

# Developer Technology Trends Analysis

Comprehensive analysis of emerging developer technologies and preferences for strategic planning.

*Created By Pak Lun Lo*

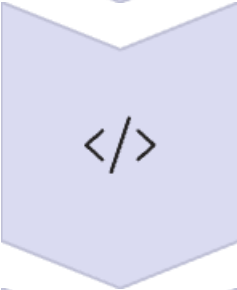


# Presentation Outline



## Executive Summary & Introduction

Key findings and purpose



## Technology Analysis

Languages, databases, job market



## Dashboard Insights

Visual data exploration



## Findings & Conclusion

Implications and next steps





# Executive Summary



## JavaScript, SQL, PostgreSQL lead market

Consistent dominance across surveys



## AWS and Azure dominate cloud platforms

Strong preference among developers



## Developer demographics: 25-34, bachelor's/master's bachelor's/master's

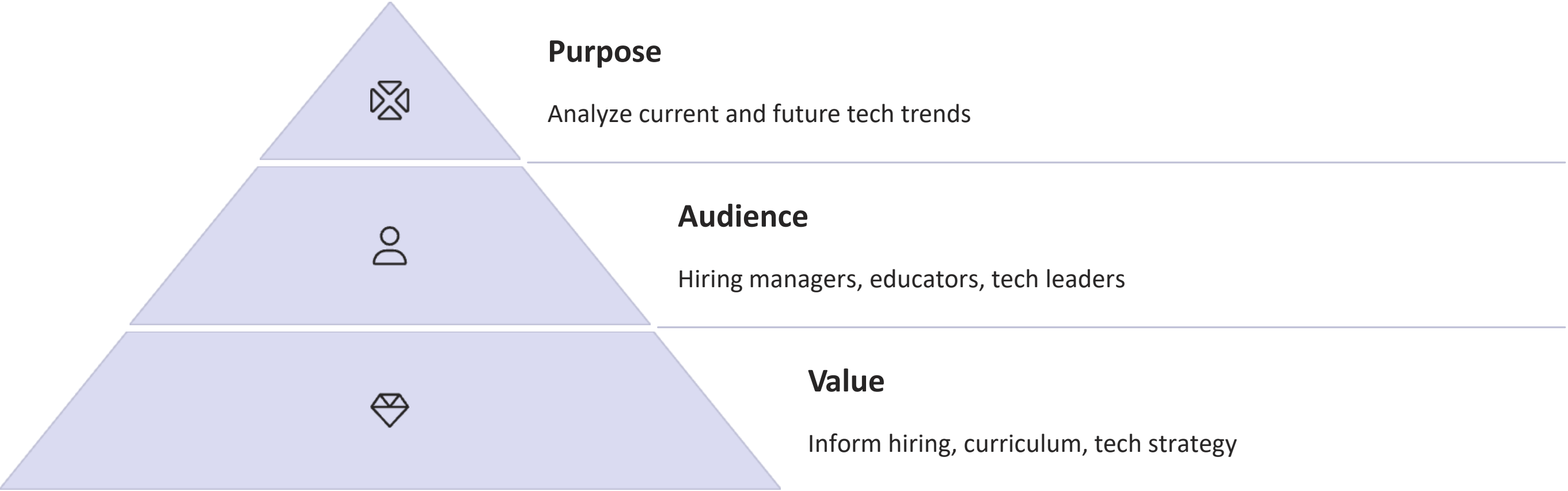
Young, educated workforce



## React, Node.js, PostgreSQL gaining popularity

Future technology preferences

# Introduction





# Methodology

## Data Sources

Stack Overflow Survey, job-postings.xlsx  
postings.xlsx

## Visualization

Comprehensive dashboards



## Tools Used

IBM Cognos, Python, Excel

## Data Wrangling

Split columns, cleaned nulls, extracted  
extracted trends

# Programming Language Trends

## Current Usage

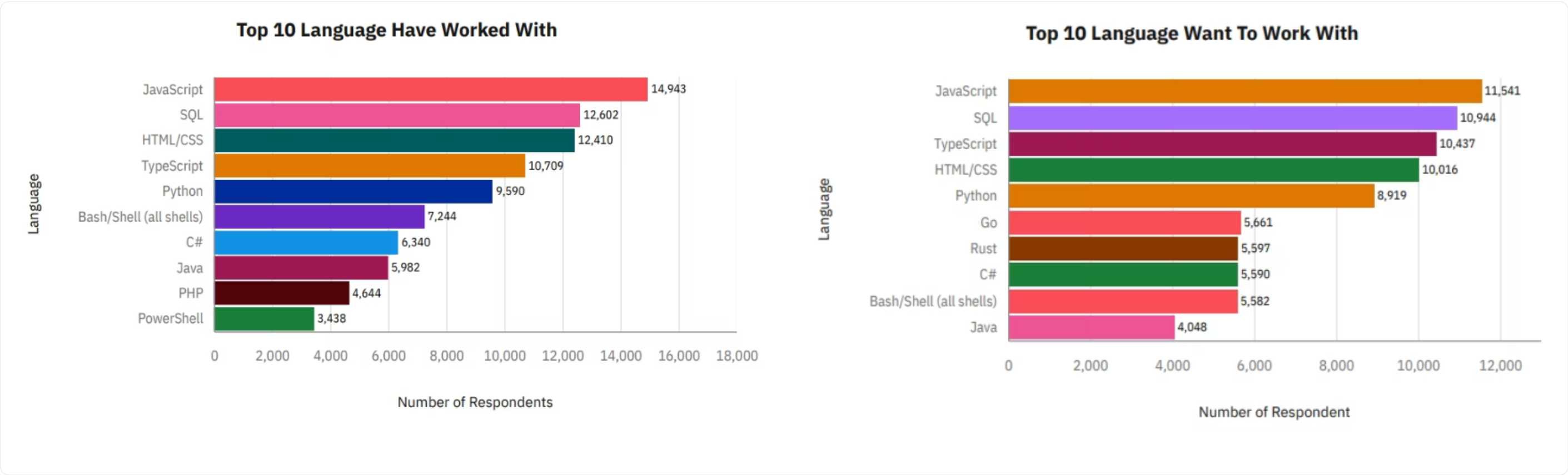
- JavaScript dominates market
- Python strong second position
- SQL essential for data work

## Future Interest

- TypeScript gaining momentum
- Rust and Go emerging rapidly
- Shift toward modern languages

# Programming Language Trends

Database preferences show clear market leaders and emerging technologies gaining traction.



## Current Usage Leaders

- JavaScript and SQL dominate
- HTML/CSS and TypeScript widely used
- Python strong in both frontend and backend

## Growing Interest

- Go and Rust gaining popularity
- TypeScript interest rising
- Demand increasing for modern, scalable tools

## Market Implications

- Full-stack skills in demand
- SQL remains essential
- Developers favor versatile, high-performance languages

# Database Trends

## Current Usage

- PostgreSQL leads in adoption
- MySQL remains widely used
- SQLite popular for lightweight apps

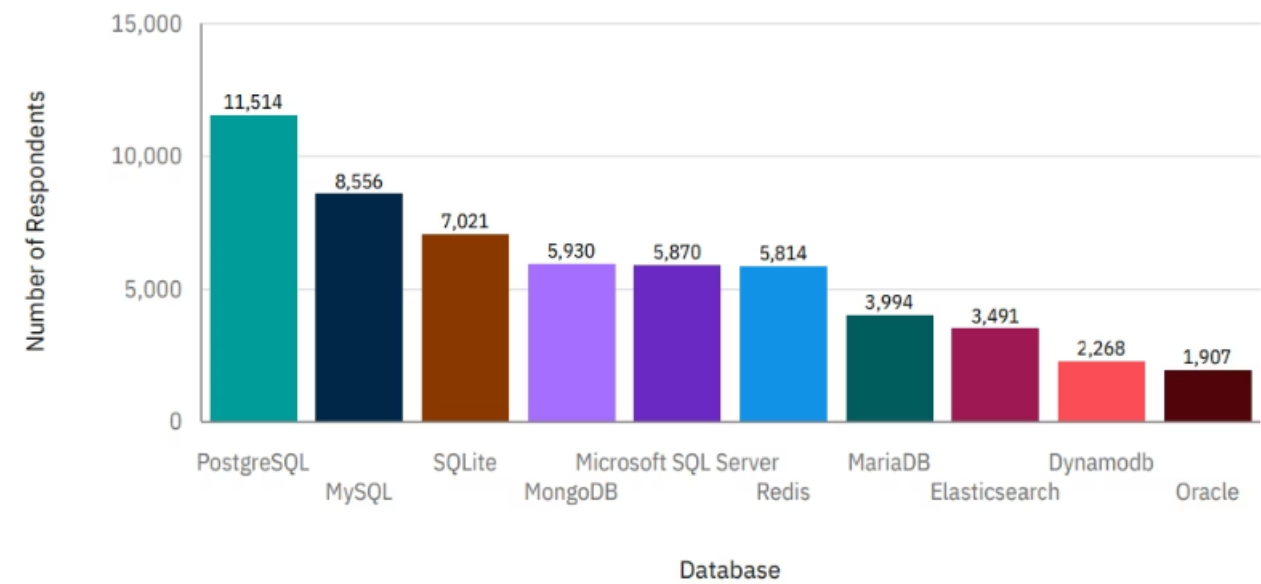
## Future Interest

- Redis and Supabase gaining momentum
- Growing demand for NoSQL options
- Shift toward cloud-native databases

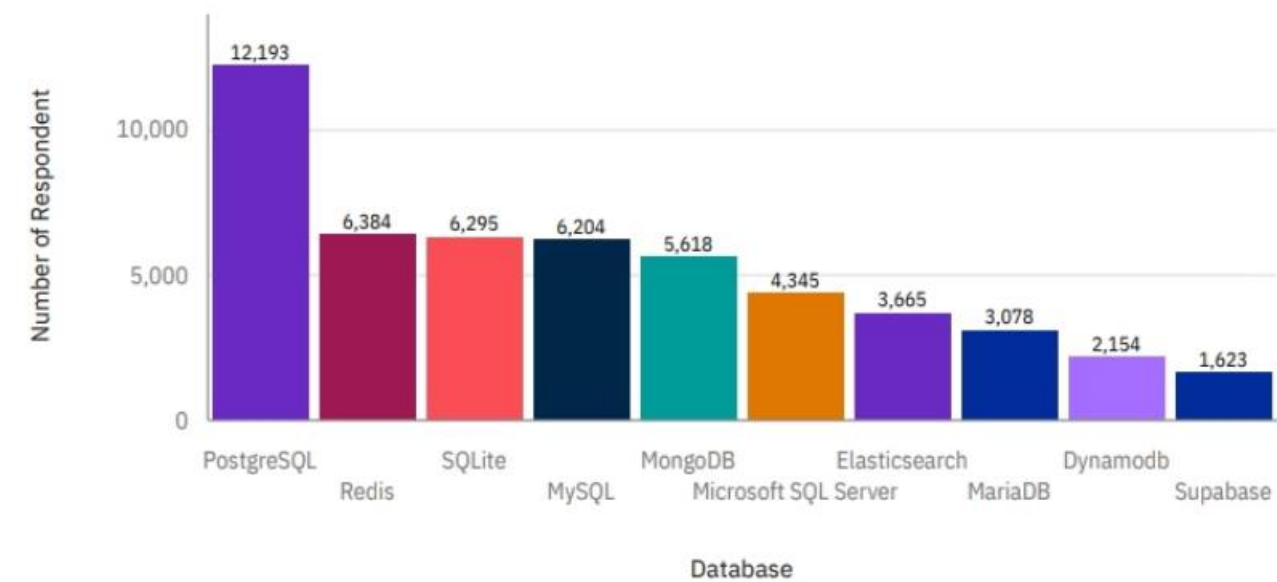


# Database Trends

Top 10 Database Have Worked With



Top 10 Database Want To Work With



## Current Usage Leaders

- PostgreSQL at the top
- MySQL still widely used
- SQLite for embedded applications

## Growing Interest

- Redis gaining traction
- Supabase emerging rapidly
- NoSQL adoption increasing

## Market Implications

- Cloud-native DBs preferred
- SQL still foundational
- Specialized solutions growing

# Job Market Analysis

## Top Demand

C, Java, and JavaScript lead in job postings.

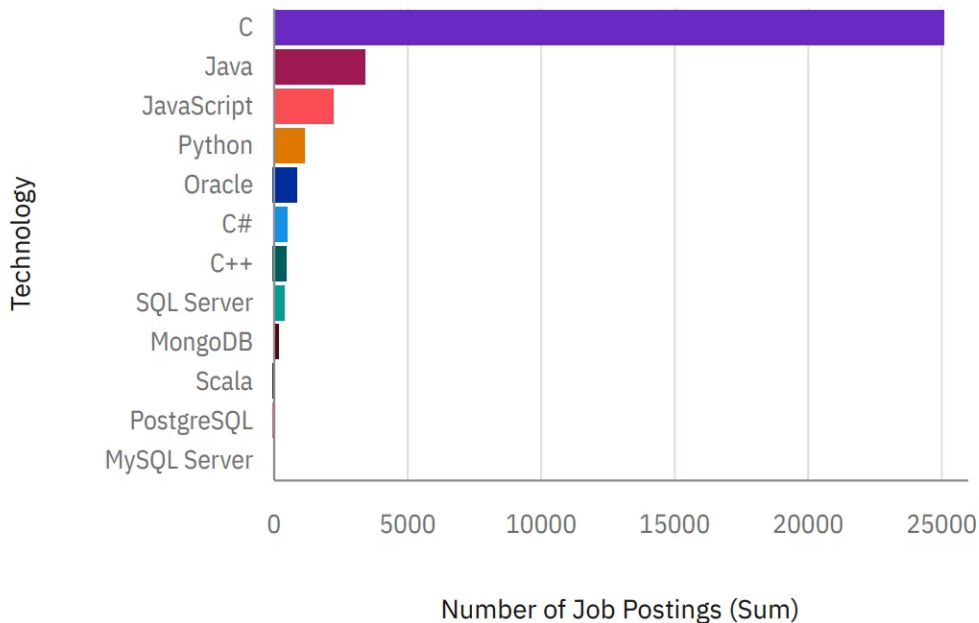
## Insight

Strong need for core programming and SQL skills.

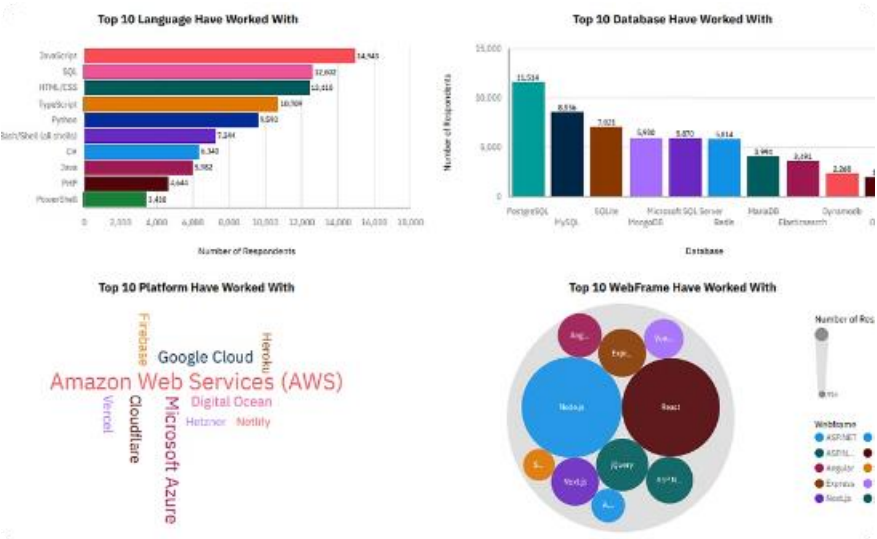
## Hiring Focus

Prioritize C, Java, JavaScript, and SQL expertise.

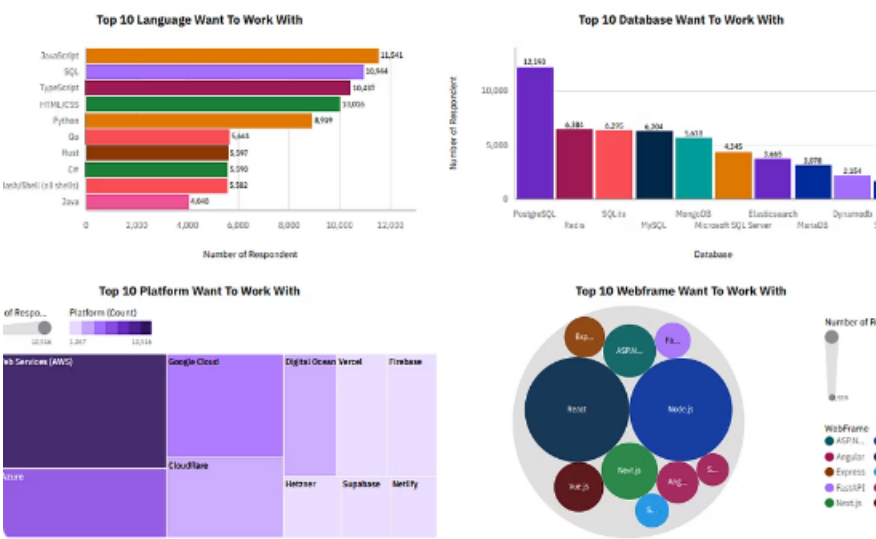
Number of Job Postings by Technology colored by Technology



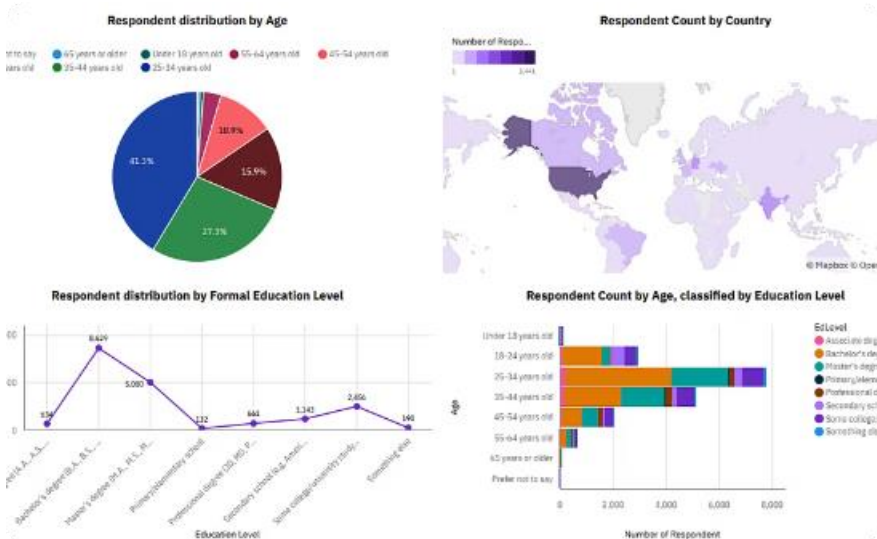
# Dashboard Visualization



Current Usage Dashboard



Future Trends Dashboard



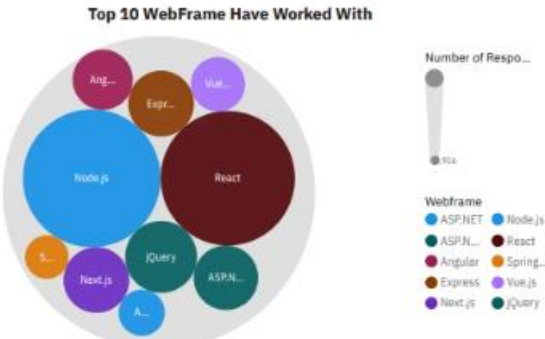
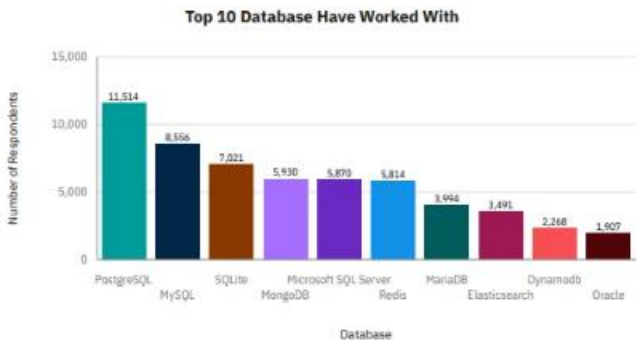
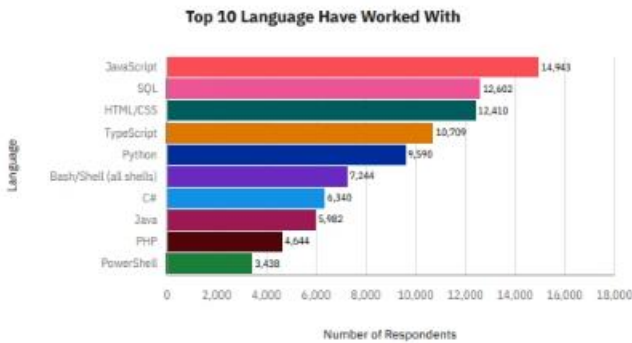
Demographics Dashboard

# Dashboard: Current Technology Usage

## Dashboard Insights

- **Top Languages:** JavaScript and SQL lead usage.
- **Databases:** PostgreSQL is most used; NoSQL gaining ground.
- **Platforms:** AWS dominates cloud platforms.
- **Frameworks:** React and Node.js are most popular.

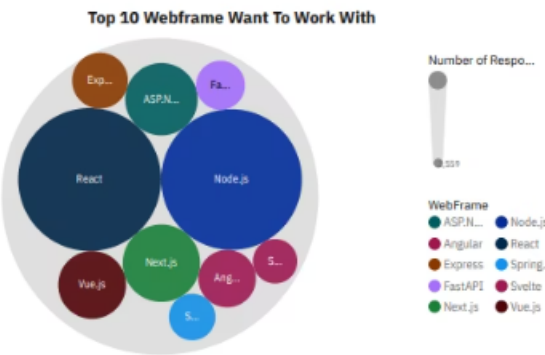
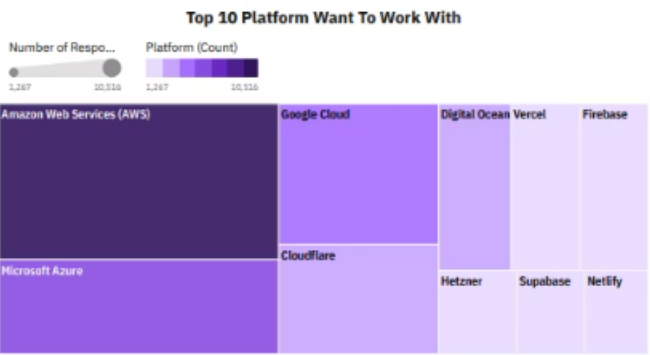
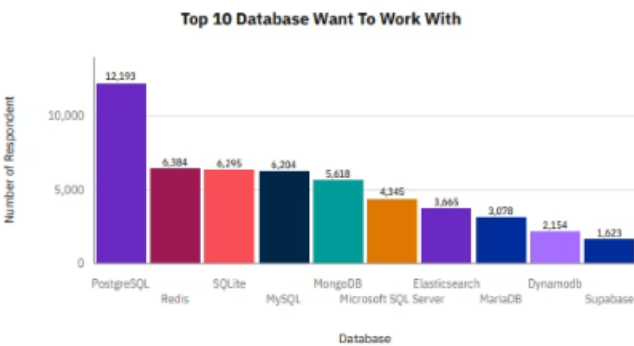
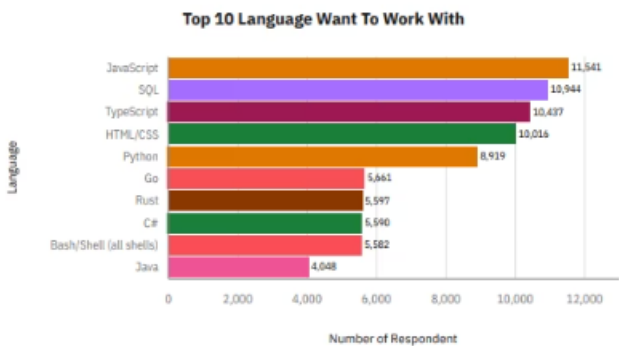
The market favors full-stack, data-driven, and cloud-native tools.



# Dashboard: Future Technology Trends

## Dashboard Insights

- **Languages:** JavaScript, SQL, and TypeScript are most desired.
- **Databases:** PostgreSQL and Redis lead future interest.
- **Platforms:** AWS, Google Cloud, and Azure top preferences.
- **Frameworks:** React and Node.js are most wanted by developers.



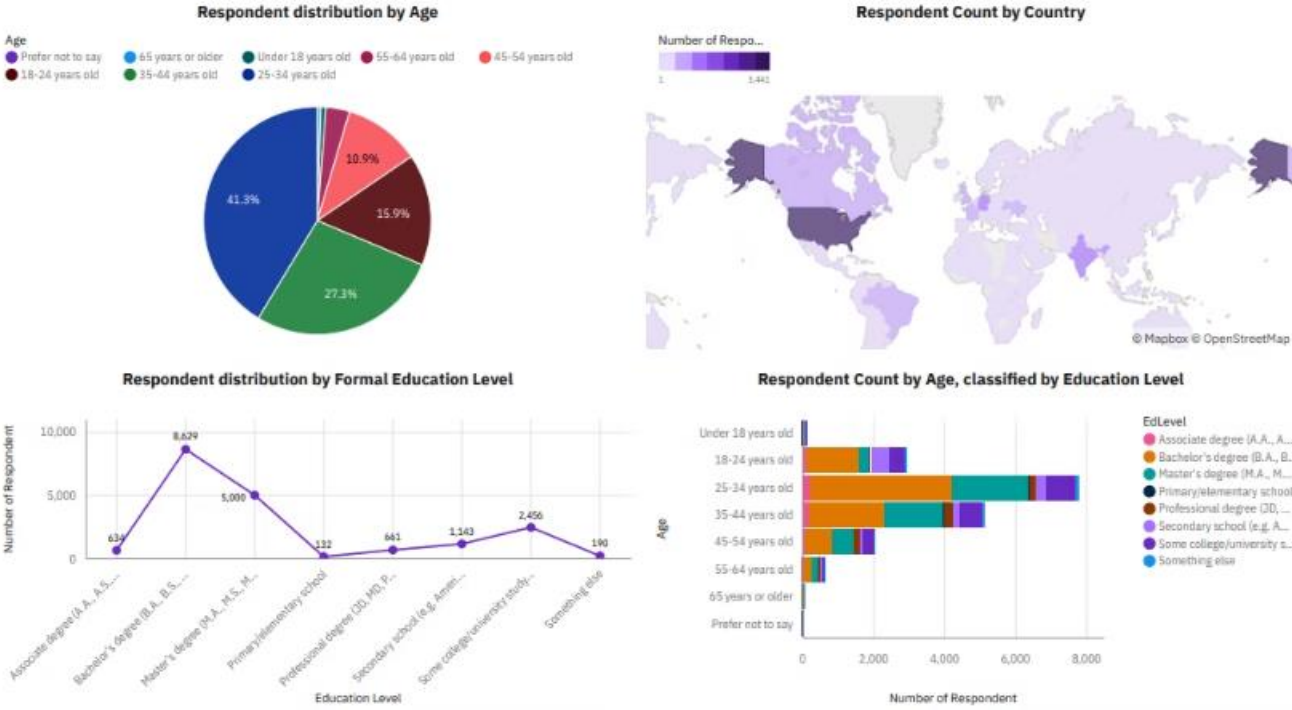
Developers are shifting toward modern, cloud-native, and JavaScript-driven stacks.

# Dashboard: Demographics

## Dashboard Insights

- **Age:** Most respondents are aged 25–34, followed by 35–44.
- **Education:** Majority hold a bachelor's or master's degree.
- **Location:** U.S. has the highest respondent count.

Young, highly educated developers from North America dominate the survey sample.







# Overall Findings & Implications

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Top Technologies

JavaScript, SQL, PostgreSQL

25-34

Key Age Demographic

Prime hiring target

2

Major Cloud Platforms

AWS and Azure dominate

4+

Emerging Technologies

Rust, Go, Supabase, Redis

# Conclusion



## Market-Developer Alignment

Strong correlation between industry demands and developer skill interests creates favorable hiring conditions.



## Cloud-Native Future

AWS leadership and emerging platforms signal continued shift toward distributed cloud architectures.



## Enduring Fundamentals

JavaScript and SQL remain essential despite rapid technology evolution across all sectors.



## Adaptable Workforce

Young, educated developer demographic positioned to quickly to quickly embrace emerging technologies like Rust.