Technology Survey Analysis

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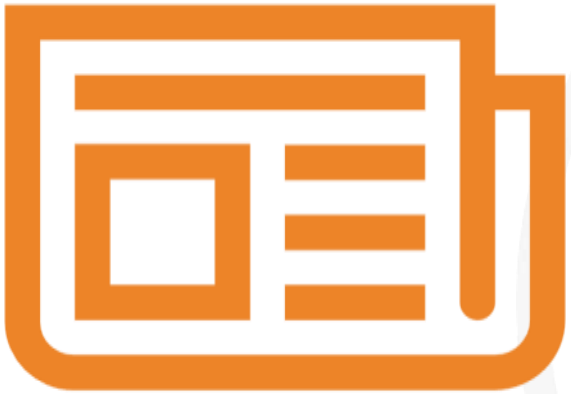
EXECUTIVE SUMMARY

- JavaScript, SQL, and Python are currently the most widely used languages.
- TypeScript and Go show rising demand for next year.
- PostgreSQL and Redis dominate database preferences.
- 41.3% of respondents are aged 25-34.

INTRODUCTION

- Purpose: Analyze technology trends to guide future strategies.
- Target Audience: Software developers, IT managers, business analysts.
- Value: Support data-driven decision-making processes.

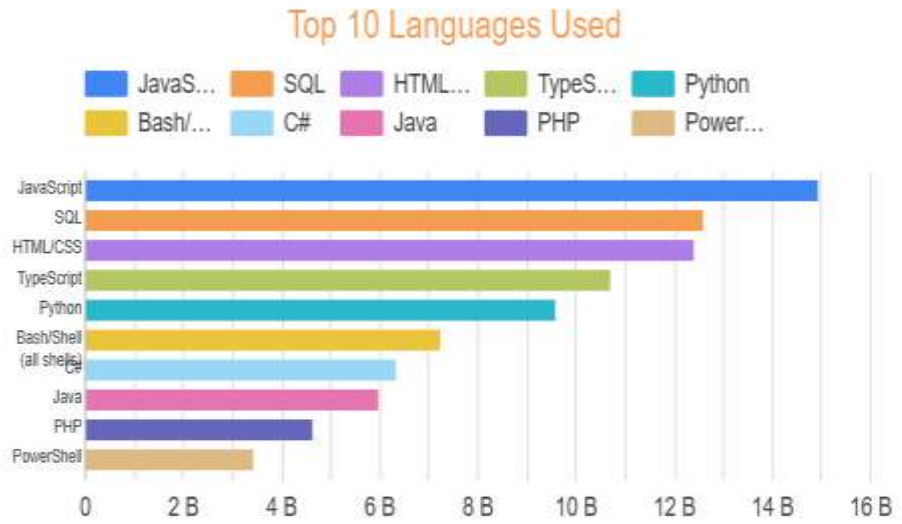
METHODOLOGY



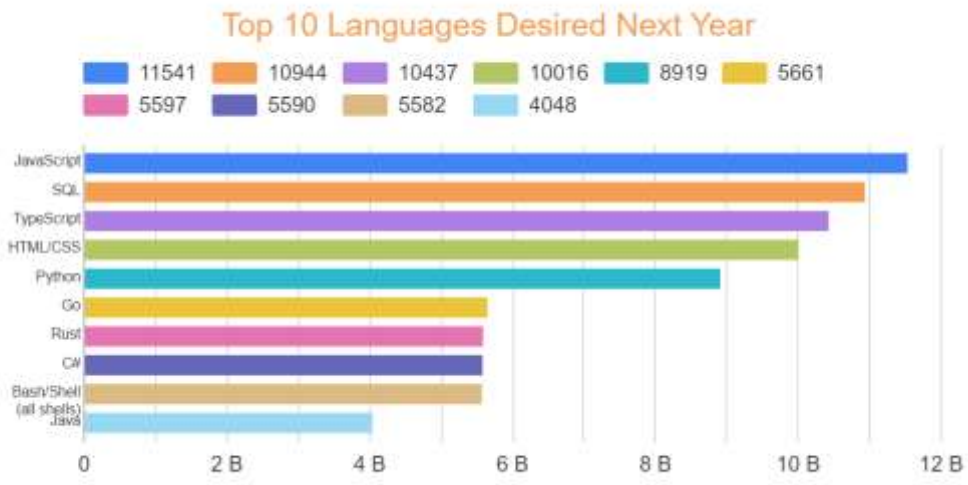
- Data Sources: Survey data
- Collection Methods: Online surveys and APIs.
- Data Wrangling: Cleaning missing data, categorical analysis.

PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

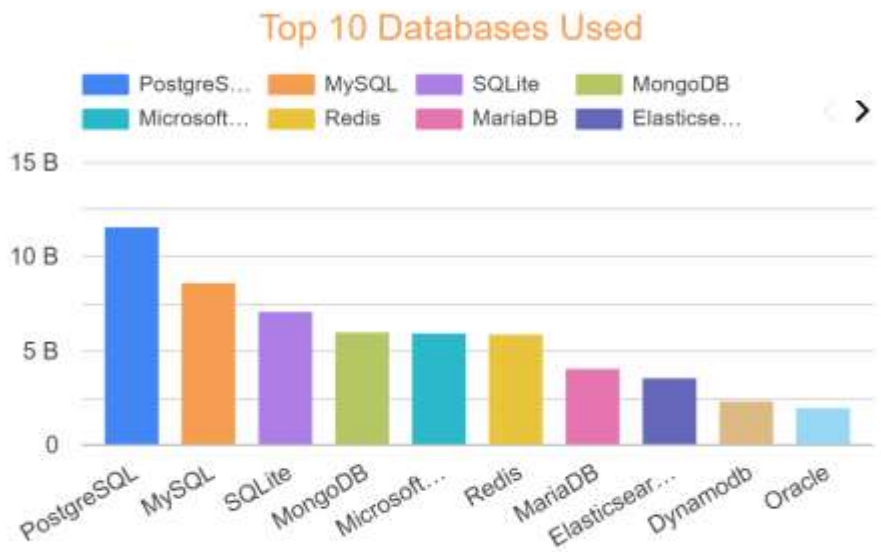
1. **JavaScript** remains #1 but shows **declining demand** (16B → 11,541).
2. **TypeScript** is the **fastest-growing** language (37% increase to #2 position).
3. **SQL** stays consistently strong (#2 → #3), while **Python** drops slightly (#3 → #5).

Implications

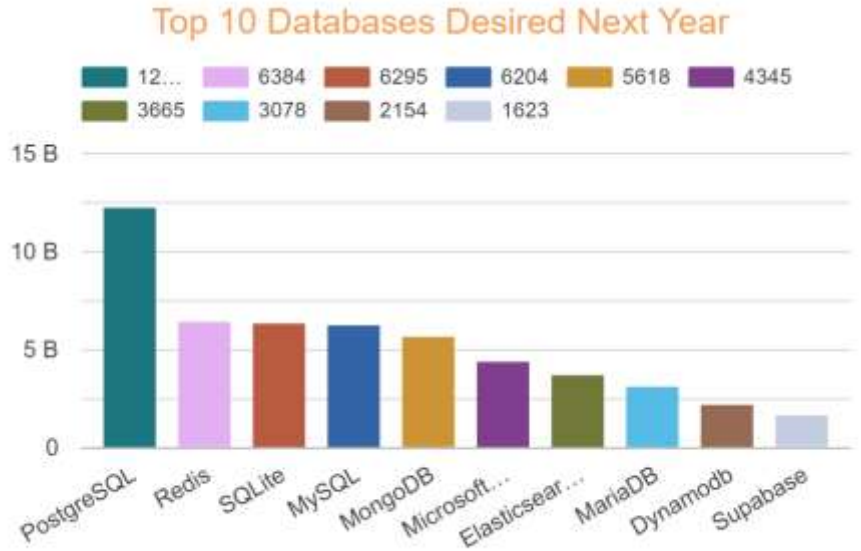
1. **Prioritize TypeScript** for web projects needing scalability/maintenance.
2. **Keep Java** for enterprise/legacy systems but modernize stacks.
3. **Strengthen SQL skills** – still critical for data work.

DATABASE TRENDS

Current Year



Next Year



DATABASE TRENDS – FINDINGS & IMPLICATIONS

Findings

1. **PostgreSQL dominates** both current usage and future demand (#1 position).
2. **Redis surges** in future demand (likely due to real-time app needs).
3. **Legacy databases** (e.g., MySQL, SQLite) remain stable but show slower growth.

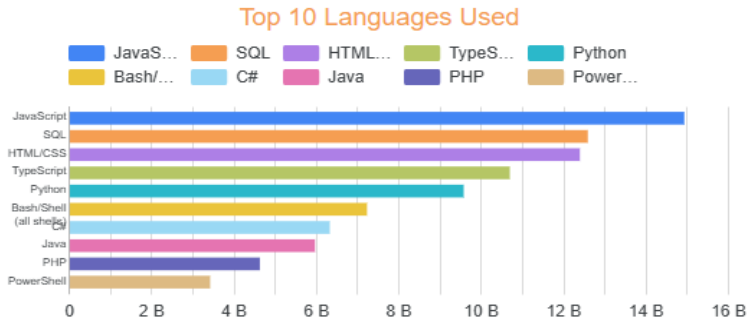
Implications

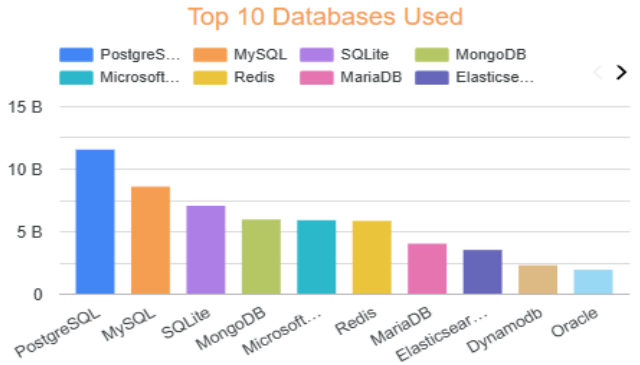
1. **Standardize on PostgreSQL** for transactional workloads (scalability + features).
2. **Adopt Redis** for caching/real-time use cases (sessions, queues).
3. **Modernize legacy DBs** (MySQL/SQLite) with extensions or hybrid architectures.

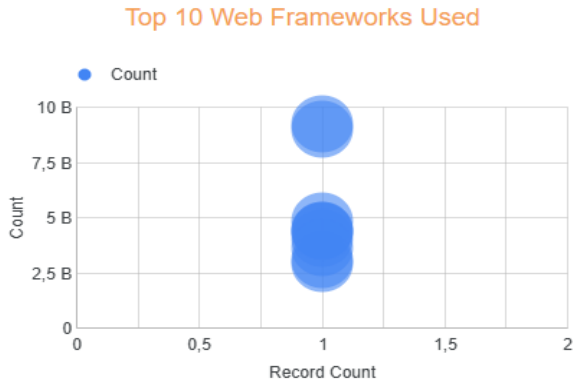
DASHBOARD

1. **Current Technology Usage**:
    1. Charts: Languages, databases, cloud platforms.
2. **Future Technology Trends**:
    1. Next-year demand visualizations.
3. **Demographics**:
    1. Age, education level, and country distributions.

DASHBOARD TAB 1







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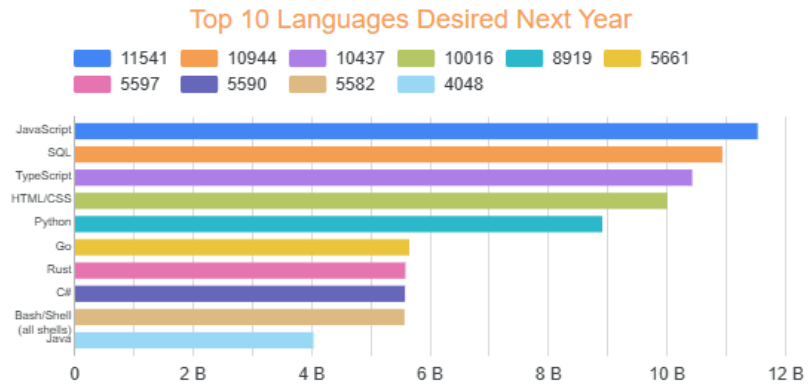

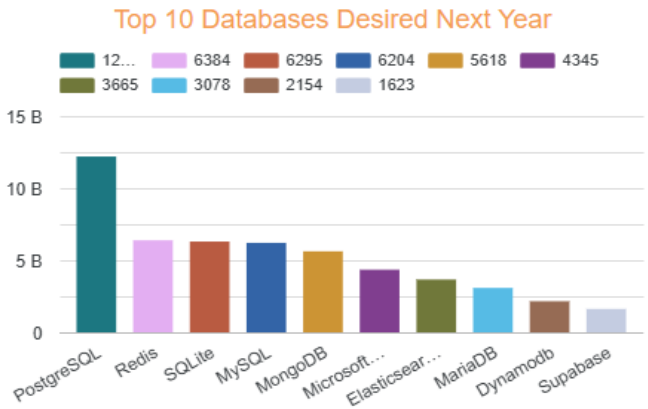

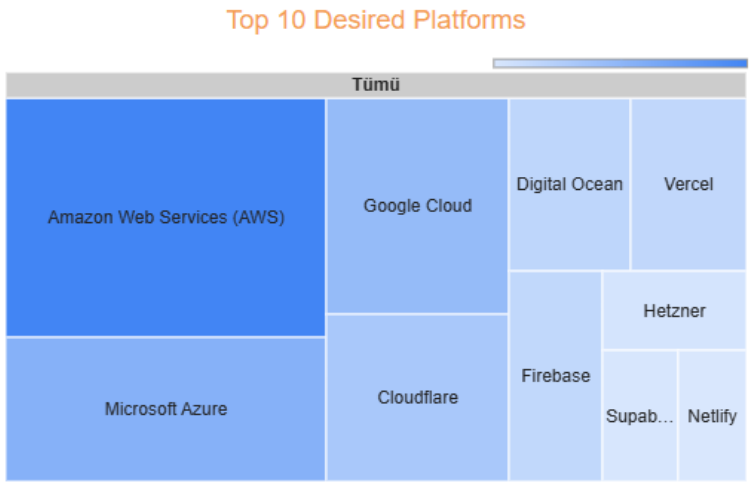

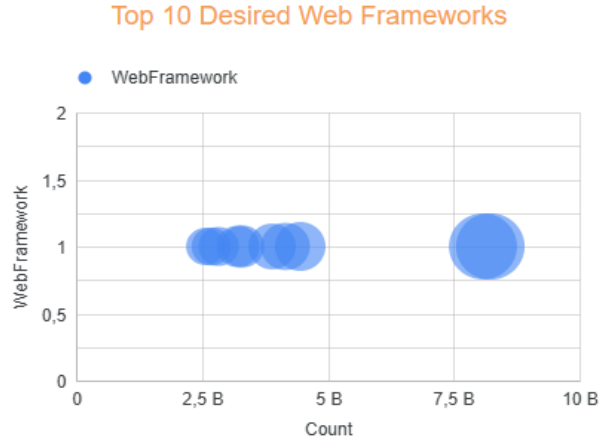

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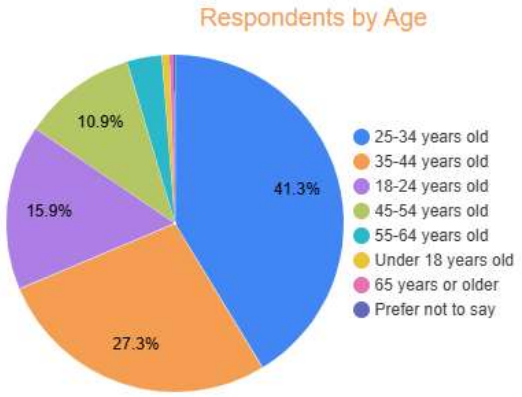
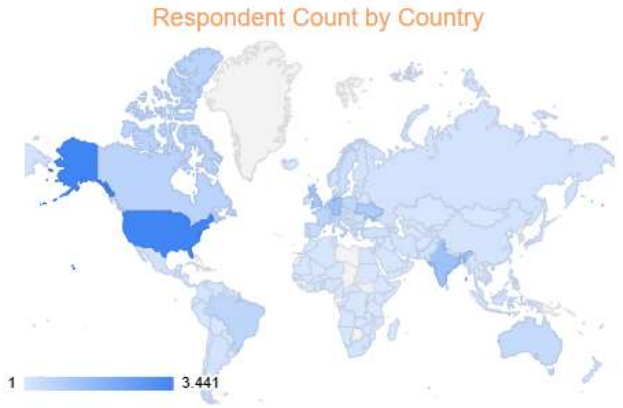
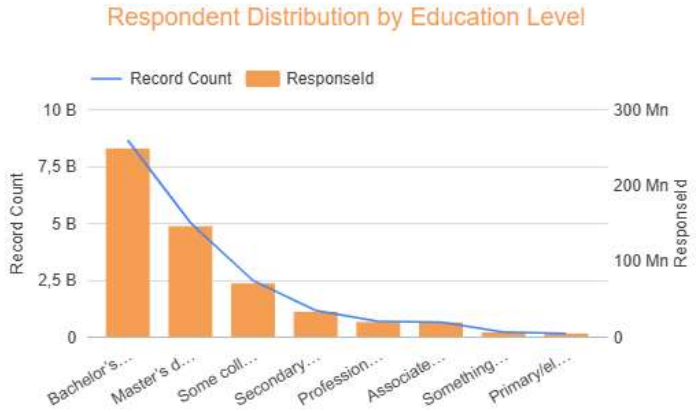
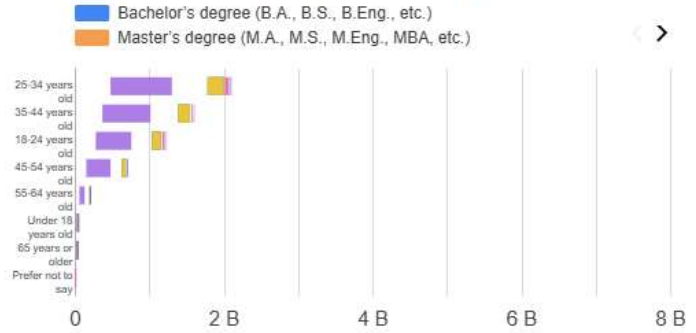








DISCUSSION

OVERALL FINDINGS & IMPLICATIONS

Findings

1. **Web Technologies Dominate**
    1. **JavaScript/TypeScript** and **PostgreSQL** lead both current usage and future demand.
    2. **Cloud platforms (AWS, Azure, Google Cloud)** are critical for deployment.
2. **Real-Time & Scalability Focus**
    1. **Redis** and **TypeScript** show the fastest growth, highlighting demand for low-latency and maintainable systems.
    2. **Go/Rust** emerge for high-performance needs (cloud infrastructure, systems programming).
3. **Demographics Shape Trends**
    1. **25-34 age group** (41.3% of respondents) drives adoption, with strong representation from **bachelor's/master's degree holders**.
    2. **Developed markets** (US, EU) lead in adopting cutting-edge tools.

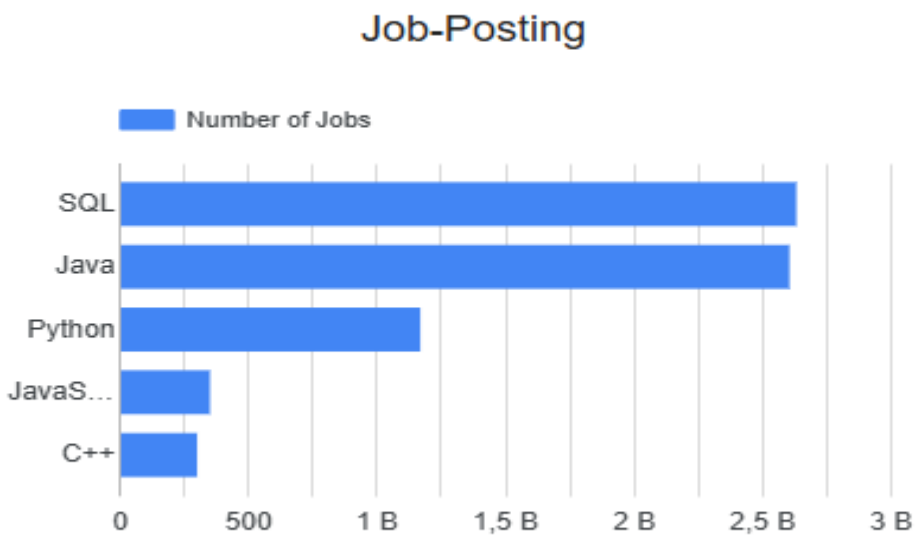
Implications

1. **Modernize Full-Stack Development**
    1. Prioritize **TypeScript + PostgreSQL/Redis** for new projects.
    2. Train teams in **Go/Rust** for infrastructure roles.
2. **Optimize for Real-Time & Cloud**
    1. Invest in **Redis for caching** and **serverless cloud solutions**.
    2. Migrate legacy systems to **hybrid SQL/NoSQL architectures**.
3. **Align with Workforce Trends**
    1. Tailor training for **young professionals (25-34)** with degrees.
    2. Focus on **AWS/Azure certifications** to match market demand

CONCLUSION

1. **Web & Cloud-Centric Future**
    1. **JavaScript/TypeScript** and **PostgreSQL** remain foundational, while **Redis** and **Go/Rust** address scalability and performance needs.
    2. **AWS/Azure/Google Cloud** dominance requires continuous investment in cloud-native solutions.
2. **Shift Toward Real-Time & Maintainability**
    1. The rise of **TypeScript** (frontend) and **Redis** (backend) reflects industry demand for **type-safe, low-latency systems**.
    2. **Legacy technologies (Java, MySQL)** persist but require modernization to stay competitive.
3. **Demographics Drive Adoption**
    1. The **25-34 age group** (41.3% of respondents) and **highly educated professionals** are key adopters of emerging tools.
    2. Training and hiring strategies should align with these trends to ensure workforce readiness.

JOB POSTINGS



POPULAR LANGUAGES