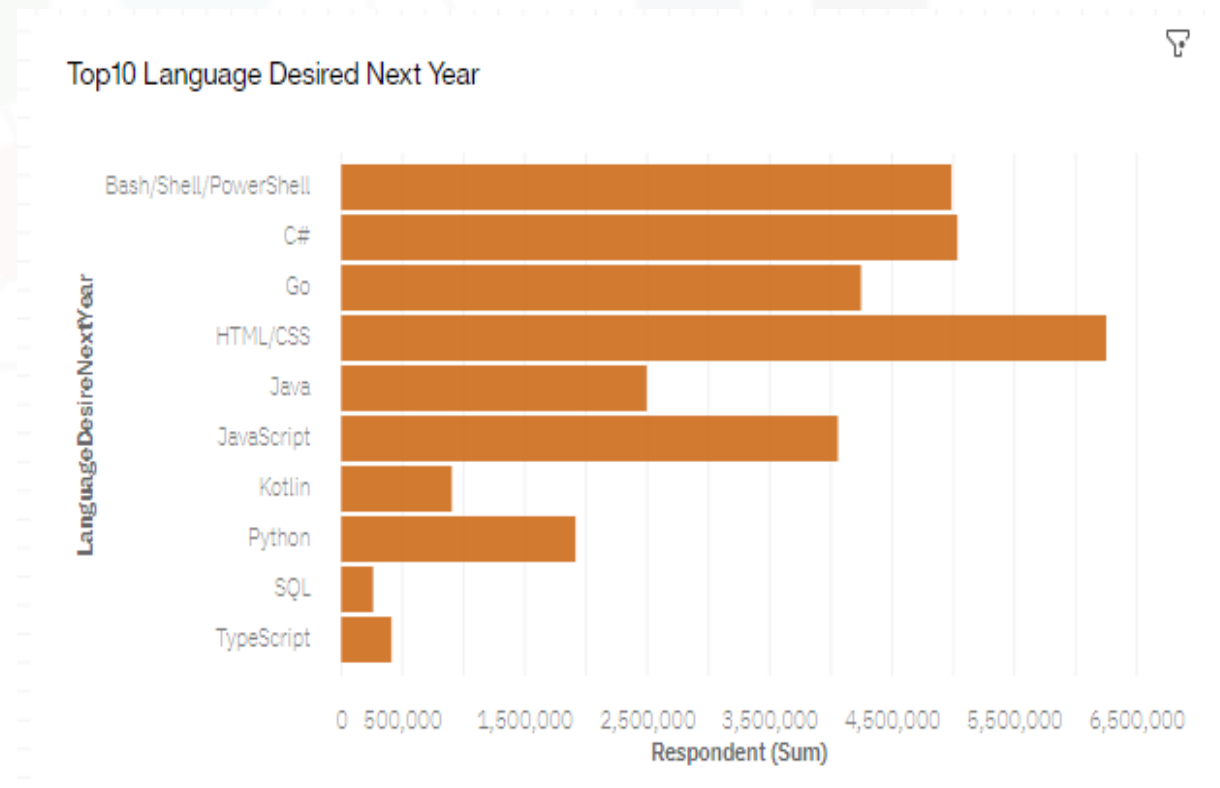


PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript maintains its position as a leading programming language.
- Python stands out as the fastest-growing language in terms of popularity.
- There is significant interest and traction in TypeScript.

Implications

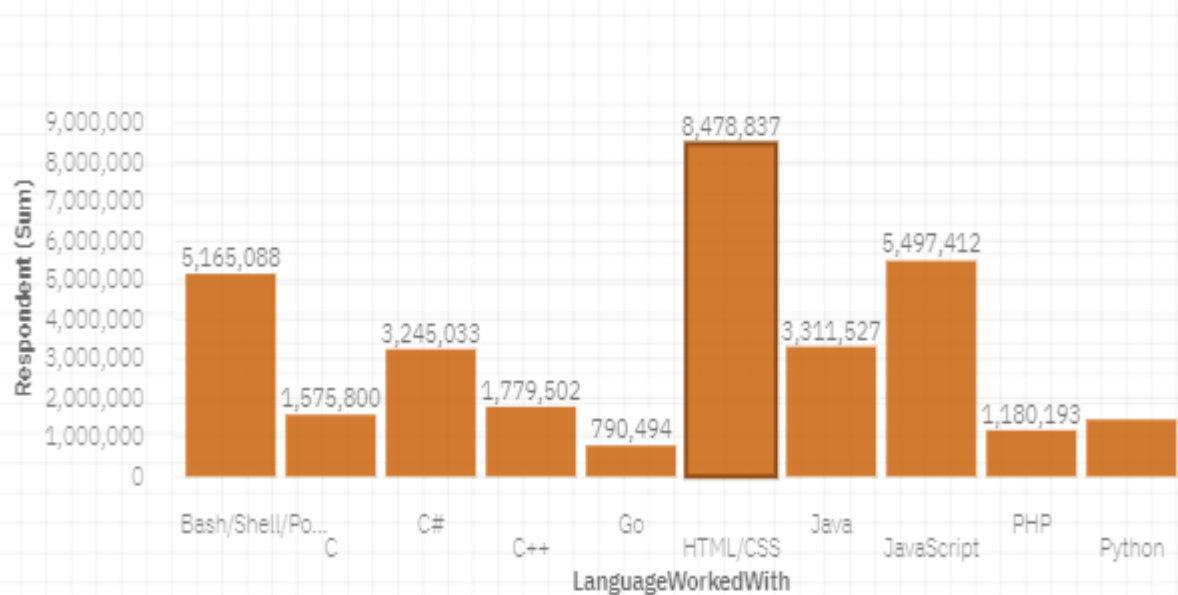
- JavaScript's enduring popularity indicates its continued significance in web development.
- Python's notable growth suggests increasing adoption across diverse application domains.
- The rising interest in TypeScript implies a trend towards languages that enhance code quality and maintainability.

DATABASE TRENDS

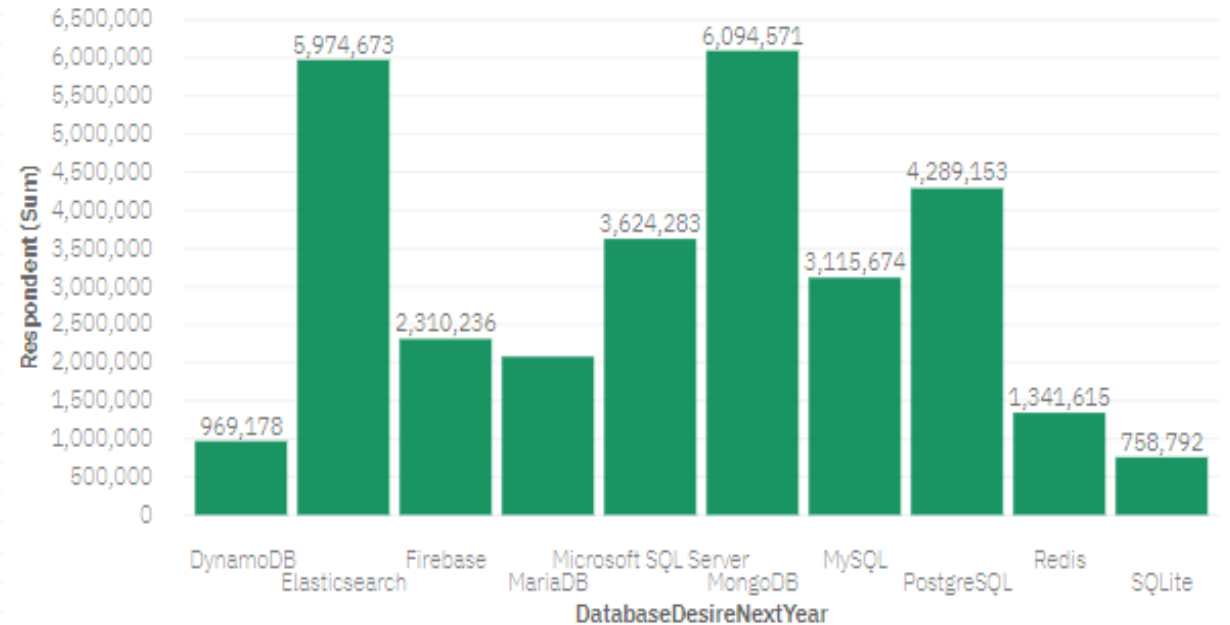
Current Year

Next Year

Top10 Database Worked With



Top10 Database Desired Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL stands out as the most widely used database.
- There is a limited interest in Microsoft SQL Server and SQLite.
- PostgreSQL and MongoDB are gaining increased attention.

Implications

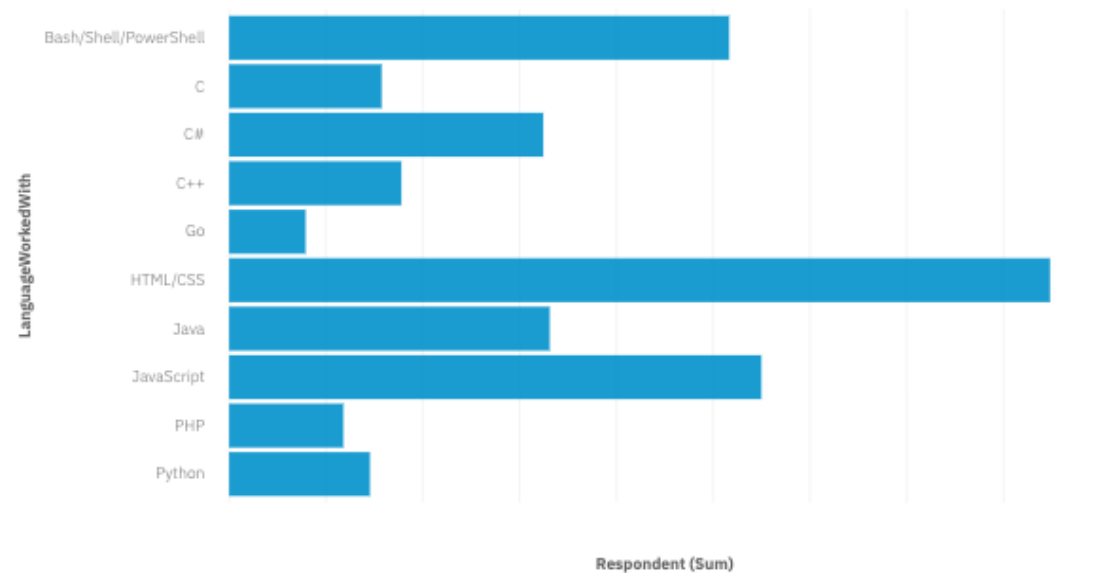
- MySQL's dominance highlights its broad acceptance and use across diverse applications.
- Limited interest in Microsoft SQL Server and SQLite may indicate specific developer preferences or project requirements.
- The rising popularity of PostgreSQL and MongoDB signifies a trend towards databases offering distinctive features, scalability, and flexibility.

DASHBOARD

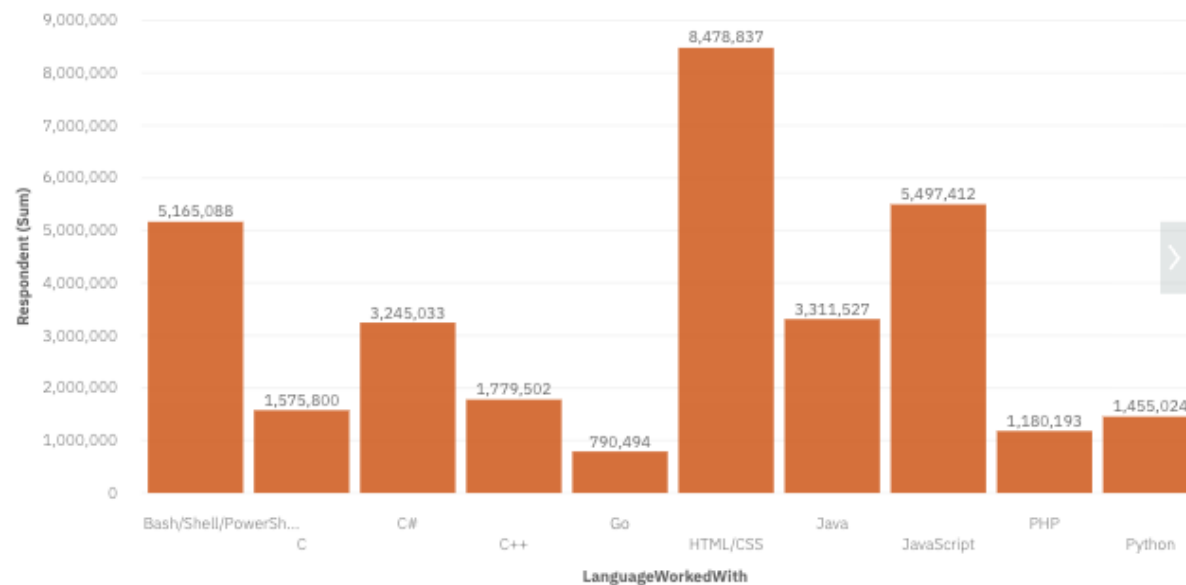


<https://dataplatform.cloud.ibm.com/dashboards/96821c8a-13b7-469c-b49b-44cb51f7c224/view/0324ca2a3a8f39df40f3f2e407cd7a527e312354e0bb850781847b490b337397f33b13c5c87e19588f450235f0bd475ccf>

Top10 language Worked With



Top10 Database Worked With



Word Cloud of Platform Worked With

Respondent (Sum)

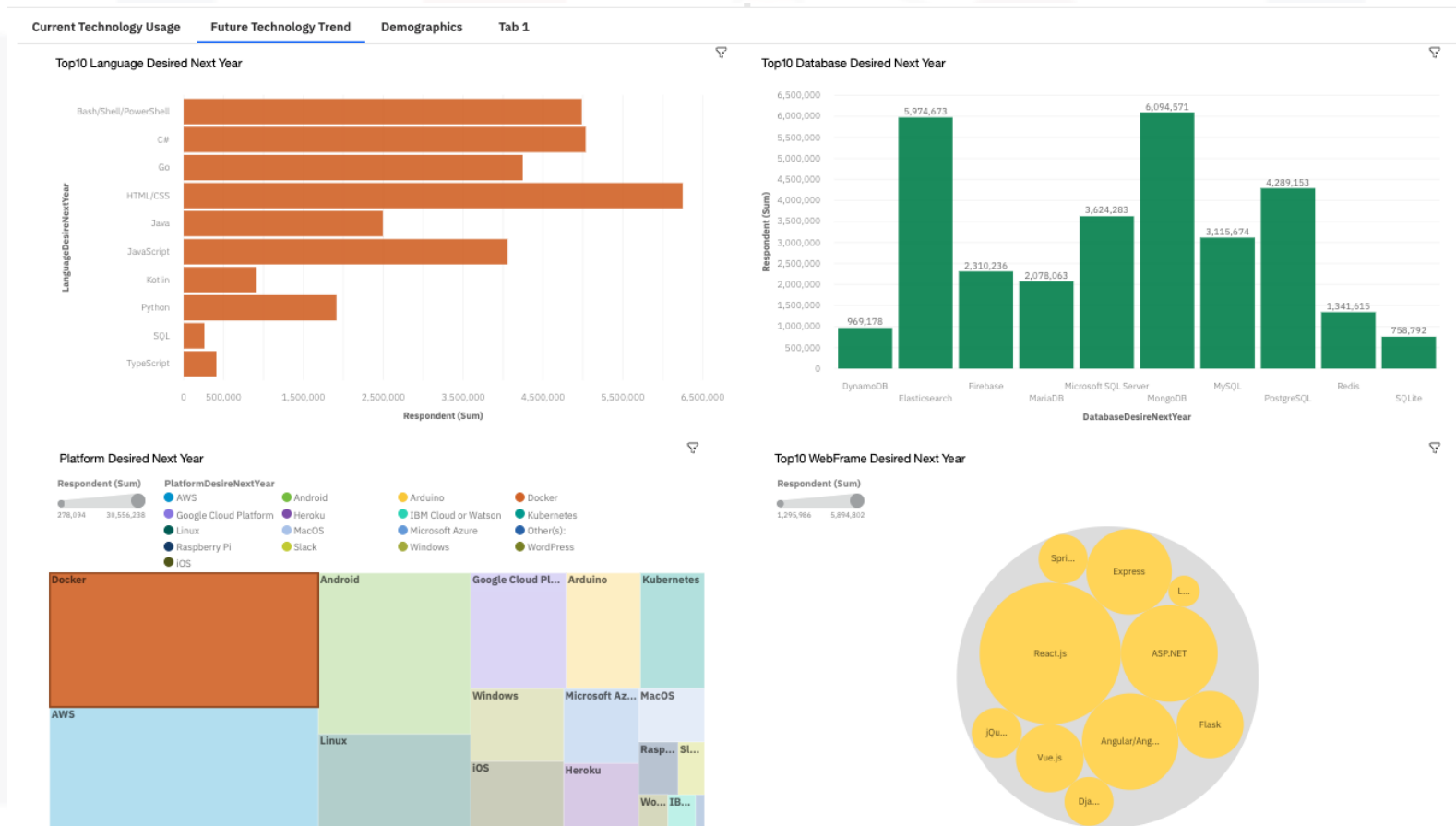


Top10 WebFrame Worked With

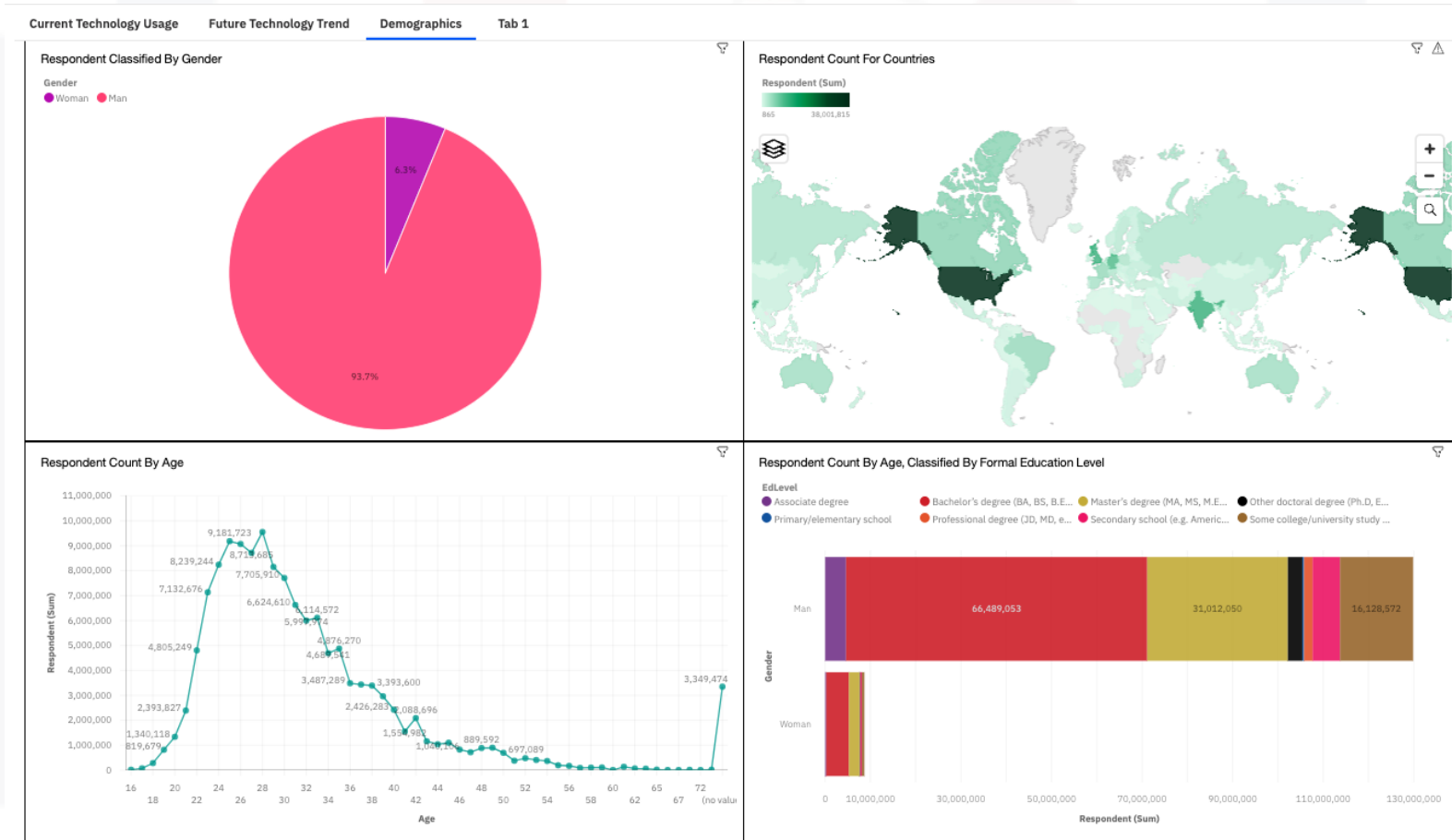
Respondent (Sum)



DASHBOARD TAB 2



DASHBOARD TAB 3



DISCUSSION



OVERALL FINDINGS & IMPLICATIONS

Findings

- JavaScript is extensively utilized, and TypeScript is gaining popularity in the development community.
- Most developers are young males, accounting for over 90% of the demographic.
- Developers are predominantly situated in developed countries.

Implications

****Language Landscape Evolution:****

- The prevalence of JavaScript and the rise of TypeScript imply an ongoing evolution in programming language preferences within the development community.

****Diversity and Inclusion Focus:****

- With over 90% of developers being young males, there is a clear need for initiatives focused on enhancing diversity and inclusion in the technology sector.

****Global Tech Perspectives:****

- The concentration of developers in developed countries underscores the importance of considering global perspectives in addressing challenges and opportunities in the technology industry.

CONCLUSION



- Developers exhibit distinctive traits that set them apart.
- Analyzing popularity trends provides valuable insights into the preferences for various tools, platforms, and programming languages.
- Efforts are needed to extend accessibility to the labor market in developing countries.

APPENDIX

