



Technology Trends Around the World

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OUTLINE



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EXECUTIVE SUMMARY



- **Developer Preferences:** Analysis of current trends in the software development community based on StackOverflow survey data.
- **Top 10 Languages:** Identification of the top 10 most-used programming languages by developers.
- **Future Technologies:** Insights into the languages and platforms developers plan to adopt in the next year.
- **Technical Environment:** Examination of the most widely used development environments, operating systems, and platforms.
- **Business Impact:** Helps businesses align their tech stack with industry trends to stay competitive and attract top talent.

INTRODUCTION



- **Purpose of Analysis:** To identify trends in developer preferences for languages, databases, platforms, and tools.
- **Scope:** The analysis focuses on both current and future technologies developers are using or planning to use.
- **Key Areas of Interest:**
 - **Languages:** Programming languages worked with in the past year.
 - **Technologies:** Development environments, databases, and platforms utilized.

METHODOLOGY



- **Data Source:** Collected from StackOverflow's annual developer survey.
- **Survey Population:** The survey targeted developers across various industries and roles globally.
- **Data Processing:** The raw data was cleaned and transformed to ensure consistency and accuracy for analysis.
- **Analysis Approach:**
 - **Exploratory Data Analysis (EDA):** Used to identify trends and key insights.
 - **Visualization Tools:** IBM Cognos Analytics was used to create charts and dashboards to display the findings.

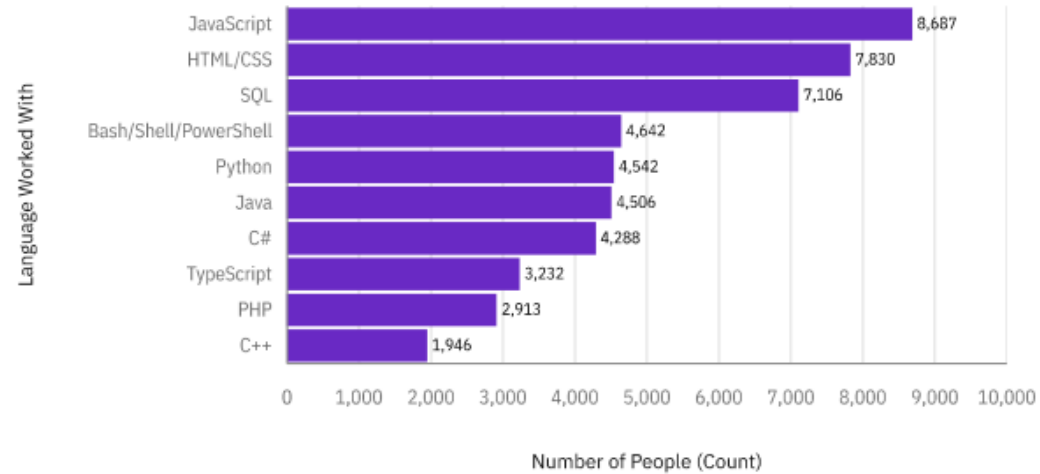
RESULTS

We uncovered many trends, let's
take a look!

PROGRAMMING LANGUAGE TRENDS

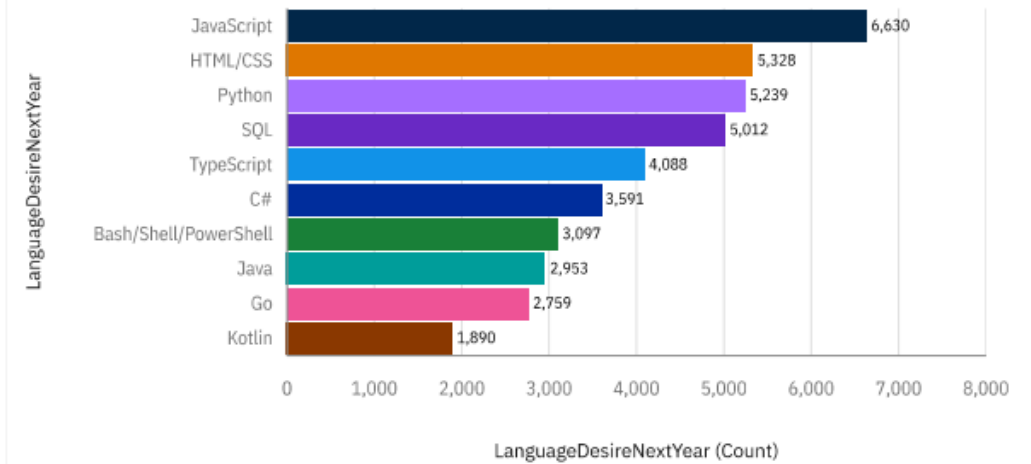
Current Year

Top 10 Language Worked With



Next Year

Top 10 Language Desired Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- **JavaScript Dominance**
- **Emergence of Python**
- **Shifts in Preferences:** Newer languages like TypeScript and Go are gaining traction,

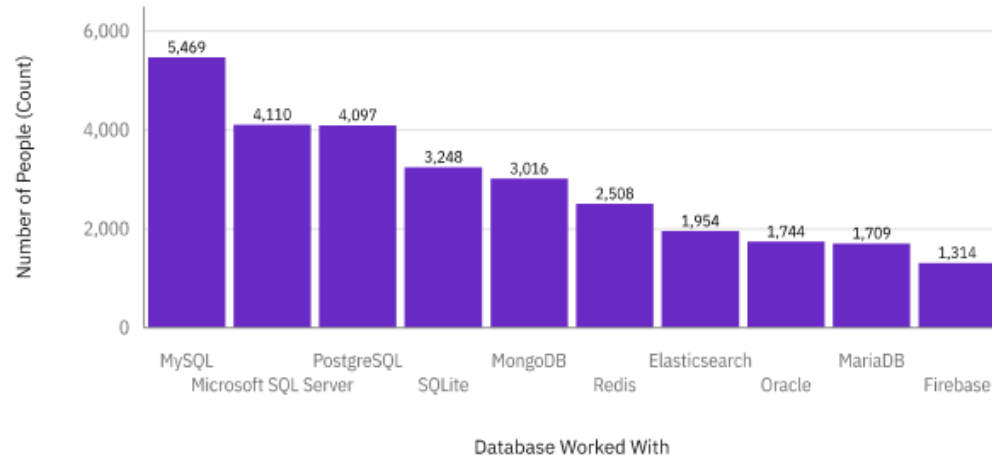
Implications

- **JavaScript's Relevance:** Businesses should continue investing in JavaScript-based technologies for front-end and back-end solutions due to its broad usage.
- **Rise of Python:** The increasing demand for Python suggests that organizations should emphasize Python skills, particularly in data science and machine learning projects.
- **Adoption of New Languages:** Companies looking to innovate may consider integrating newer technologies like TypeScript and Go to stay ahead of development trends and attract talent proficient in these languages.

DATABASE TRENDS

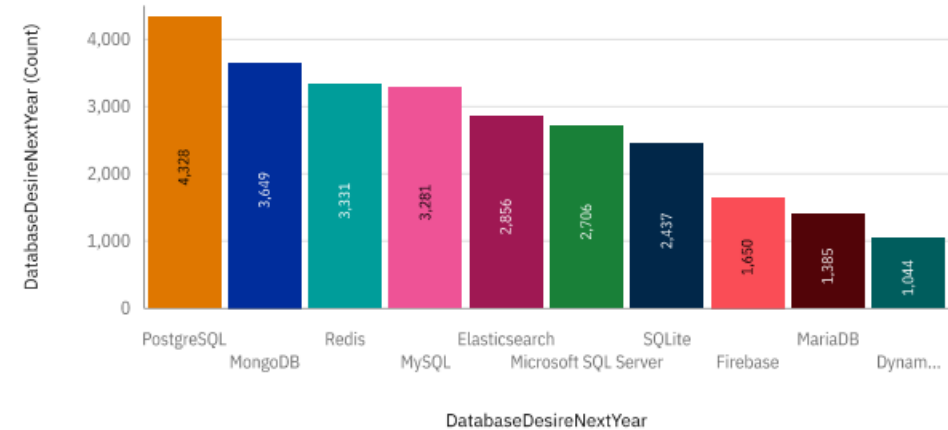
Current Year

Top 10 Databases Worked With



Next Year

Top 10 Database Desire Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- **MySQL Lead**
- **Growing Interest in PostgreSQL:** PostgreSQL shows increasing popularity,
- **New Technologies:** Emerging databases like Redis and Firebase are gaining interest

Implications

- **PostgreSQL Demand:** Businesses should focus on adopting and supporting PostgreSQL to align with industry demand and developer preferences.
- **Investment in Scalability:** The growing interest in databases like Redis and Firebase suggests that companies need to invest in scalable, high-performance data solutions.
- **Technology Adaptation:** Organizations should stay flexible in their database technology stack, adopting newer databases as part of their innovation strategies to meet future needs.

DASHBOARD

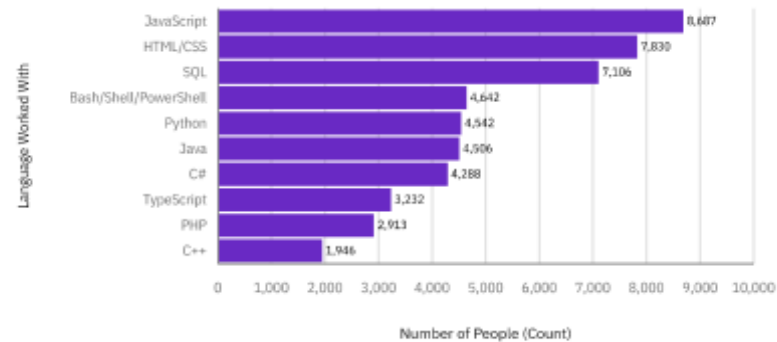


<https://github.com/Chiedzam/DashboardProjects/blob/main/IBM%20Final%20Dashboard.pdf>

DASHBOARD TAB 1

Current Technology Usage

Top 10 Language Worked With

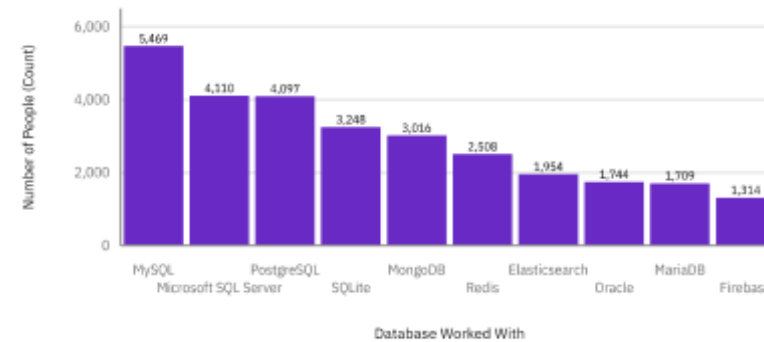


Platforms Worked With

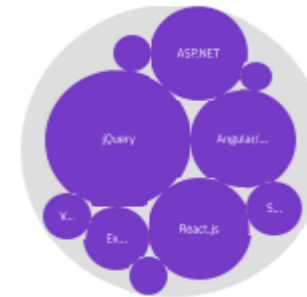


Developers trends

Top 10 Databases Worked With



Top 10 WebFrame Worked With

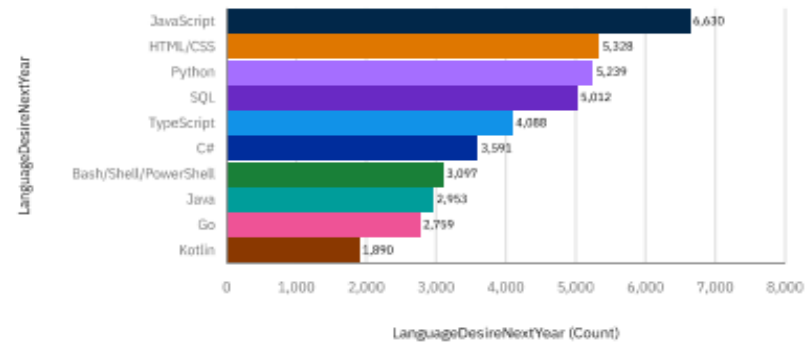


DASHBOARD TAB 2

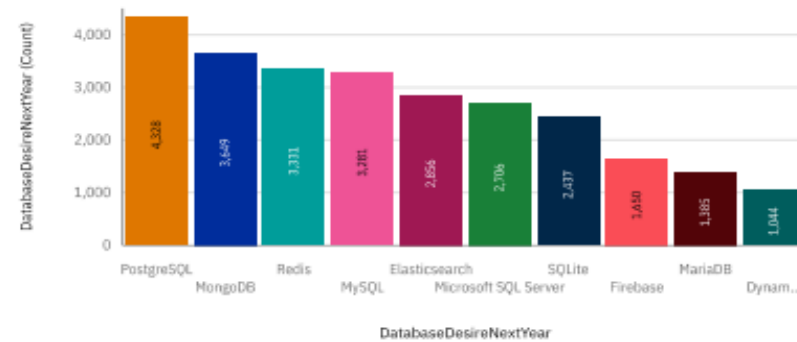
Developers trends

Future Technology Trend

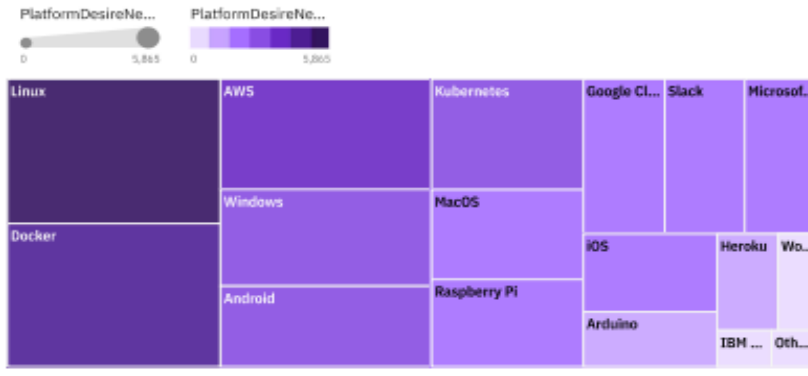
Top 10 Language Desired Next Year



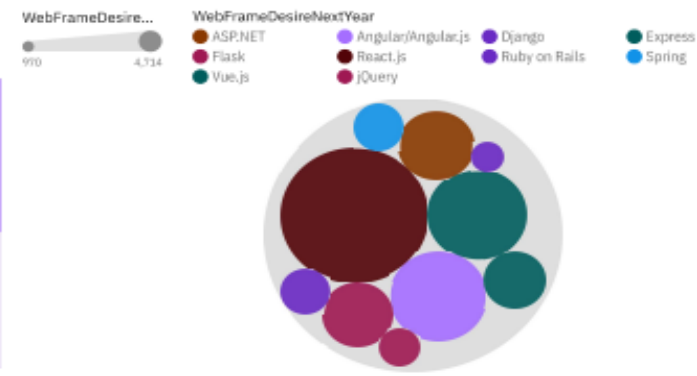
Top 10 Database Desire Next Year



Platform Desired Next Year



Top 10 WebFrame Desire Next Year

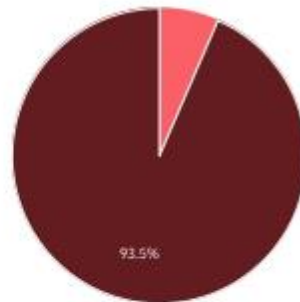


DASHBOARD TAB 3

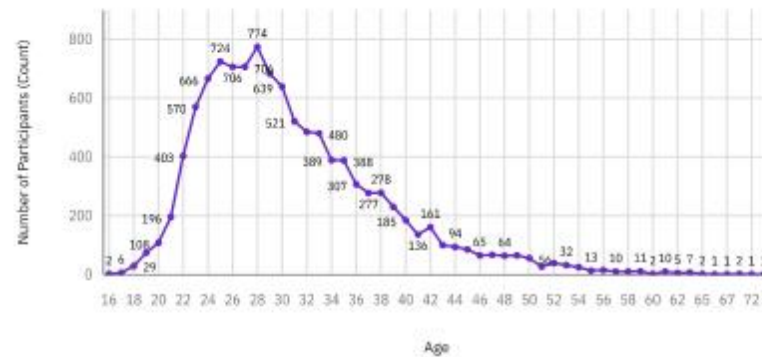
Demographics

Gender of Participants

Gender
● Woman ● Man



Age of Participants



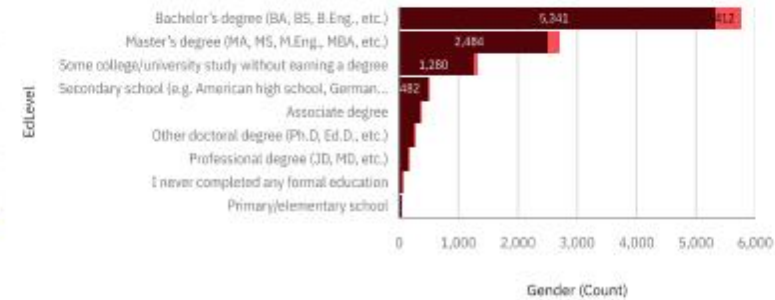
Developers trends

Countries of Participants



Education by Gender

Gender
● Man ● Woman



OVERALL FINDINGS & IMPLICATIONS

Findings

- **JavaScript Dominance:** JavaScript continues to be the most widely used programming language.
- **PostgreSQL Popularity:** PostgreSQL is the most desired database for future use
- **Emergence of New Technologies:** New languages and databases, such as TypeScript, Go, and Firebase, are showing rapid growth in developer interest.
- **Demographic Overview:** The survey reveals a predominantly male (93.5%) and younger developer population (ages 22-36) from diverse global locations, with most holding a Bachelor's degree or higher.

Implications

- **Tech Stack Alignment:** Companies should continue investing in JavaScript and PostgreSQL to stay aligned with developer trends and maintain their technical infrastructure.
- **Future-Proofing:** As new technologies like Go and Firebase gain popularity, organizations should explore incorporating these tools to stay competitive and attract skilled developers.
- **Skill Development and Diversity:** With a global and predominantly younger workforce, companies need to invest in diverse hiring practices and offer education opportunities, ensuring that underrepresented groups have equal access to development careers.
- **Focus on Education:** The educational backgrounds suggest that companies should continue to provide learning resources and support, particularly for professionals with varying levels of formal education.

CONCLUSION



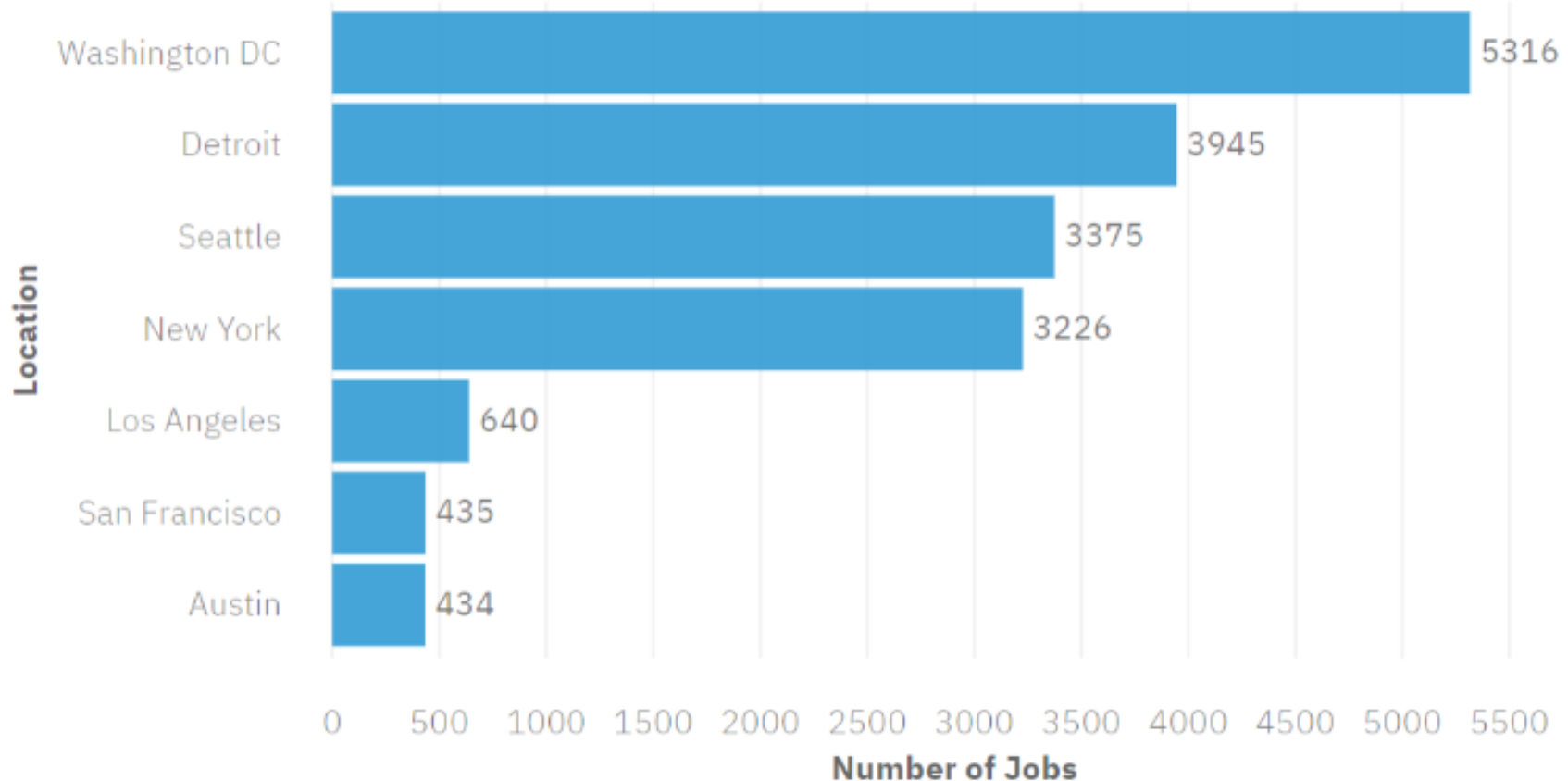
- **JavaScript and PostgreSQL:** Leaders in language and database use.
- **Emerging Technologies:** Growing interest in TypeScript, Go, and Firebase.
- **Diverse Developer Base:** Global, young, and varied in education.
- **Strategic Focus:** Align with current trends while exploring new technologies.

APPENDIX



- Additionally I explored data from other sources, provided with IBM and Job posting data

JOB POSTINGS



POPULAR LANGUAGES

