

STACK OVERFLOW DEVELOPER SURVEY

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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 annual Developer Survey is the largest and most comprehensive survey of people who code around the world.
- Results don't represent everyone in the developer community evenly.
- Nearly 90,000 developers.
- Trends to predict where the developers are going.
- Characterization of developers around the globe.



METHODOLOGY



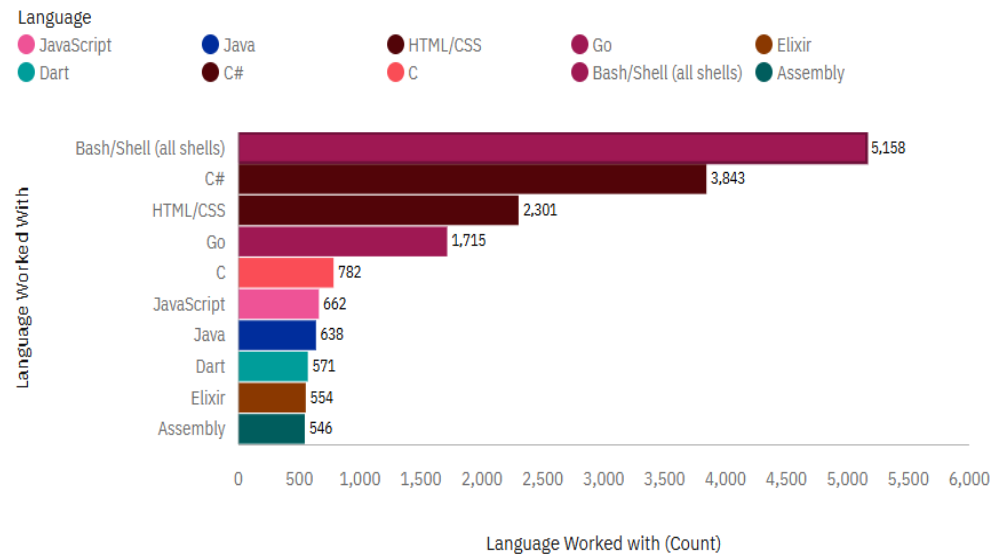
- Collect survey data & explore its content
- Web Scraping
 - APIs.
 - Request library.
- Data Wrangling
- Exploratory data analysis
 - Analyzing data distribution.
 - Handling outliers.
 - Correlations.
- Data Visualization
 - Highlight distribution of data, relationships, the composition and comparison of data.
- Dashboards



PROGRAMMING LANGUAGE TRENDS

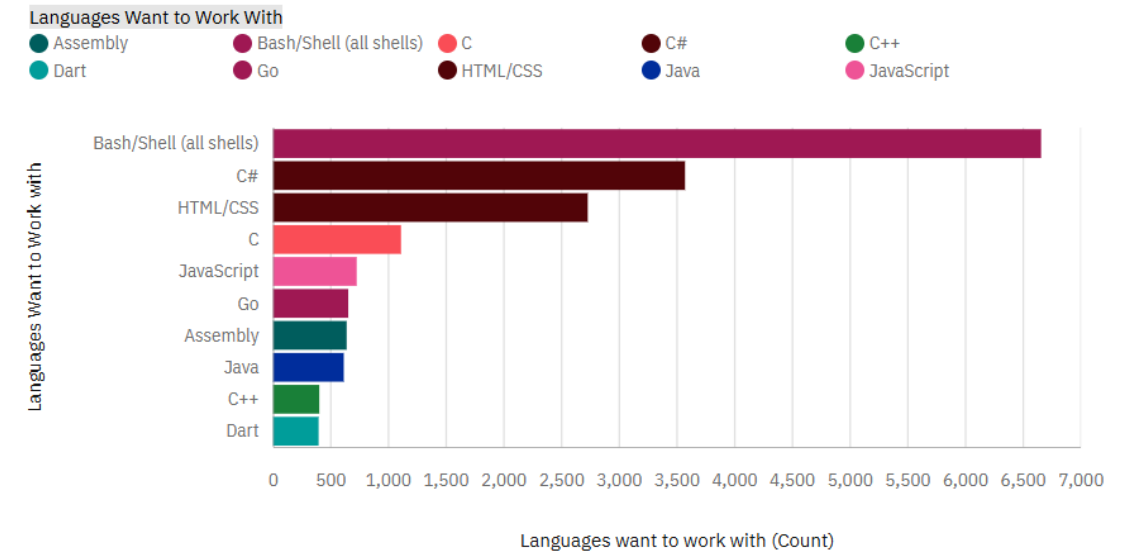
Current Year

Top 10 Languages 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 languages.



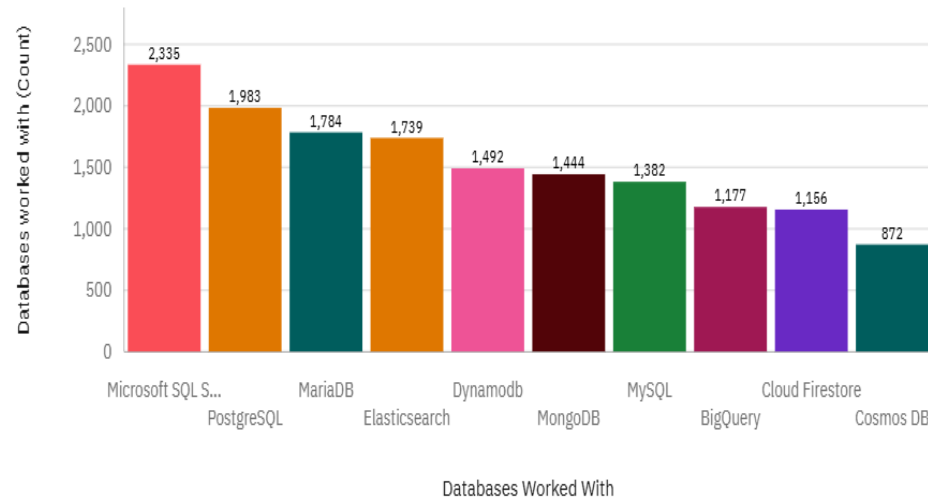
DATABASE TRENDS

Current Year

Top 10 Databases worked with

Language

BigQuery Cloud Firestore Cosmos DB Dynamodb Elasticsearch
MariaDB Microsoft SQL Server MongoDB MySQL PostgreSQL

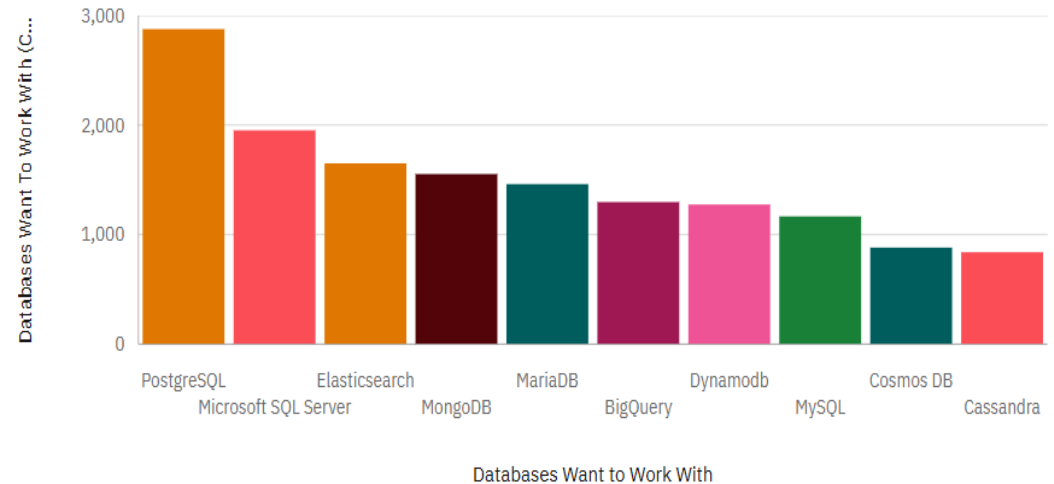


Next Year

Top 10 Database Want To Work With

Language

BigQuery Cassandra Cosmos DB Dynamodb Elasticsearch
MariaDB Microsoft SQL Server MongoDB MySQL PostgreSQL



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- Microsoft SQL Server is the most worked-with database currently, but PostgreSQL is the most desired for next year.
- PostgreSQL, Elasticsearch, and MongoDB show strong positions in both current usage and future interest.
- Cassandra appears in future interest but is not among the top 10 currently used, while Cosmos DB drops in future preference.

Implications

- Developers may be shifting from traditional enterprise databases like SQL Server to more open-source, scalable options like PostgreSQL.
- Technologies with consistent presence (e.g., Elasticsearch, MongoDB) indicate stable industry demand and are good choices for skill-building.
- Rising interest in Cassandra suggests emerging demand for distributed database systems, while declining interest in Cosmos DB could mean reduced relevance or limited adoption.



DASHBOARD



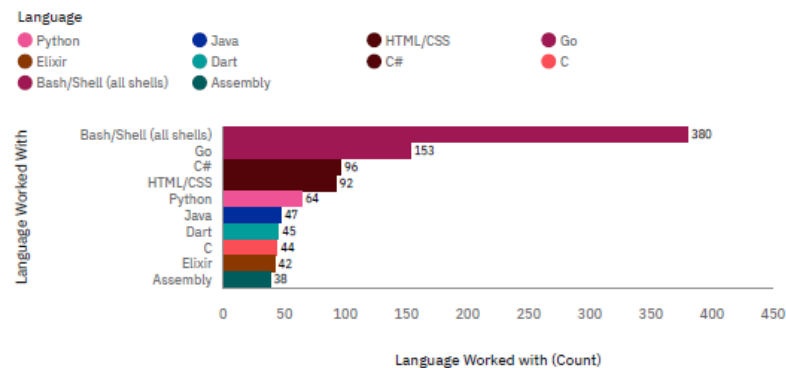
<https://raw.githubusercontent.com/preethi-s2000/IBM-Data-Analyst-Capstone-Project/blob/main/dashboard.pdf>



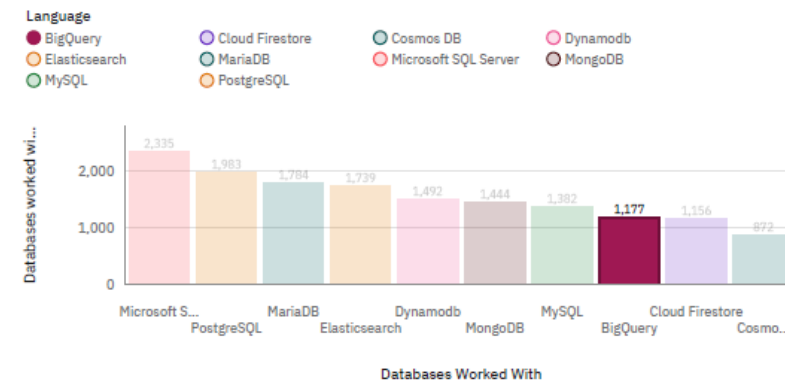
DASHBOARD TAB 1

Tab 1

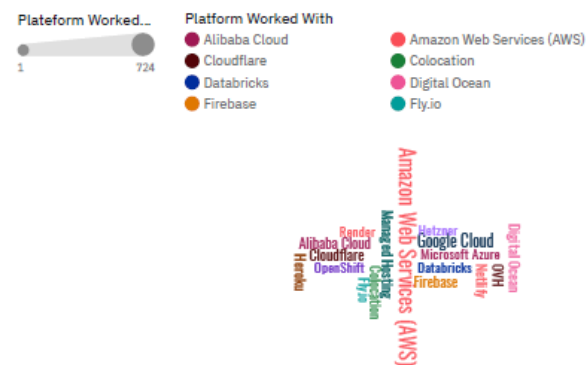
Top 10 Languages Worked With



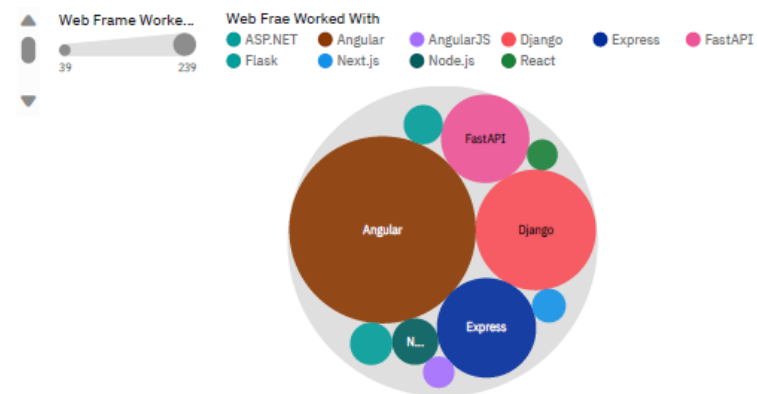
Top 10 Databases worked with



Platform Worked With



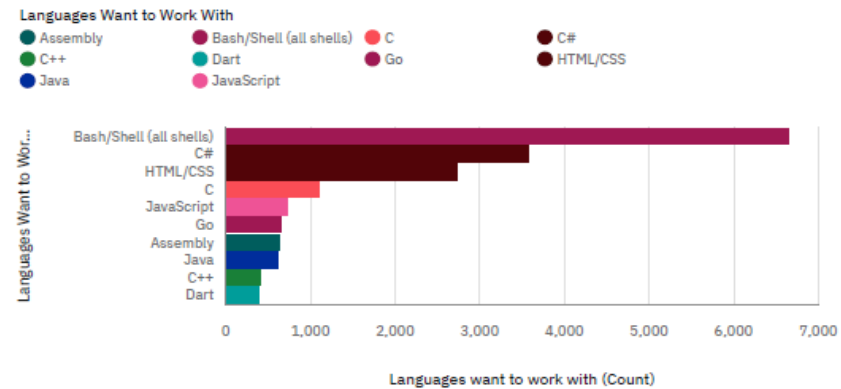
Top 10 Web Frame Worked With



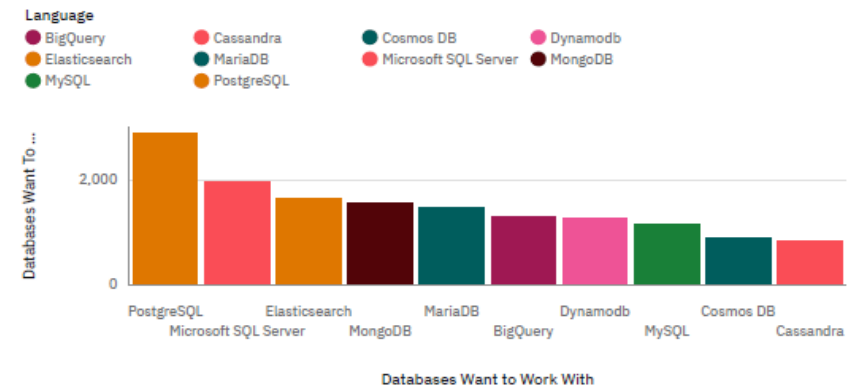
DASHBOARD TAB 2

Tab 2

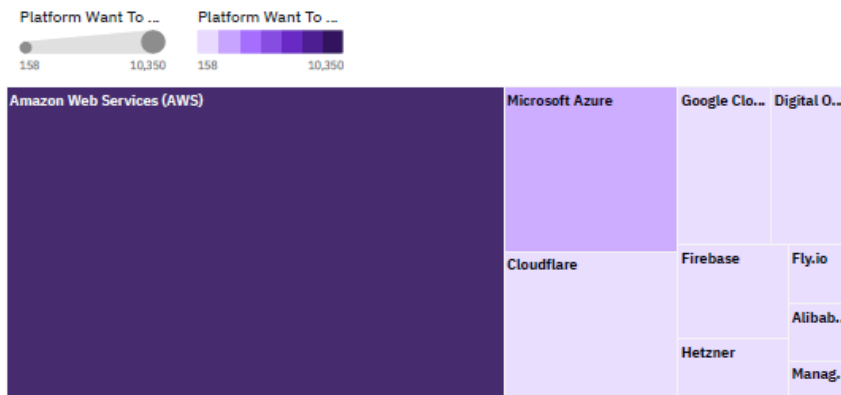
Top 10 Language Want To Work With



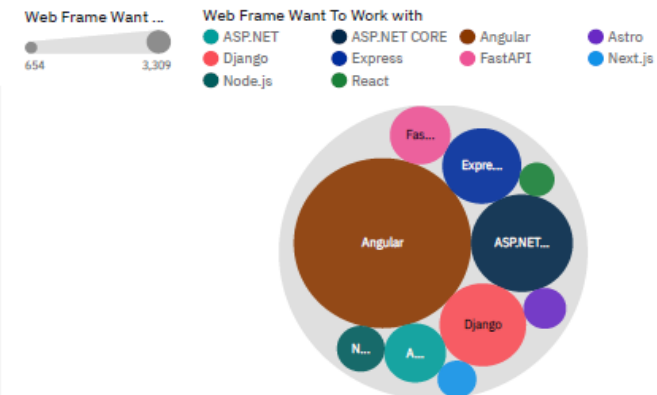
Top 10 Database Want To Work With



Top 10 Platform Want To Work With



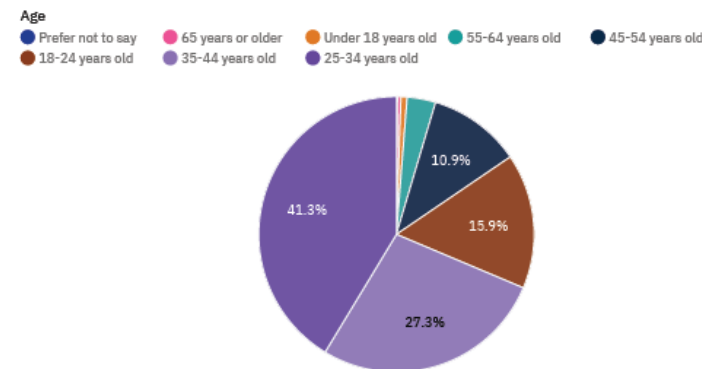
Language hierarchy colored by Language and sized by Language



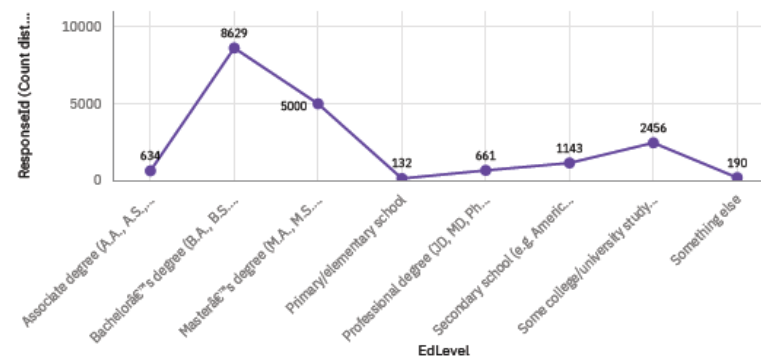
DASHBOARD TAB 3

Tab 3

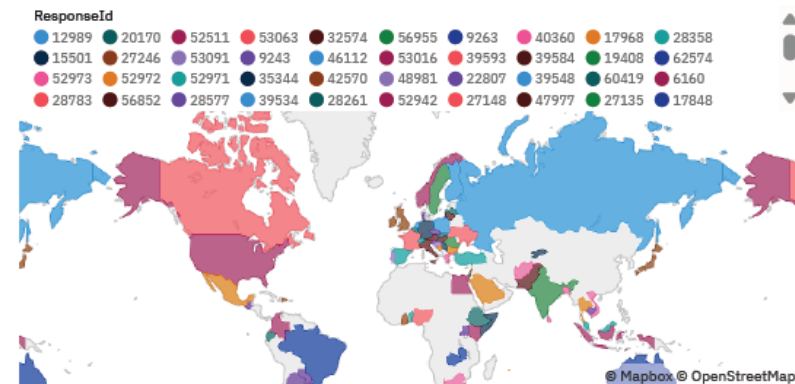
Respondent Distribution by Age



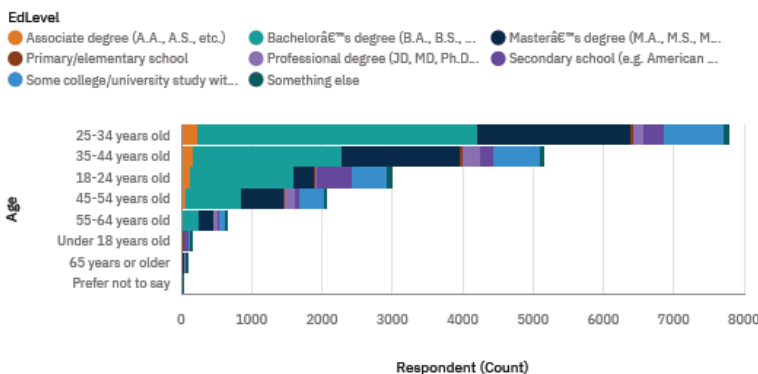
Respondent by Education Level



Respondent Count for Country regions



Respondent Count by Age Classified by Education Level



CONCLUSION



- Developers are people with very marked characteristics.
- A good idea of popularity trends of different tools, platforms and languages can be obtained.
- There is a job to be done to spread accessibility of this labor market to countries in development.

