

# *Technology Trends and Developer Demographics Analysis*

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# OUTLINE

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- Executive Summary
- Introduction
- Methodology
- Programming Language Trends
- Database Trends
- Dashboards Overview
- Insights from Dashboards
- Overall Findings & Implications
- Conclusion
- Appendix



# EXECUTIVE SUMMARY

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- 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

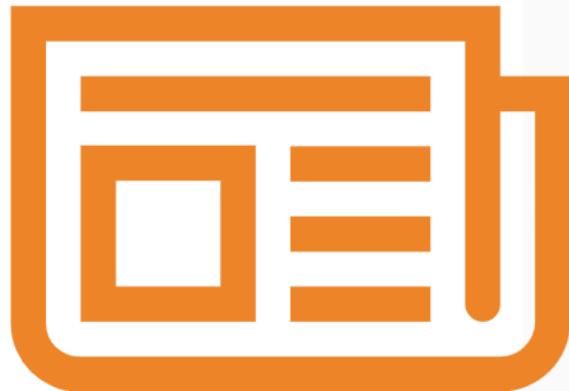
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- **Purpose**
  - Analyze current and future technology trends among developers.
- **Target Audience**
  - Students, aspiring data professionals, recruiters, and technology decision-makers.
- **Value**
  - Helps understand market demand and skill trends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

# METHODOLOGY

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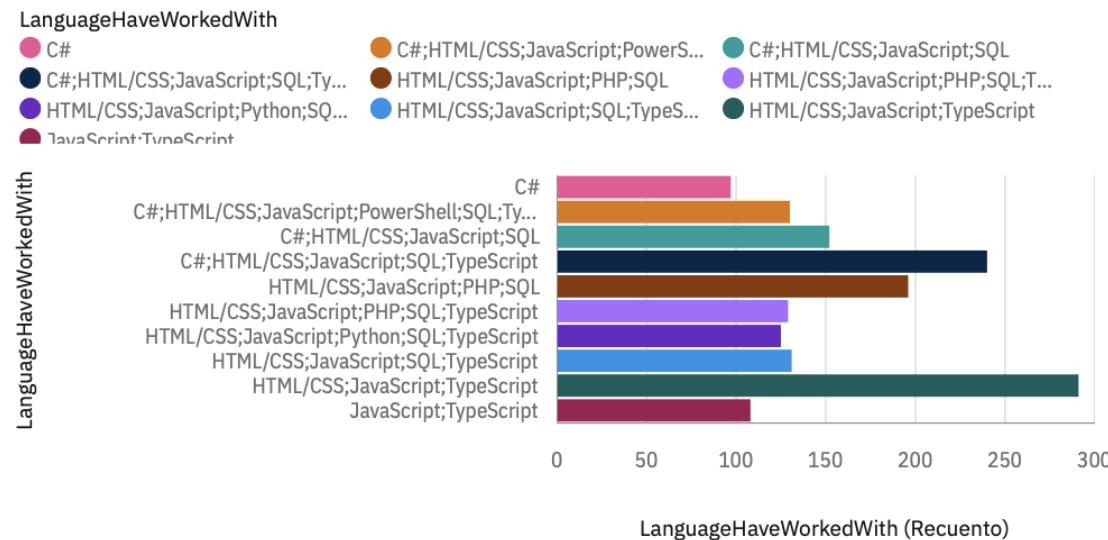
- **Data Source**
  - Stack Overflow Developer Survey (CSV dataset).
- **Data Collection**
  - Survey responses collected globally.
- **Data Wrangling**
  - Cleaning missing values
  - Splitting multi-select fields
  - Aggregating counts
  - Filtering top 10 technologies
  - Visualization using Python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



# PROGRAMMING LANGUAGE TRENDS

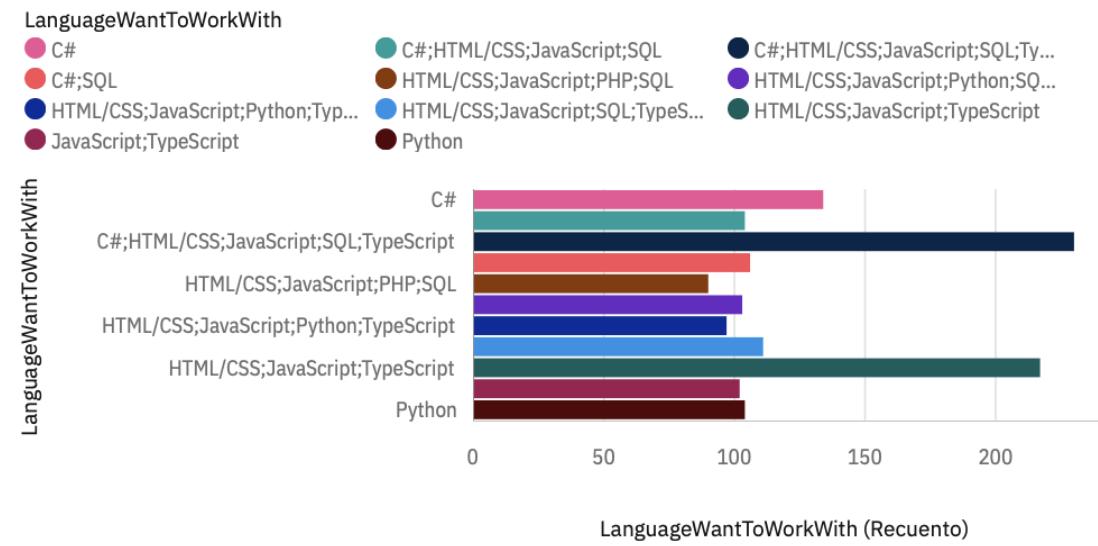
## Current Year

Top 10 Programming language used



## Next Year

Top 10 Language Developer Want to Work With



# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

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

## Implications

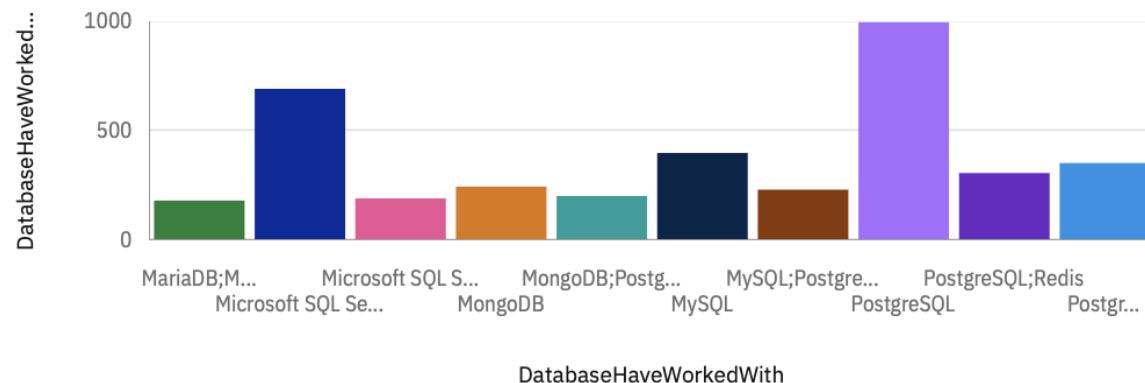
- Python remains critical for data and IA roles
- Developers are preparing for performance and cloud-focused languages



# DATABASE TRENDS

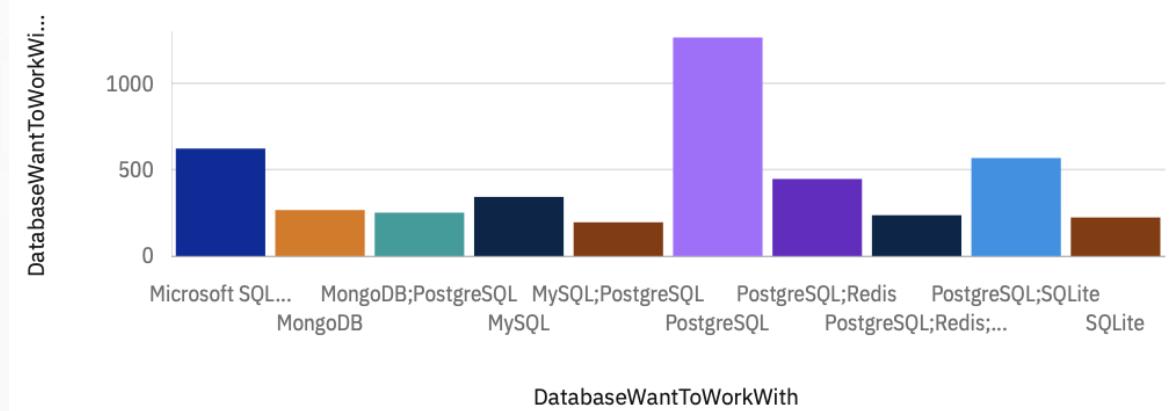
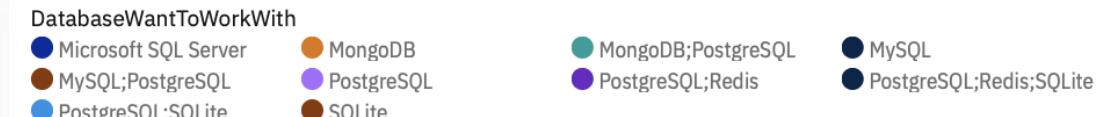
## Current Year

### Top 10 Databases Used



## Next Year

### Top 10 Databases Developer Want to Work With



# DATABASE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

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

## Implications

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



# DASHBOARD

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## Dashboard Overview

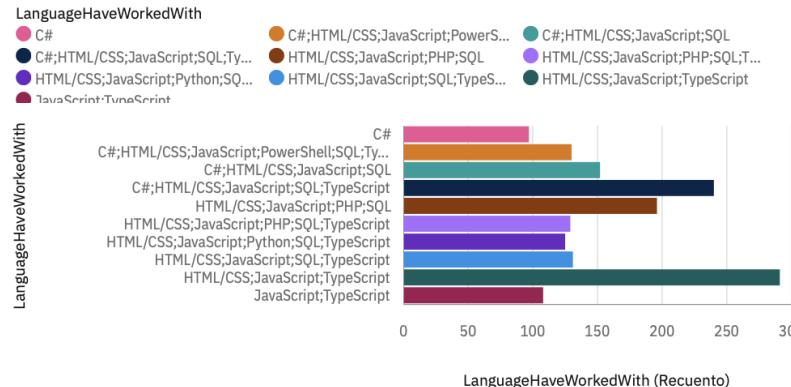
This dashboard provides an interactive overview of key technology usage patterns based on the developer survey data. The visualizations allow exploration of current tools, future technology interest, and demographic characteristics.



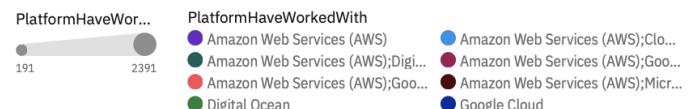
# DASHBOARD TAB 1

## Current technology usage

### Top 10 Programming language used

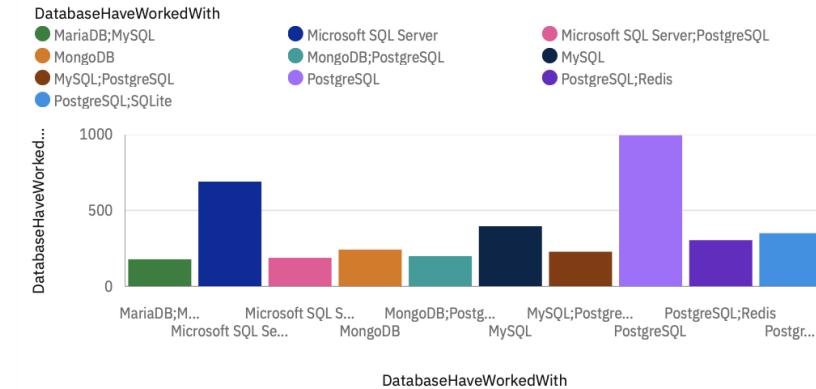


### Top 10 Platform Used

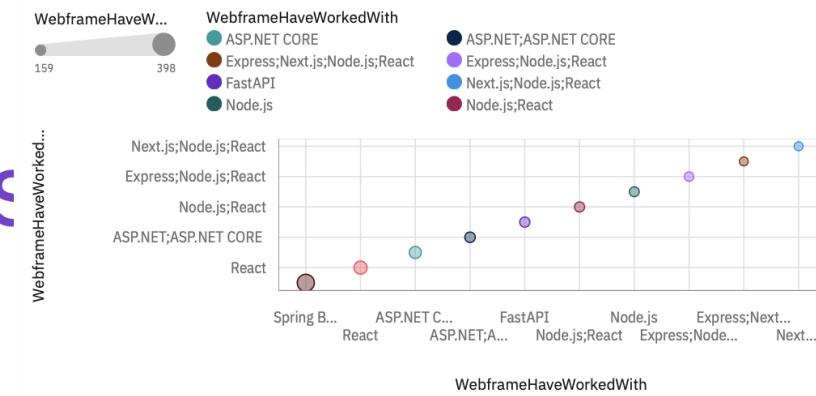


azon Web Services

### Top 10 Databases Used



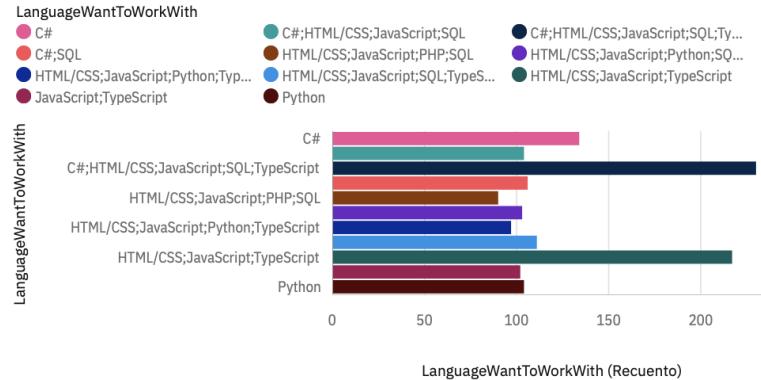
### Top 10 WebFrame Used



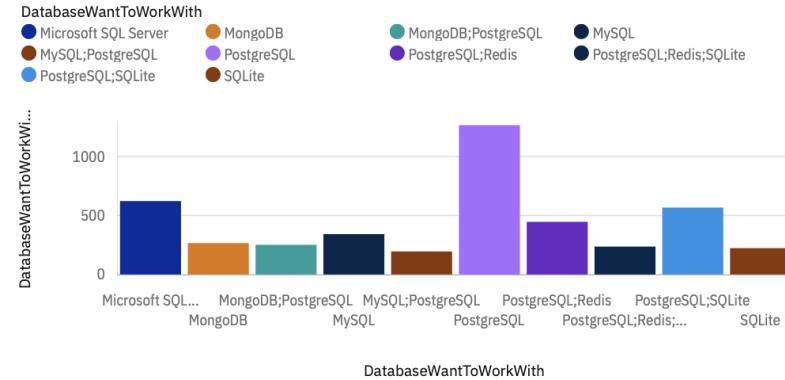
# DASHBOARD TAB 2

## Future Technology Trend

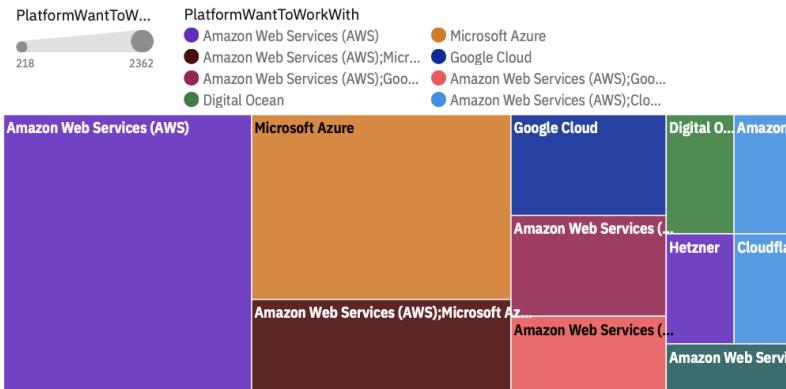
### Top 10 Language Developer Want to Work With



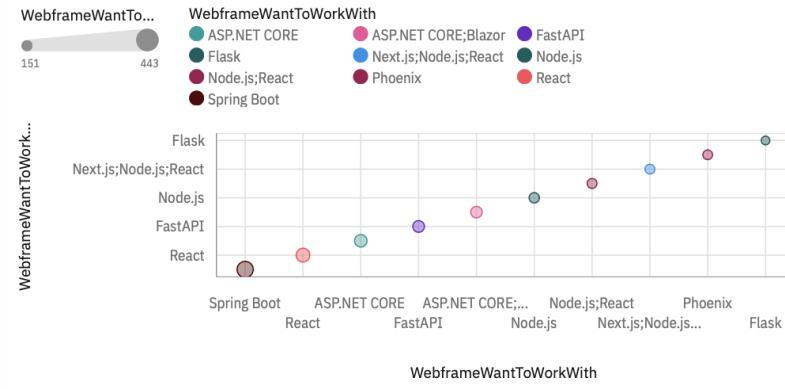
### Top 10 Databases Developer Want to Work With



### Future Platform Technology Trends



### Future Web Frameworks Preferences



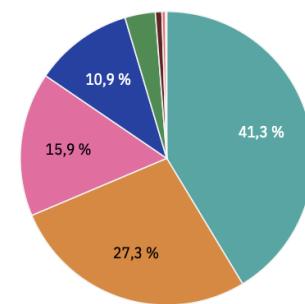
# DASHBOARD TAB 3

## Demographics

Respondent Distribution by Age

Age

- 25-34 years old
- 35-44 years old
- 18-24 years old
- 45-54 years old
- 55-64 years old
- Under 18 years old
- 65 years or older
- Prefer not to say



Respondent Distribution by Country

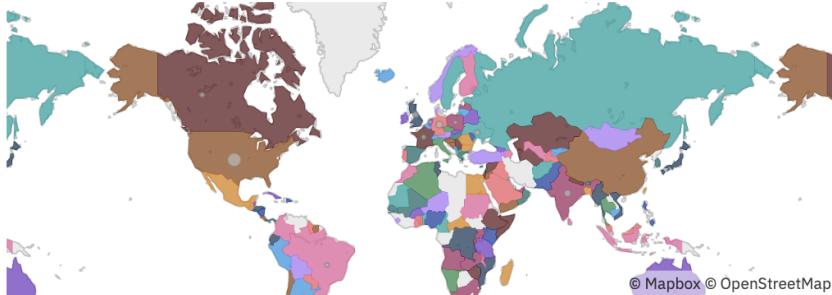
Country (Recuento)

- United Kingdom of Great Britain and Northern Ireland
- Austria
- Argentina
- South Africa

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Country

- United States of America
- United Republic of Tanzania
- Hungary
- Ghana

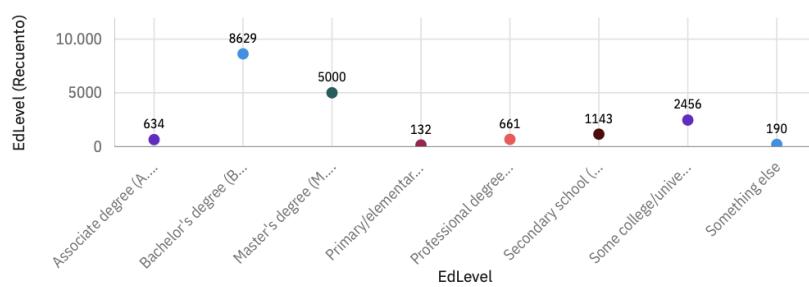


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Distribution of Respondents by Level Education

EdLevel

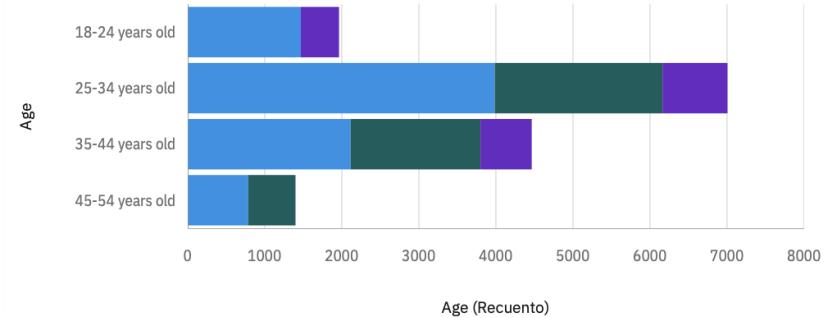
- Associate degree (A.A., A.S., etc.)
- Bachelor's degree (B.A., B.S., B.E., etc.)
- Master's degree (M.A., M.S., M.En...)
- Primary/elementary school
- Professional degree (JD, MD, Ph.D.)
- Secondary school (e.g. American High School)
- Some college/university study without degree
- Something else



Age Distribution by Education Level

EdLevel

- Bachelor's degree (B.A., B.S., B.E., etc.)
- Master's degree (M.A., M.S., M.En...)
- Some college/university study without degree



# DISCUSSION

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## Key insights from Dashboard Analysis

- Programming 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

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## Findings

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

## Implications

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



# CONCLUSION

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

