



STACK OVERFLOW 2019 DEVELOPER SURVEY

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OUTLINE



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

EXECUTIVE SUMMARY



- **Purpose:** To analyze the current state of the developer community, covering aspects such as technology preferences and demographic information.
- **Scope:** Survey responses from nearly 90,000 developers worldwide.
- **Key Findings:**
 - JavaScript remains the most popular programming language.
 - Python have seen significant growth in use.
 - Gender diversity remains a challenge in the tech industry.
- **Conclusion:** The survey provides critical insights into the evolving landscape of software development, highlighting trends and areas for improvement in the tech community.

INTRODUCTION



- Nature of the Analysis: Comprehensive survey targeting a global developer audience.
- Problem Statement: Understanding the preferences, challenges, and demographics of the developer community to guide future industry developments.
- Research Questions:
 - What are the most popular programming languages and technologies?
 - How does diversity look within the developer community?

METHODOLOGY



- Data Sources: Responses from 90,000+ developers collected through Stack Overflow's annual survey.
- Data Collection Plan:
 - Online survey distributed to global developer community.
 - Questions covering a wide range of topics including technology usage, job satisfaction, and demographics.
- Analysis Methods:
 - Descriptive statistics for demographic and job satisfaction data.
 - Trend analysis for technology usage.
 - Comparative analysis to highlight changes from previous years.

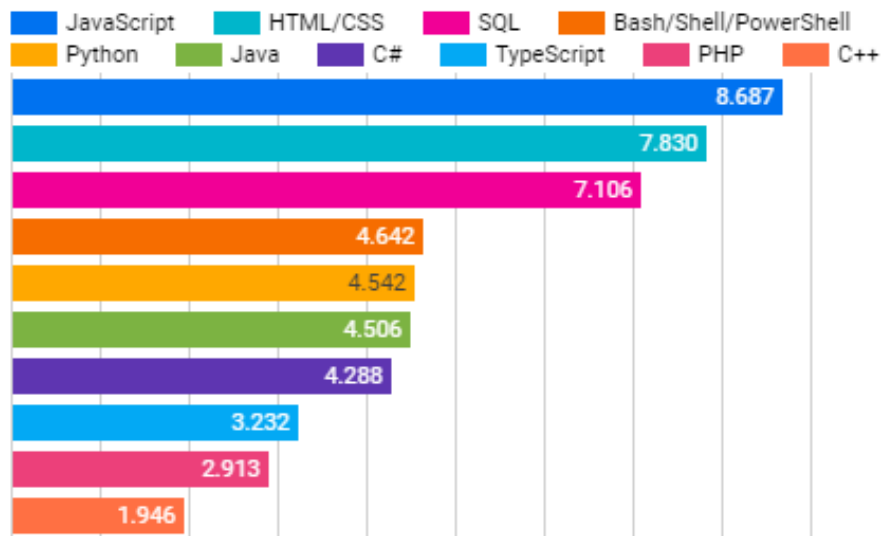
RESULTS

- **Data Collection:**
 - Diverse respondent pool representing multiple countries and roles in the tech industry.
- **Data Organization:**
 - Categorized by programming languages, databases, platforms, webframes, and demographic information.
- **Key Findings:**
 - **Programming Languages:** JavaScript leads, followed by HTML/CSS and SQL.
 - **Frameworks and Tools:** React.js and Node.js are among the most used frameworks. Docker and Kubernetes show significant growth.
 - **Demographics:** Majority male respondents, indicating a need for increased diversity initiatives.

PROGRAMMING LANGUAGE TRENDS

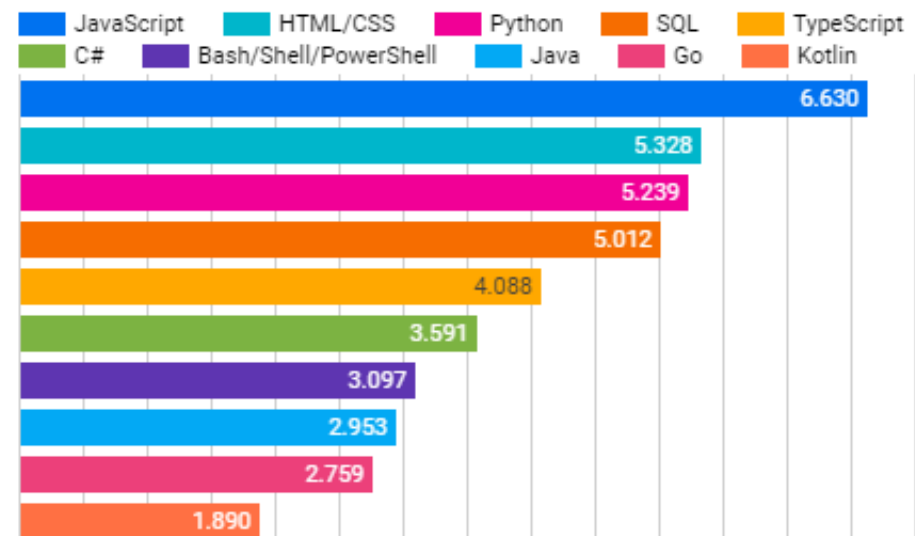
Current Year

Top 10 LanguageWorkedWith



Next Year

Top 10 LanguageDesireNextYear



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

JavaScript remains at the top: Consistently popular among developers.

Rising Popularity of Python: Moving up the ranks in both usage and desired learning.

Continued Relevance of SQL and Java: Both languages remain in the top 10 for current use and future interest.

Implications

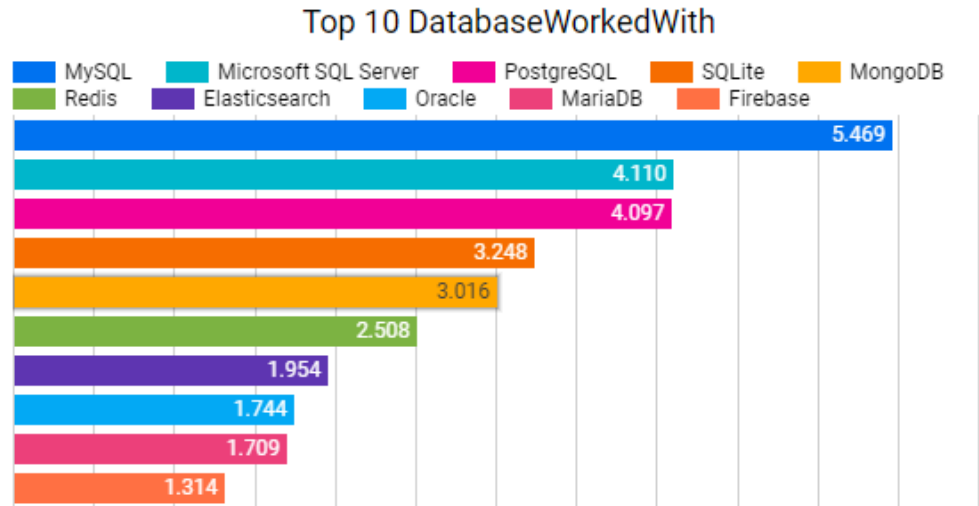
Essential Skill: JavaScript will continue to be a critical skill for developers in web development and other areas.

Versatility and Demand: Python's applicability in web development, data science, and automation drives its demand. Educational programs should emphasize Python.

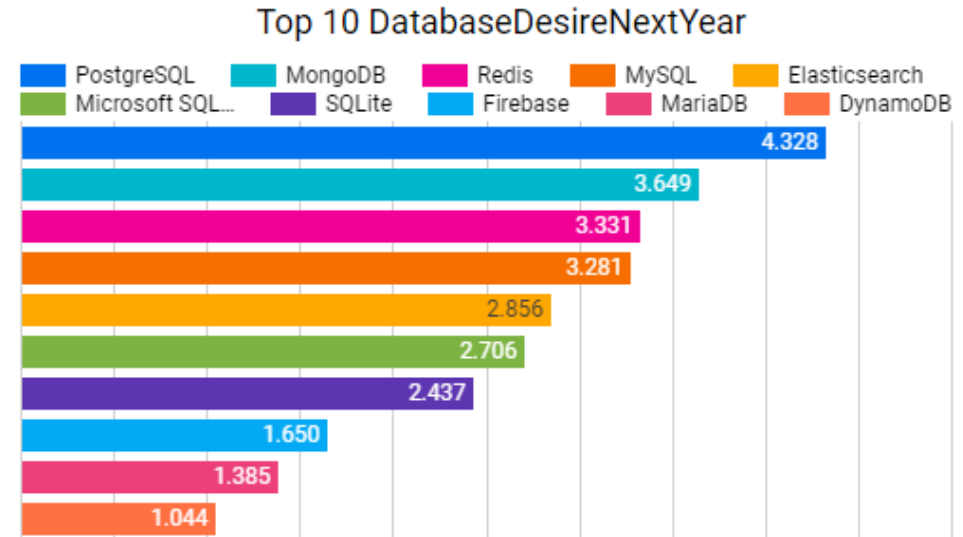
Stable Skills: Knowledge of SQL and Java remains important due to their extensive use in enterprise applications and databases.

DATABASE TRENDS

Current Year



Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- 1. PostgreSQL and MySQL Popularity:** MySQL is widely used, and PostgreSQL is the most desired database.
- 2. Rising Interest in NoSQL Databases:** MongoDB and Redis are highly desired for next year.
- 3. Shift Towards Open-Source Solutions:** Higher interest in PostgreSQL, MongoDB, and Redis over traditional proprietary databases like Oracle.

Implications

Essential Skills: Knowledge of these relational databases is crucial for backend development, enhancing job prospects.

Modern Applications: The rise of NoSQL databases reflects the need for scalable and flexible database solutions. Developers should acquire skills in these databases for modern application development.

Cost-Effective Solutions: Organizations are moving towards open-source solutions for their flexibility and cost-effectiveness. Developers should familiarize themselves with these technologies.

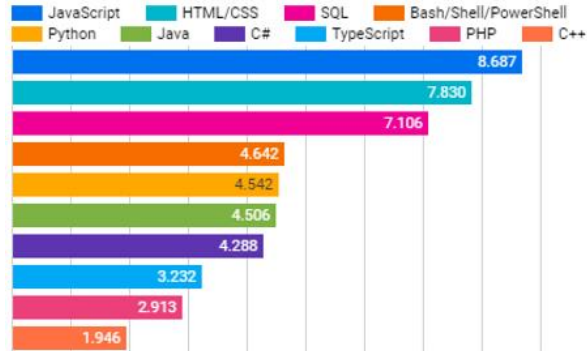
DASHBOARD



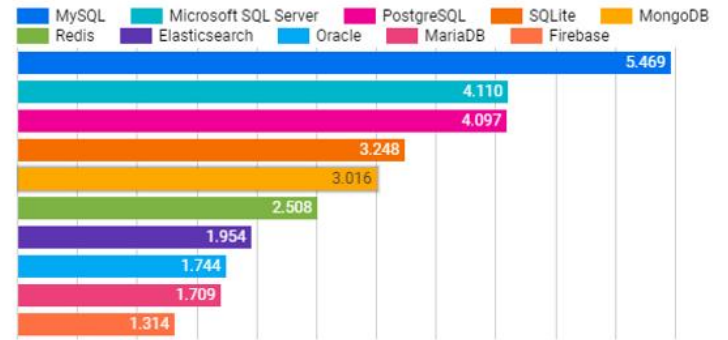
[GitHub link of the Looker Studio dashboard](#)

DASHBOARD TAB 1 – Current Technology Usage

Top 10 LanguageWorkedWith



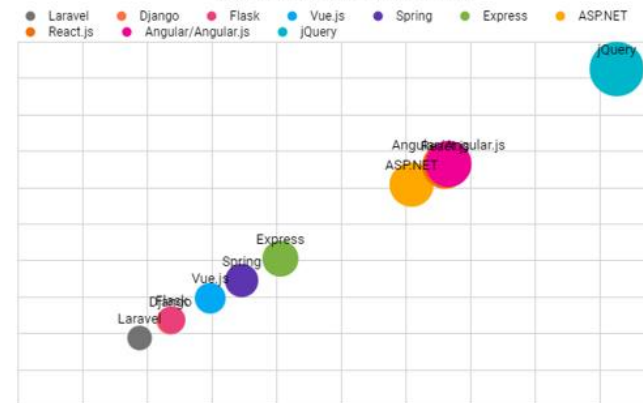
Top 10 DatabaseWorkedWith



PlatformWorkedWith.

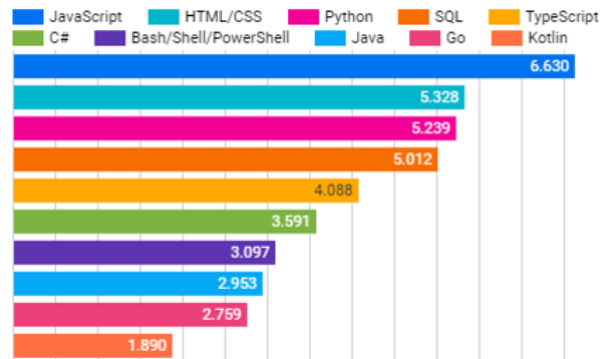


Top 10 WebFrameWorkedWith

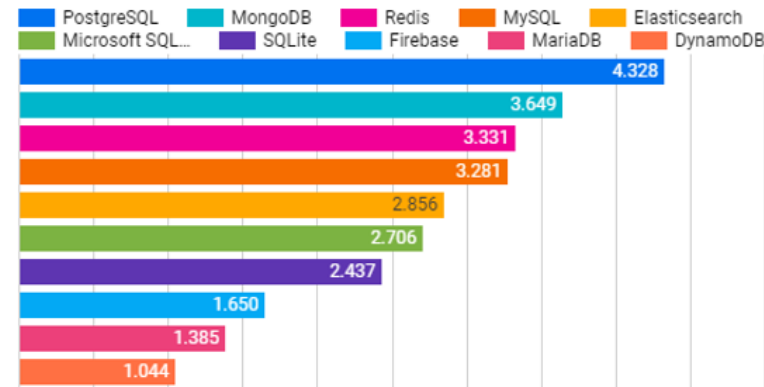


DASHBOARD TAB 2 – Future Technology Trend

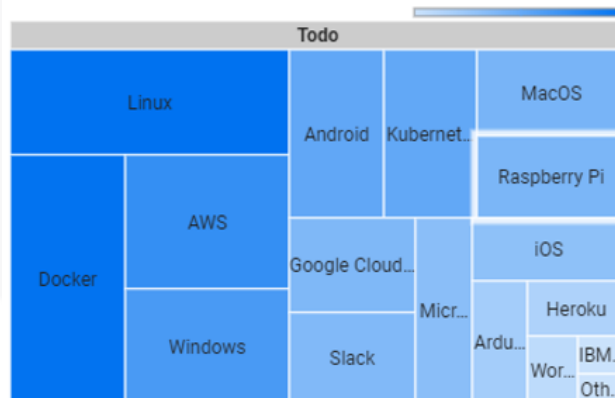
Top 10 LanguageDesireNextYear



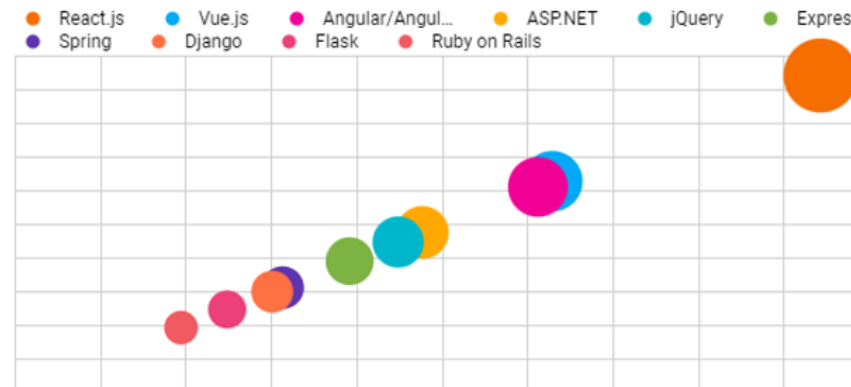
Top 10 DatabaseDesireNextYear



PlatformDesireNextYear

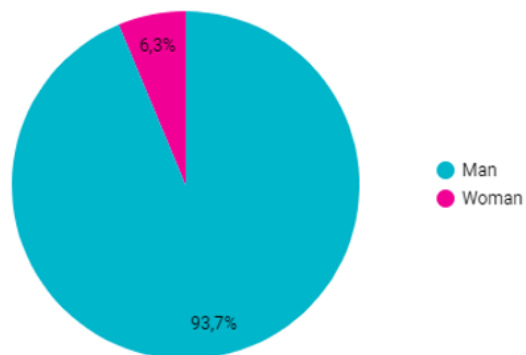


Top 10 WebFrameDesireNextYear

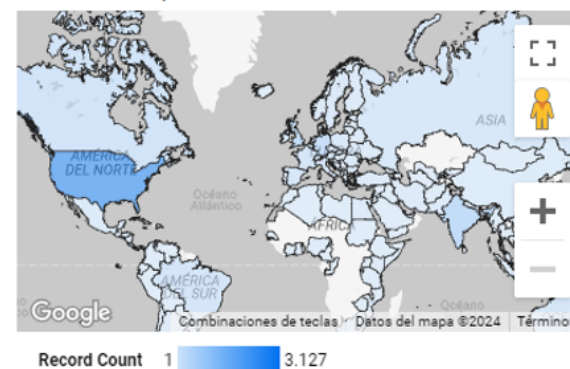


DASHBOARD TAB 3 - Demographics

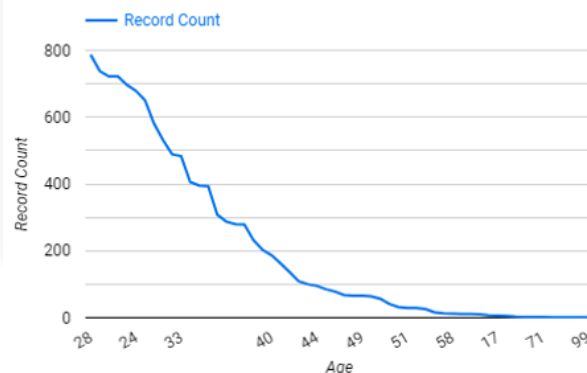
Respondent classified by Gender



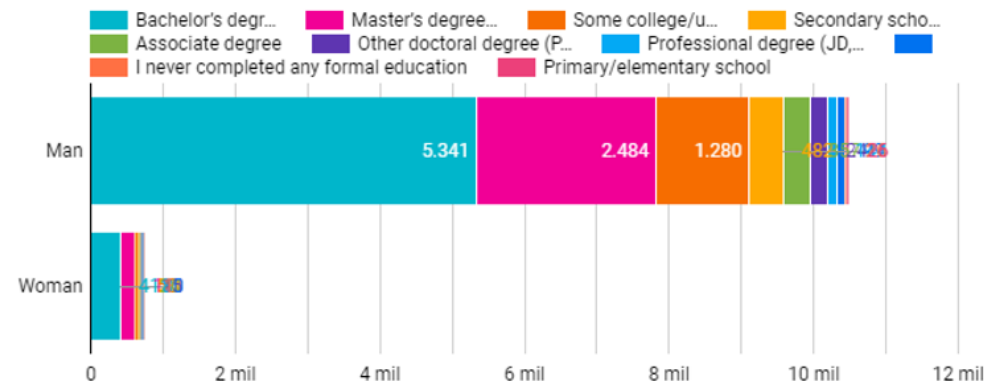
Respondent Count for Countries



Respondent Count by Age



Respondent Count by Gender, classified by Formal Education Level



DISCUSSION



Based on our researchs, We emphasize the importance of adapting to evolving technologies, embracing modern development practices, and addressing demographic challenges to create a more inclusive and innovative tech community.

OVERALL FINDINGS & IMPLICATIONS

Findings

- 1. JavaScript Dominance:** JavaScript is the most popular programming language among developers.
- 4. Gender Diversity Challenge:** The tech industry continues to struggle with gender diversity, with a majority of respondents being male.
- 5. Popularity of React.js and Vue.js:** These frameworks are widely used among developers.
- 6. Need for Continuous Learning:** Rapid changes in technology require ongoing education and skill development.

Implications

- Skill Development:** Developers and students should prioritize learning JavaScript to remain competitive in the job market.
- Diversity Initiatives:** Companies need to implement more robust diversity and inclusion programs to address the gender imbalance in the workforce.
- Educational Focus:** Educational institutions should incorporate React.js and Node.js into their curricula to prepare students for current industry demands.
- Lifelong Learning:** Developers must engage in continuous learning and professional development to stay current with evolving technologies.

CONCLUSION



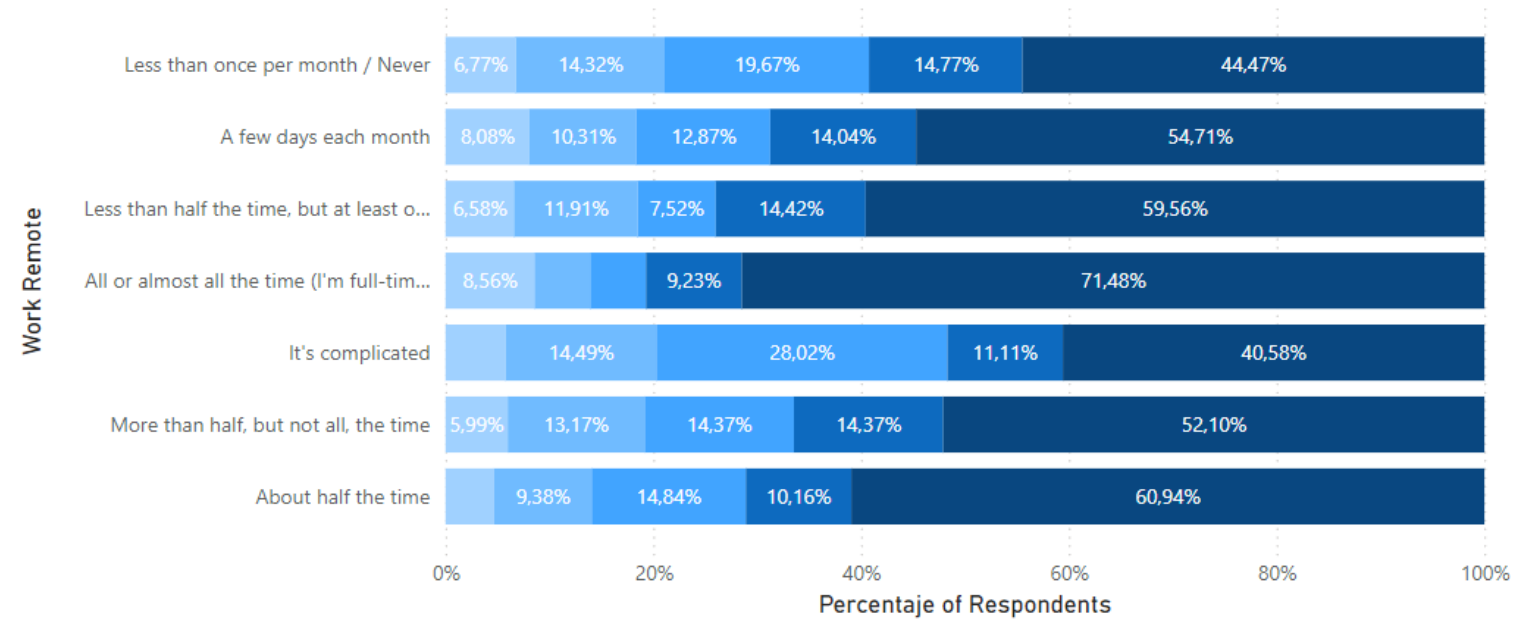
- **Reiteration of the Problem:** Understanding developer preferences and challenges to inform industry practices.
- **Summary of Findings:**
 - Popularity of specific programming languages and technologies.
 - Persistent gender diversity issues.
- **Outcome of Analysis:** Provides a comprehensive overview of current trends and challenges in the developer community.
- **Future Steps:**
 - Continued monitoring of trends in future surveys.
 - Implementation of initiatives to address diversity gaps.
 - Encourage adoption of emerging technologies in educational curricula.

APPENDIX

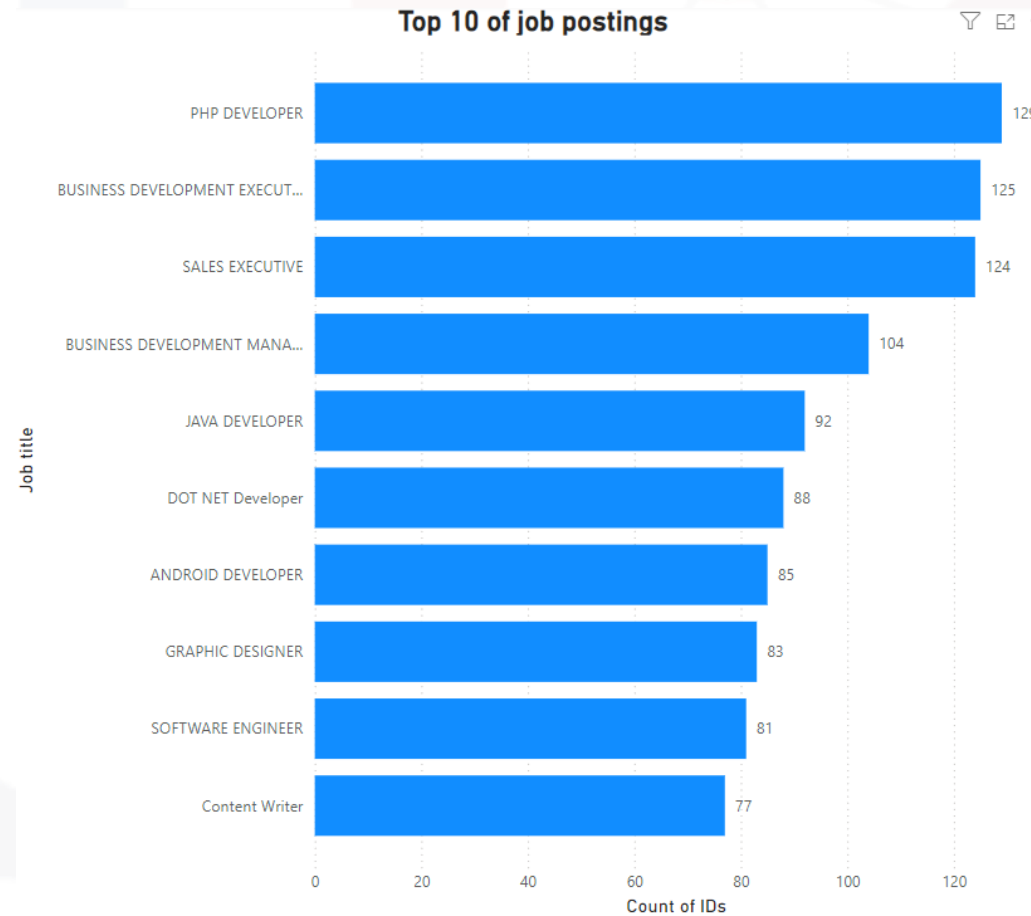


Top 5 Work Remote per Country

Country ● Canada ● Germany ● India ● United Kingdom ● United States



JOB POSTINGS



POPULAR LANGUAGES

