

STACK OVERFLOW DEVELOPER SURVEY

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OUTLINE



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

EXECUTIVE SUMMARY



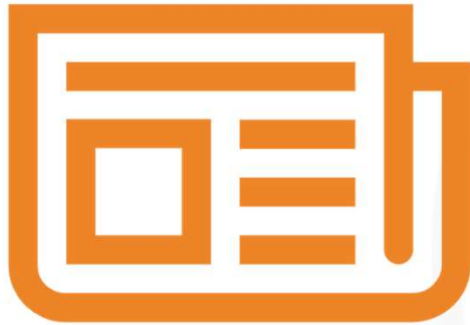
- Define the purpose and goals of the data analysis.
- Outlined the methodology used throughout the research.
- Collected relevant and accurate data for analysis.
- Performed in-depth analysis of the gathered data.
- Created visual representations to illustrate key insights.
- Presented results supported by meaningful graphs and trends.
- Discussed key findings and their implications.
- Concluded with a summary of insights from the research.

INTRODUCTION



- The Stack Overflow Developer Survey is the world's largest and most in-depth survey of coding professionals and enthusiasts.
- It provides valuable insights but does not fully represent every segment of the global developer community.
- The 2023 edition gathered responses from nearly 90,000 developers worldwide.
- The survey reveals key trends that help forecast the future direction of the developer landscape.
- It offers a global snapshot of developer roles, tools, preferences, and demographics.

METHODOLOGY

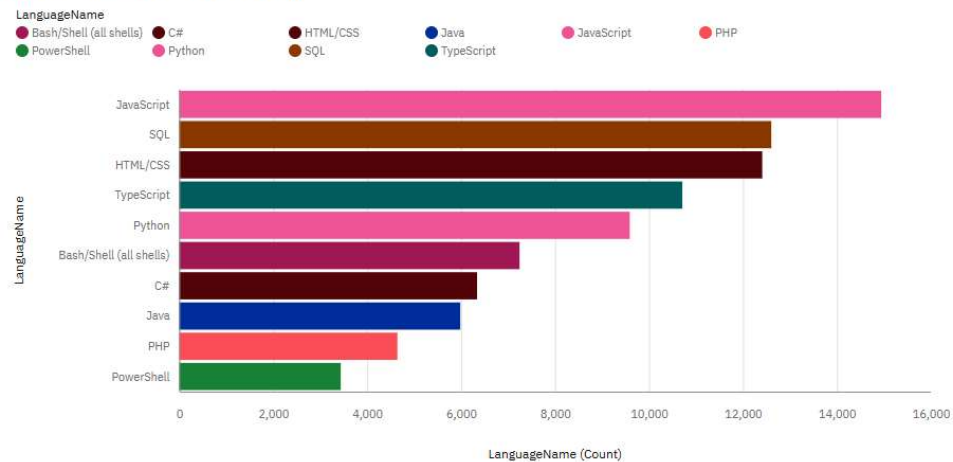


- Collecting survey data and explore the dataset
- Web Scraping
 - APIs
 - Request Library
- Data Wrangling
- Exploratory Data Analysis
 - Analyzing Data Distribution
 - Handling Outliers
 - Correlation
- Data Visualization
 - Highlight distribution of data, relationship and the composition of data
- Dashboards

PROGRAMMING LANGUAGE TRENDS

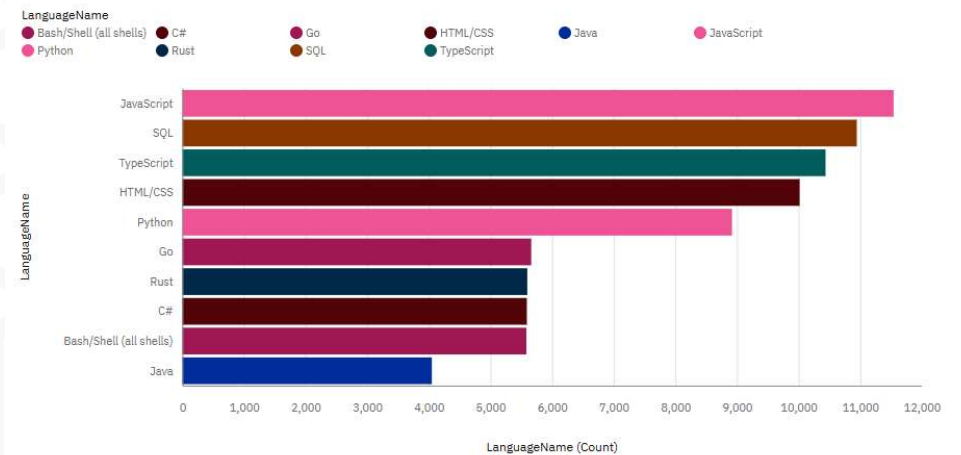
Current Year

Top 10 Language Have Worked With



Next Year

Top 10 Language Want To Work With



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- Bash/Shell is the most worked-with and most desired language.
- C# and HTML/CSS are consistently popular across current and future preferences.
- Languages like Dart and Elixir are currently used but not among future preferences.

Implications

- Bash/Shell is crucial for automation and DevOps; Its relevance is growing.
- High demand for C# and HTML/CSS signals opportunities in web and application development.
- Decline in Dart and Elixir interest shows a shift toward more mainstream and career-aligned language.

DATABASE TRENDS

Current Year

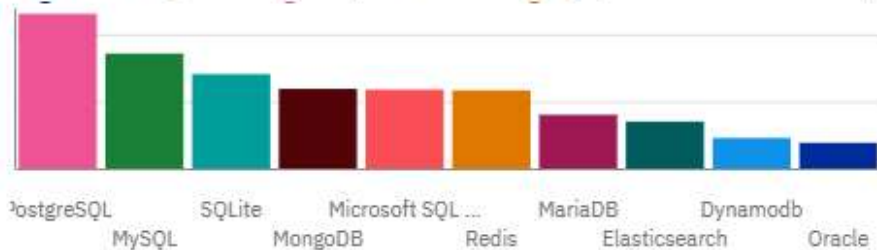
Next Year

Top 10 Database Work With



Database_worked_with

Dynamodb Elasticsearch MariaDB
Microsoft SQL Server MongoDB MySQL

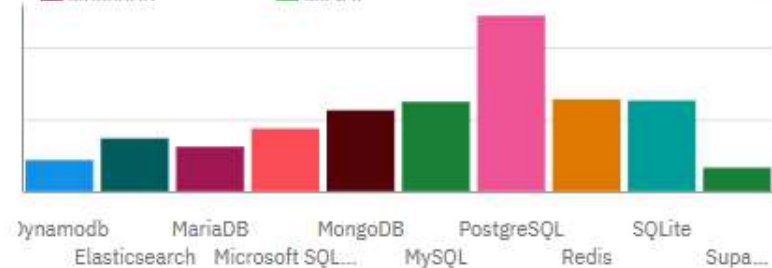


Top 10 Database Want to Work With



DatabaseName

Dynamodb Elasticsearch
MariaDB Microsoft SQL Server
MongoDB MySQL



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- Microsoft SQL Server is the most used database currently, but PostgreSQL is the most desired for the future.
- PostgreSQL, Elasticsearch, and MongoDB show strong presence in both current usage and future interest.
- Cassandra shows future interest despite not being in the current top 10, while Cosmos DB is declining in future preference.

Implications

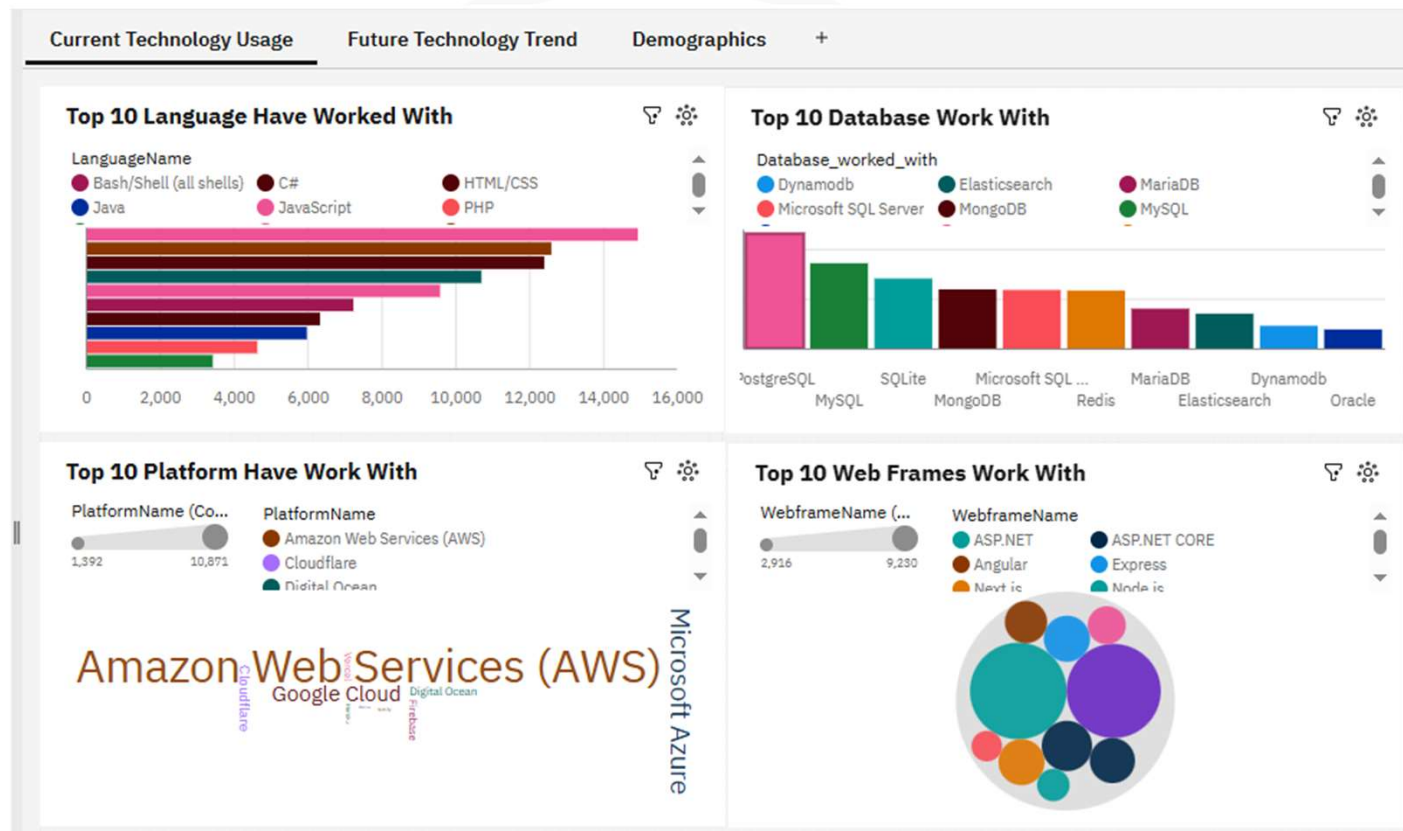
- Developers may be transitioning from traditional enterprise databases like SQL Server to open-source, scalable options such as PostgreSQL.
- Consistent technologies like Elasticsearch and MongoDB suggest stable industry demand and are valuable for skill development.
- Increasing interest in Cassandra indicates growing demand for distributed database systems, while decreasing interest in Cosmos DB may signal reduced relevance or limited adoption.

DASHBOARD

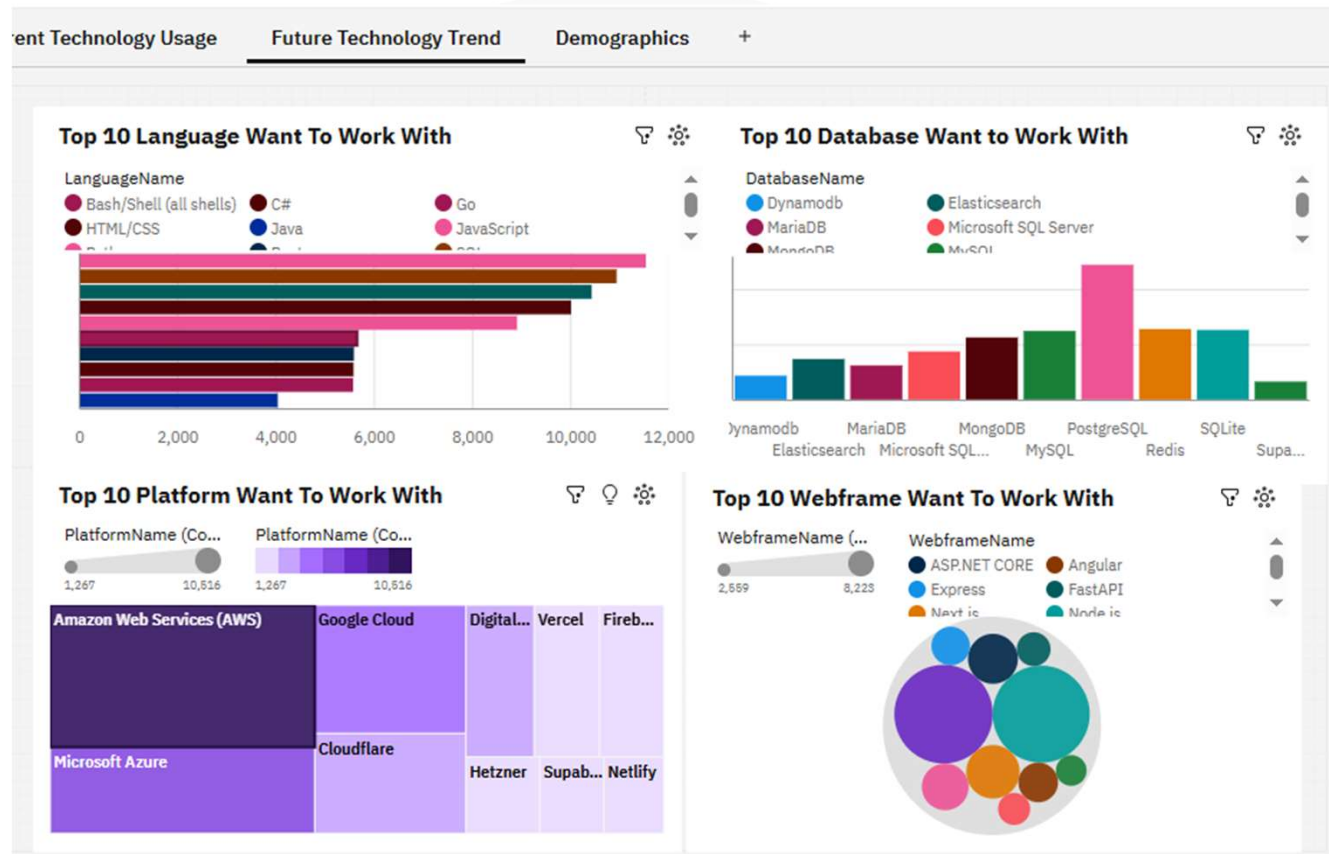


<https://github.com/mohammed-rayhan/ibm-data-analyst-capstone-project/blob/main/Project-Output-P.pdf>

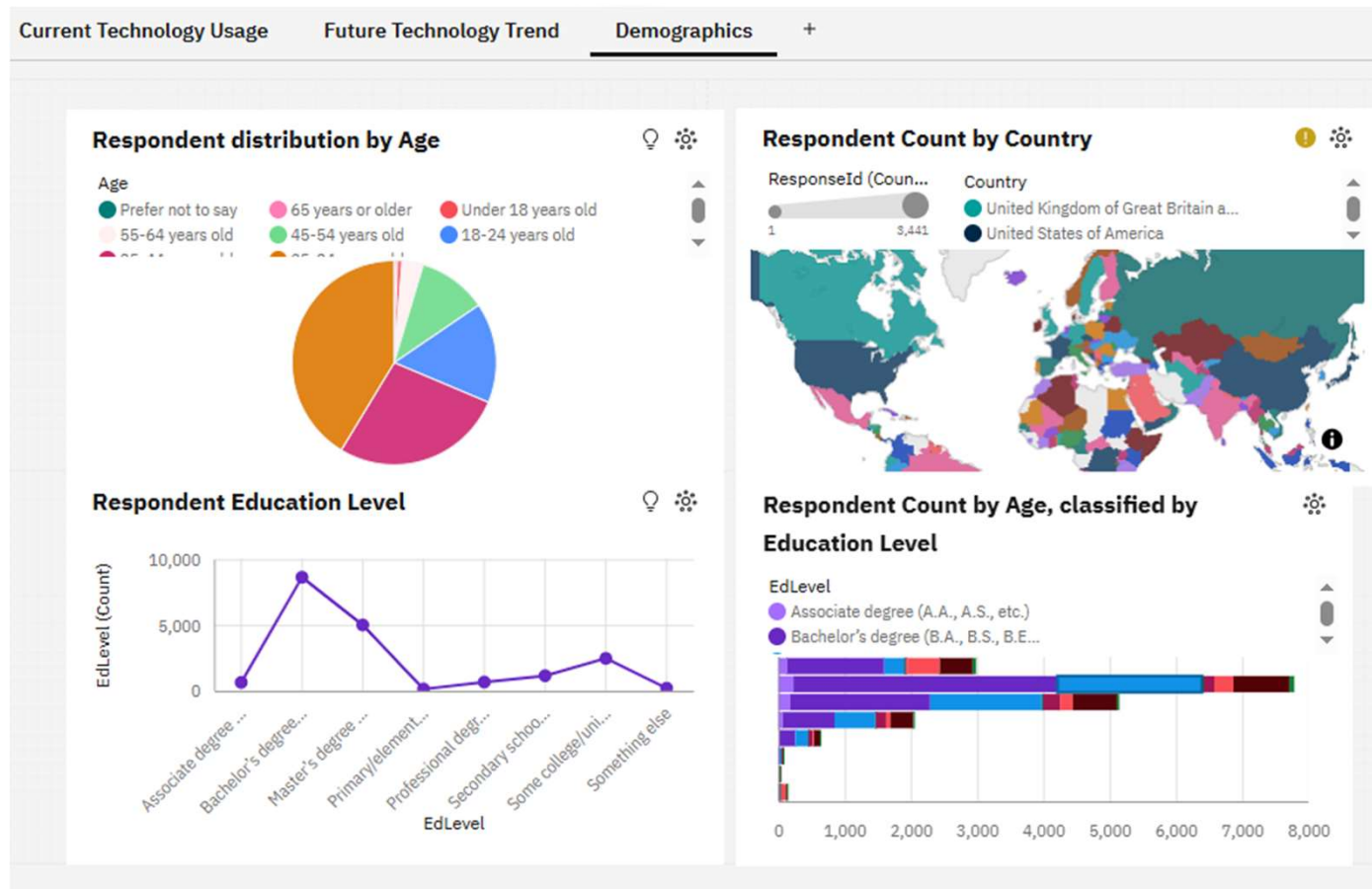
DASHBOARD TAB 1



DASHBOARD TAB 2



DASHBOARD TAB 3



CONCLUSION

- Developers tend to exhibit distinct and recognizable characteristics, making them a unique demographic within the tech industry.
- Through analysis, valuable insights can be gained into the popularity trends of various tools, platforms, and programming languages.
- However, efforts are still needed to enhance accessibility and inclusivity in this labor market, particularly for developing countries.