



STACK OVERFLOW DEVELOPER SURVEY

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18/09/2024

OUTLINE



Executive Summary

Introduction

Methodology

Results

Visualization – Charts

Dashboard

Discussion - Findings & Implications

Conclusion

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 programmers worldwide.
- The results may not fully represent all segments of the developer community.
- Survey includes input from nearly 90,000 developers.
- Highlights trends to predict the future direction of the developer landscape.
- Provides a global characterization of developers.

METHODOLOGY



- **Data Collection & Exploration**
 - Web Scraping: Automate the extraction of data from websites.
 - APIs: Fetch structured data using APIs
 - Request library: Use python's requests Library for making HTTP requests to retrieve the data
- **Data Wrangling/ Data Cleaning:** Handle missing values, remove duplicates, and format the data properly.
- **Exploratory data analysis**
 - Data distribution Analysis
 - Handling outliers.
- **Data Analytics**
 - Correlation Analysis
- **Data Visualization**
 - Highlight distribution of data, relationships, the composition and comparison of data.
- **Data Dashboards**

RESULTS

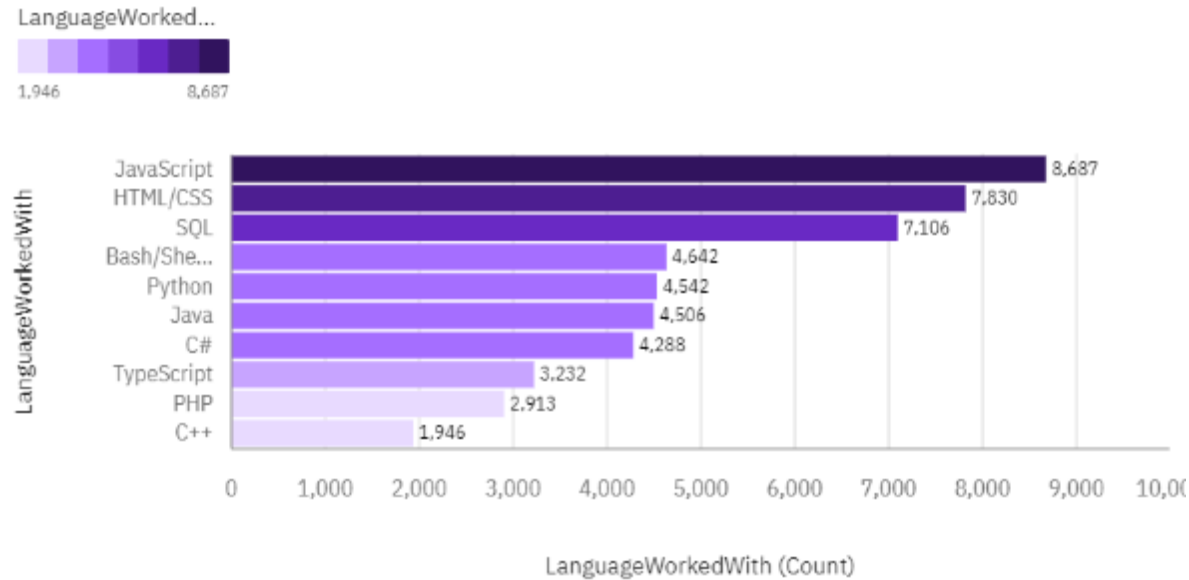
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- **Result and findings 1:** Programming Language Trends– Current Year vs Next Year
 - **Result and findings 2:** Database Trends- Current Year vs Next year

PROGRAMMING LANGUAGE TRENDS

Current Year

Current Technology Usage

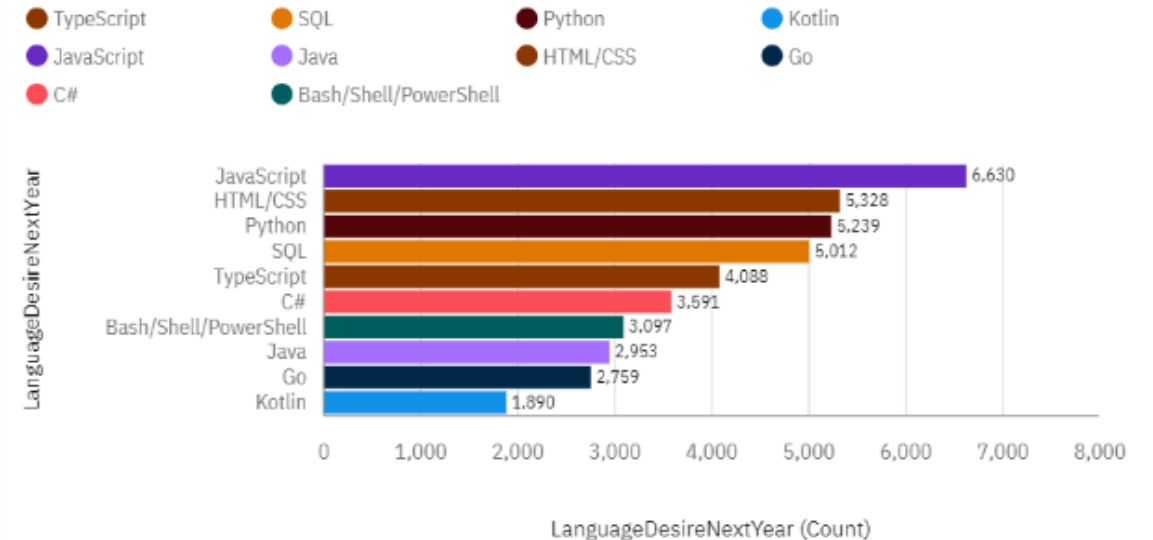
Top 10 Language Worked With



Next Year

Future Technology Trend

Top 10 Language Desire Next Year



PROGRAMMING LANGUAGE TRENDS – FINDINGS & IMPLICATIONS

Findings:

- JavaScript remains the leading language
- Overall, Python is the fastest-growing Language
- Chart depicts rapid interest in TypeScript.

Implications:

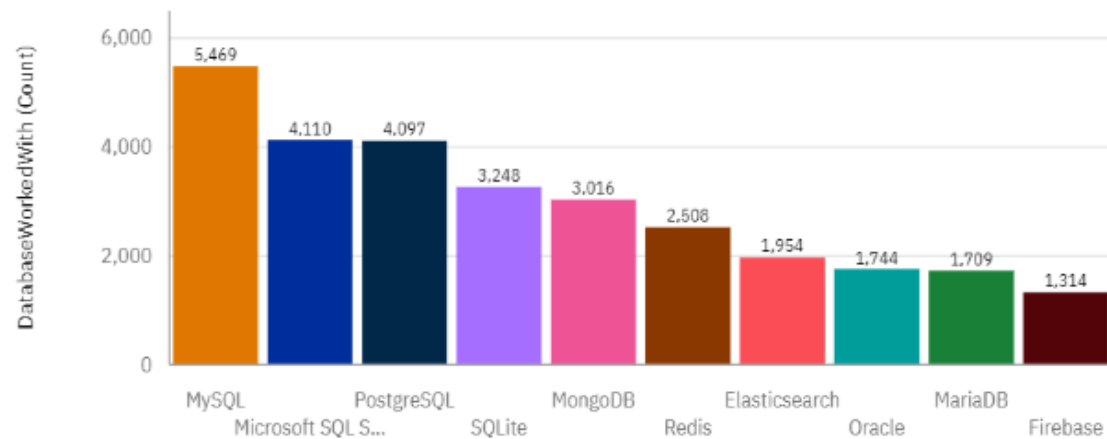
- Potential shift of developers from JavaScript to TypeScript.

DATABASE TRENDS

Current Year

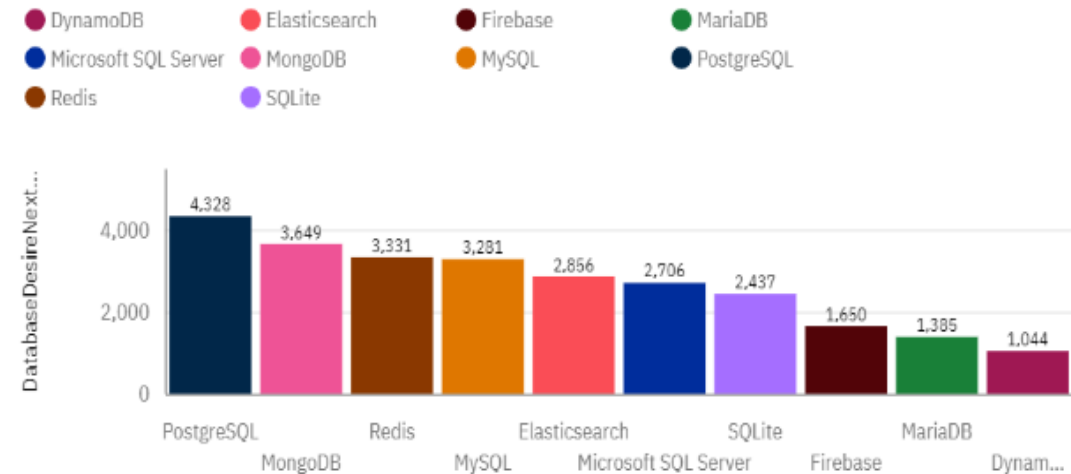
Next Year

Top 10 Database Worked With



DatabaseWorkedWith

Top 10 Database Desire Next Year



DATABASE TRENDS – FINDINGS & IMPLICATIONS

Findings:

- MySQL remains the most used database
- With declining interest in Microsoft SQL Server and SQLite,
- While interest in PostgreSQL and MongoDB is on the rise.

Implications:

- Microsoft SQL Server and SQLite are losing ground in the market,
- While PostgreSQL and MongoDB are gaining strong market presence.

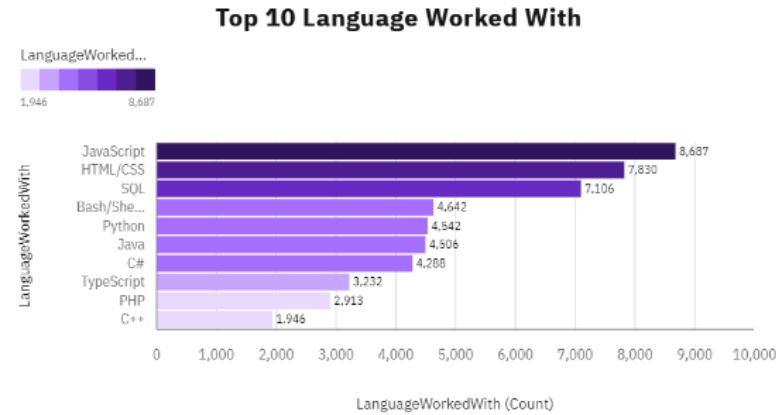
DASHBOARD



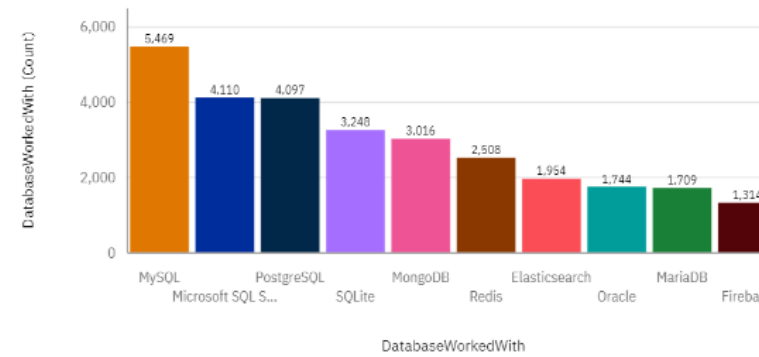
<https://github.com/aashpathak/IBM-Coursera-Project/blob/main/Dashboards.pdf>

CURRENT TECHNOLOGY USAGE

Current Technology Usage



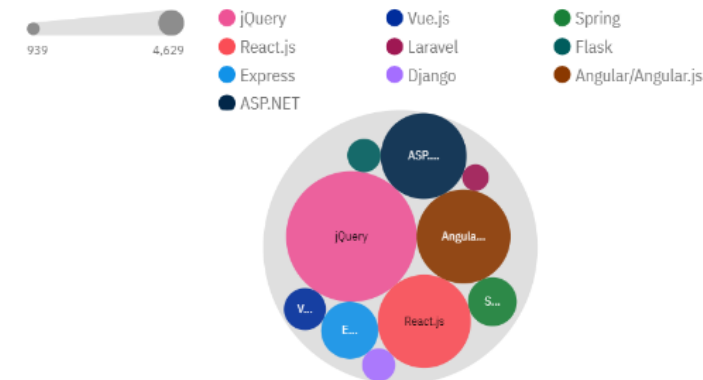
Top 10 Database Worked With



Platform Worked With

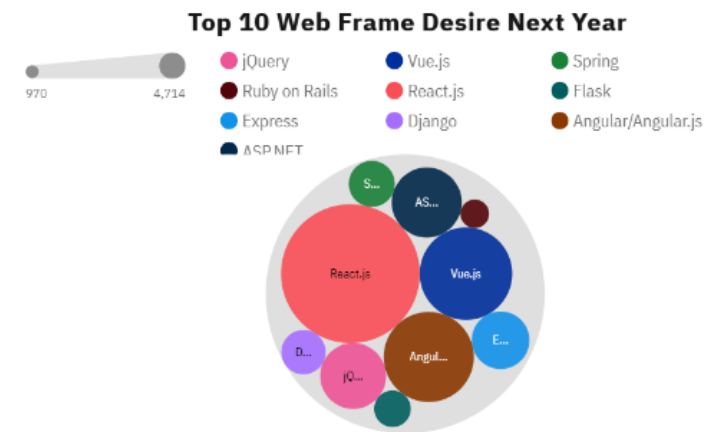
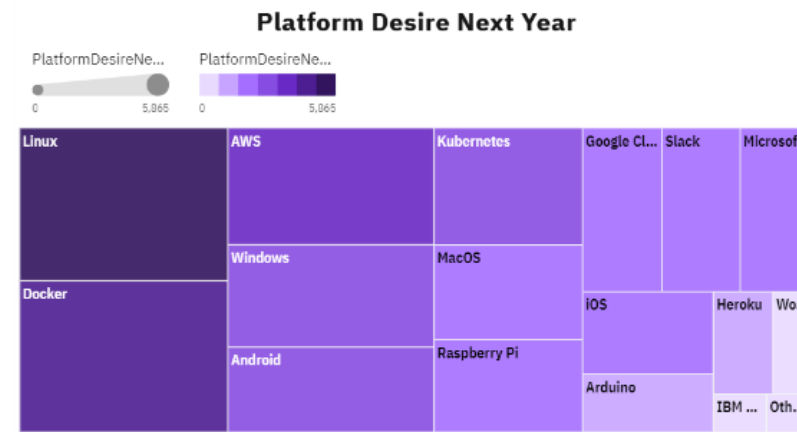
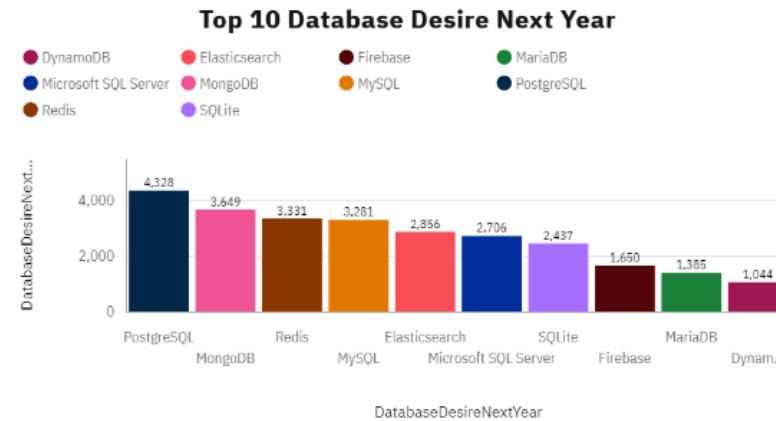
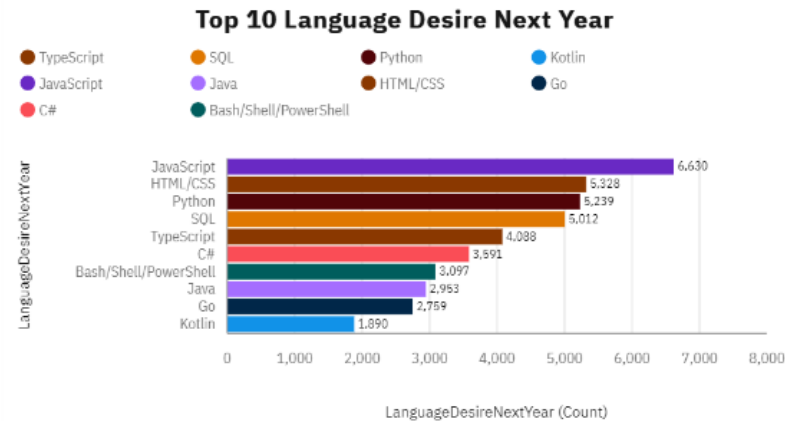


Top 10 Web Frame Worked With



FUTURE TECHNOLOGY TREND

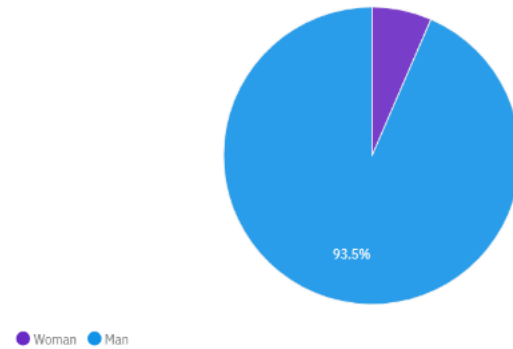
Future Technology Trend



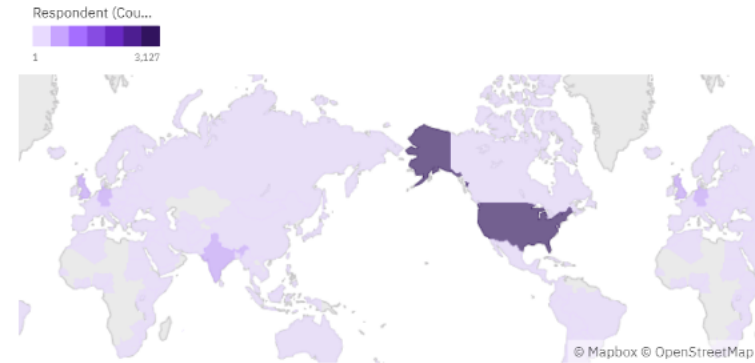
DEMOGRAPHICS

Demographics

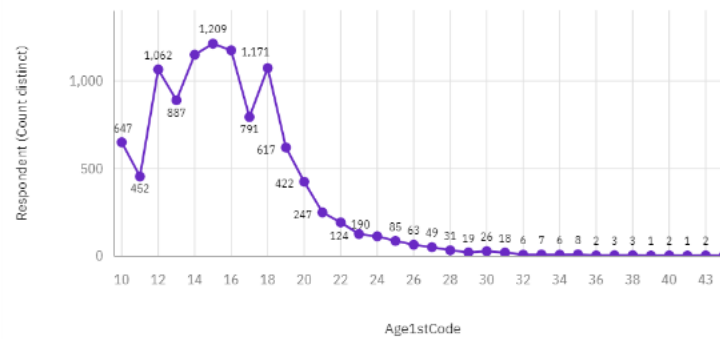
Respondent classified by Gender



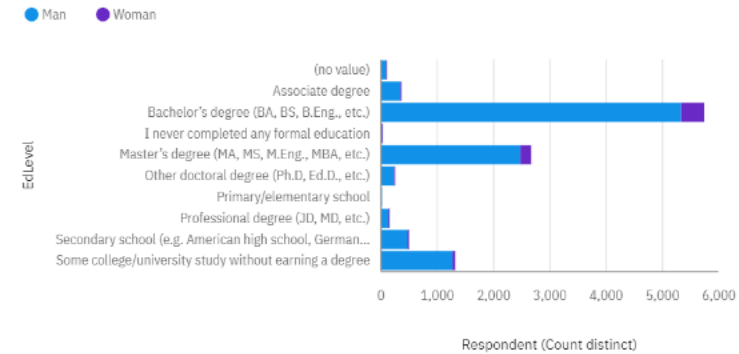
Respondent Count for Countries



Respondent Count by Age



Respondent Count by Gender and Formal Education Level



DISCUSSION



OVERALL FINDINGS & IMPLICATIONS

Findings:

- JavaScript is widely used, with TypeScript growing in popularity.
- Over 90% of developers are young males.
- Developers are predominantly based in developed countries.

Implications:

- JavaScript and TypeScript web frameworks are gaining followers.
- There is global polarization in developer locations and gender.
- Most young developers do not have postgraduate studies.

CONCLUSION



In conclusion, developers exhibit distinct characteristics, and analyzing trends in tools, platforms, and languages provides valuable insights into their popularity. However, there is a need to improve accessibility to this labor market in developing countries.