

Technology Trends and Developer Demographics Analysis

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OUTLINE



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- Dashboards Overview
- Insights from Dashboards
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EXECUTIVE SUMMARY



- Analysis of global developer survey data to identify technology trends.
- Python, SQL, and JavaScript dominate current usage.
- Strong future interest in emerging technologies such as Rust and cloud platforms.
- Databases show a shift toward cloud-native and NoSQL solutions.
- Demographic analysis reveals experience and education influence technology adoption.



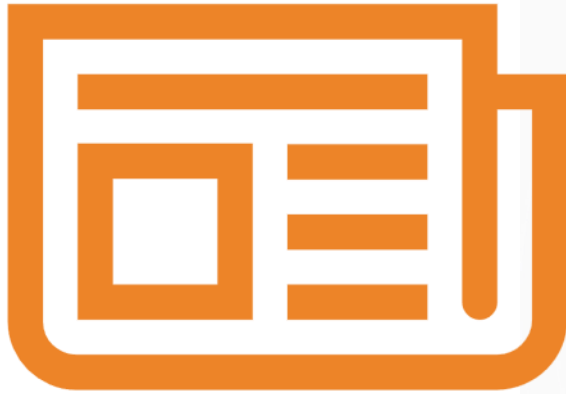
INTRODUCTION



- **Purpose**
 - Analyze current and future technology trends among developers.
- **Target Audience**
 - Students, aspiring data professionals, recruiters, and technology decision-makers.
- **Value**
 - Helps understand market demand and skill trends for career and business planning.



METHODOLOGY



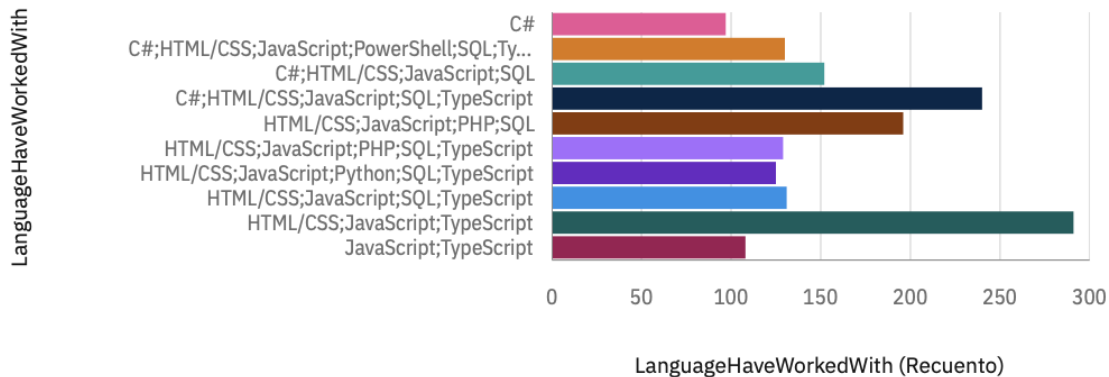
- **Data Source**
 - Stack Overflow Developer Survey (CSV dataset).
- **Data Collection**
 - Survey responses collected globally.
- **Data Wrangling**
 - Cleaning missing values
 - Splitting multi-select fields
 - Aggregating counts
 - Filtering top 10 technologies
 - Visualization using Python and IBM Cognos Analytics

PROGRAMMING LANGUAGE TRENDS

Current Year

Top 10 Programming language used

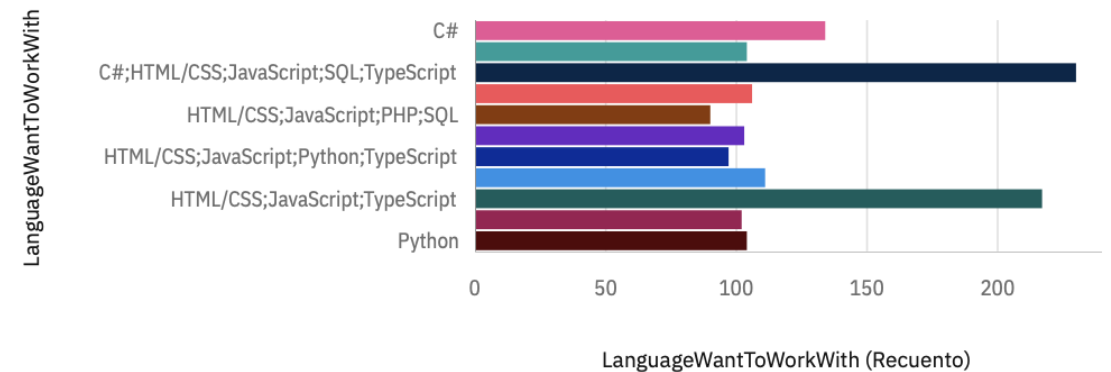
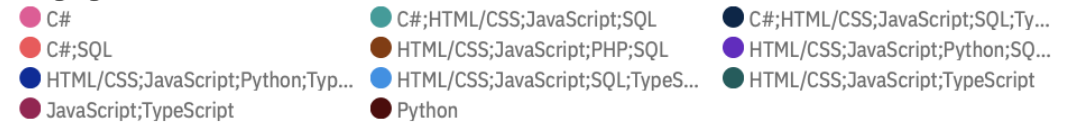
LanguageHaveWorkedWith



Next Year

Top 10 Language Developer Want to Work With

LanguageWantToWorkWith



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- Python and JavaScript lead the current usage
- Strong interest in modern languages like Rust and Go

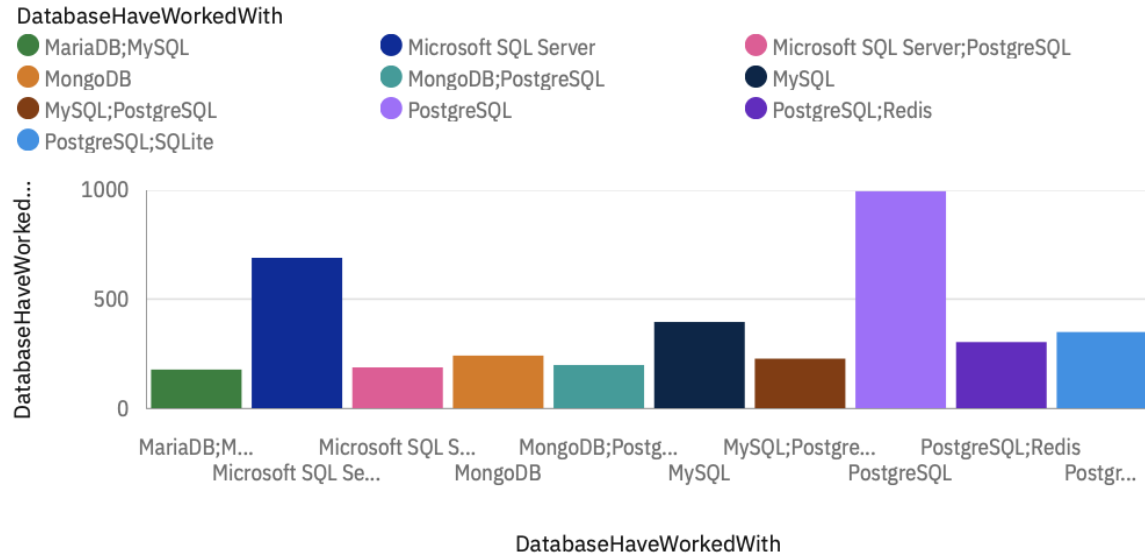
Implications

- Python remains critical for data and IA roles
- Developers are preparing for performance and cloud-focused languages

DATABASE TRENDS

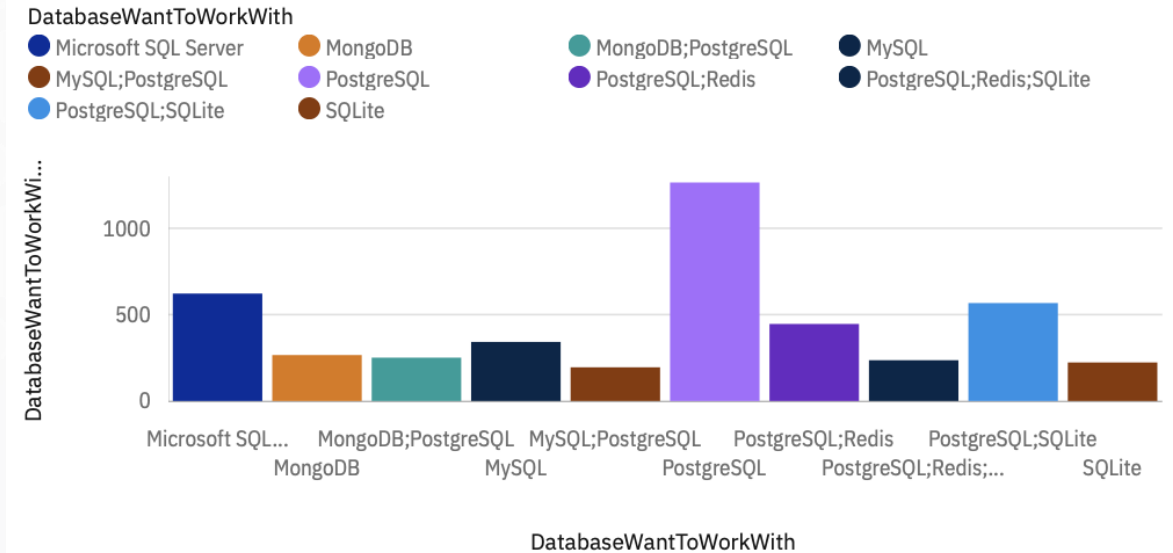
Current Year

Top 10 Databases Used



Next Year

Top 10 Databases Developer Want to Work With



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL and PostgreSQL dominate current use.
- Cloud and NoSQL databases show growing interest.

Implications

- Organizations should invest in scalable, cloud – ready databases.



DASHBOARD



Dashboard Overview

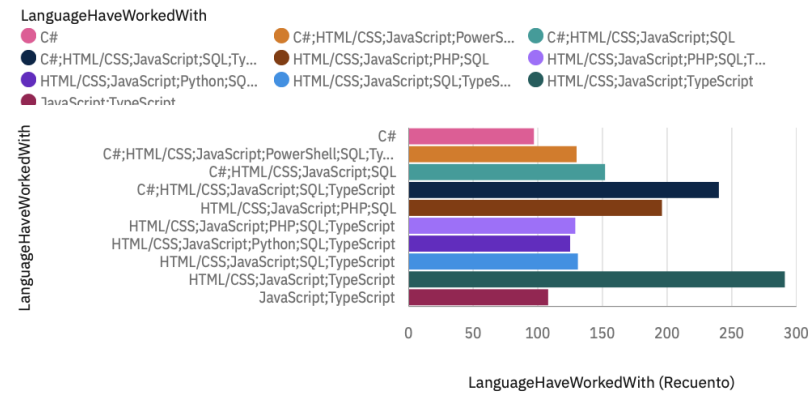
This dashboard provides an interactive overview of key technology usage patterns based on the developer survey data. The visualizations allow exploration of current tools, future technology interest, and demographic characteristics.



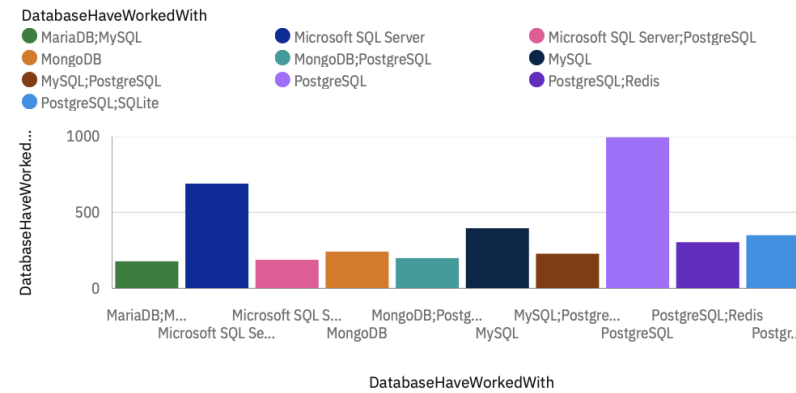
DASHBOARD TAB 1

Current technology usage

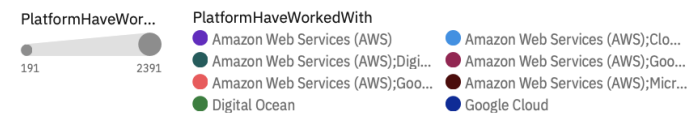
Top 10 Programming language used



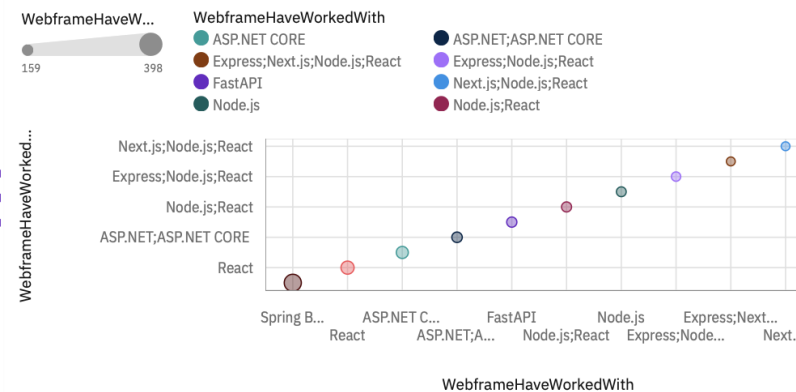
Top 10 Databases Used



Top 10 Platform Used



Top 10 WebFrame Used



Amazon Web Services (AWS);Google Cloud;Microsoft Azure;Digital Ocean;IBM Cloud;Digital Ocean;Google Cloud;Google Cloud

Amazon Web Services (AWS);Google Cloud;Microsoft Azure;Digital Ocean;IBM Cloud;Digital Ocean;Google Cloud;Google Cloud

Amazon Web Services (AWS);Google Cloud;Microsoft Azure;Digital Ocean;IBM Cloud;Digital Ocean;Google Cloud;Google Cloud

Amazon Web Services (AWS);Google Cloud;Microsoft Azure;Digital Ocean;IBM Cloud;Digital Ocean;Google Cloud;Google Cloud

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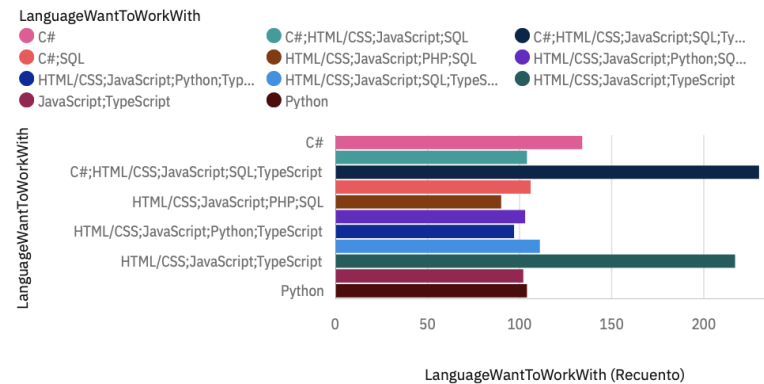
Amazon Web Services (AWS);Google Cloud;Microsoft Azure;Digital Ocean;IBM Cloud;Digital Ocean;Google Cloud;Google Cloud

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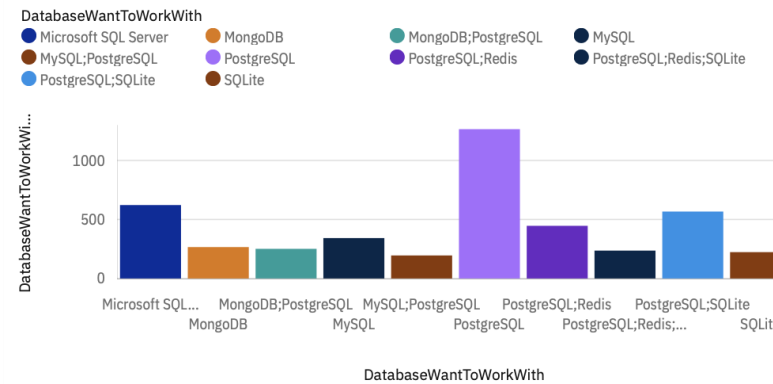
DASHBOARD TAB 2

Future Technology Trend

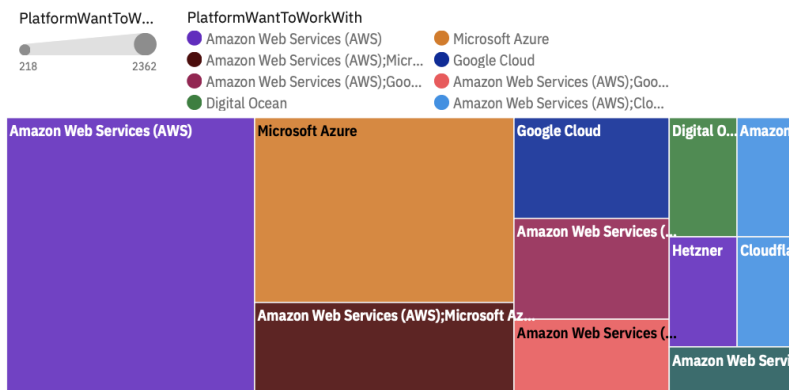
Top 10 Language Developer Want to Work With



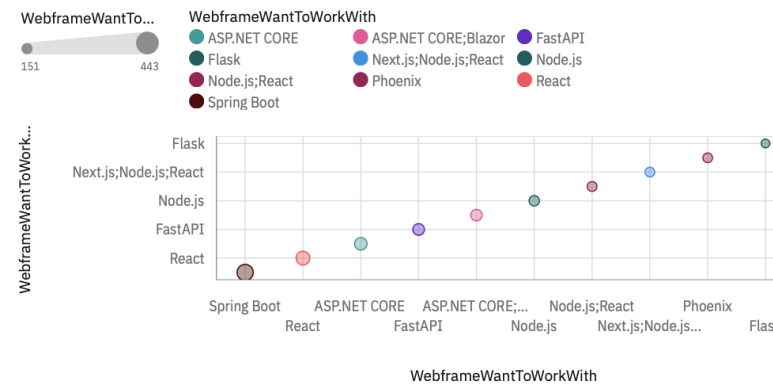
Top 10 Databases Developer Want to Work With



Future Platform Technology Trends



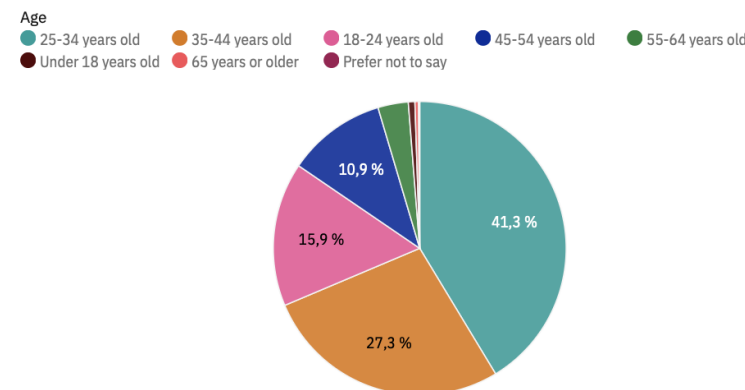
Future Web Frameworks Preferences



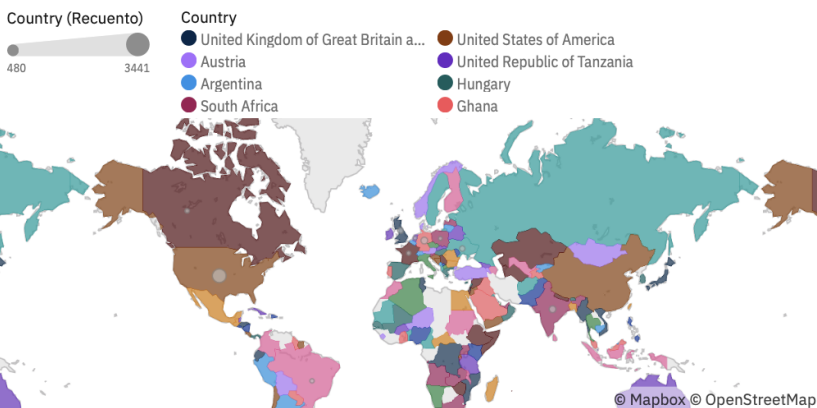
DASHBOARD TAB 3

Demographics

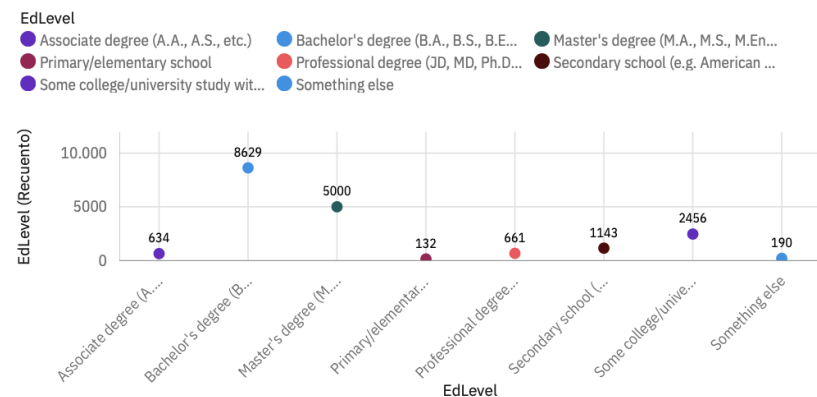
Respondent Distribution by Age



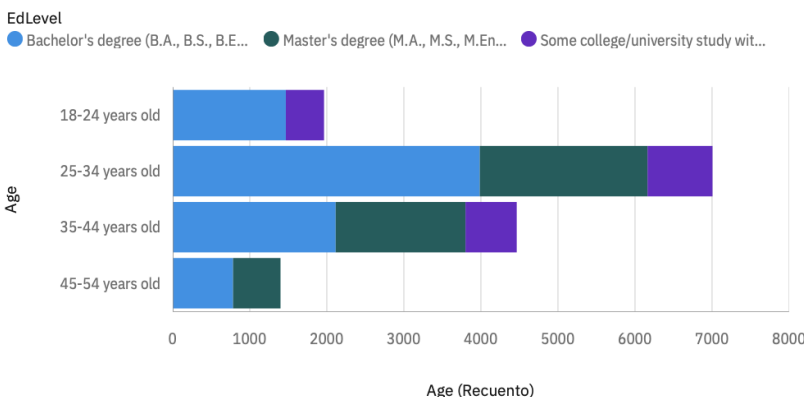
Respondent Distribution by Country



Distribution of Respondents by Level Education



Age Distribution by Education Level



DISCUSSION



Key insights from Dashboard Analysis

- Programing languages such as python and JavaScript dominate current usage, while emerging languages show strong future interest.
- Developers with higher experience levels tend to adopt a broader set of technologies.
- Remote work preferences vary significantly across regions and employment types.
- Higher education levels correlate with increased engagement in advanced technologies.



OVERALL FINDINGS & IMPLICATIONS

Findings

- Technology adoption reflects market demand.
- Clear transition toward cloud, IA and automation tools.

Implications

- Continuous learning is essential for developers.
- Companies should hiring with emerging skill trends.

CONCLUSION



- Survey data reveals clear technology evolution patterns.
- Python and cloud technologies remain central.
- Demographics influence technology choices.
- Data-driven insights support strategic decision-making.