Technology Landscape: Today and Tomorrow

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EXECUTIVE SUMMARY

WEB IS KING

Web-based languages (JavaScript, SQL, HTML/CSS) dominate current developer usage.

PYTHON ON THE RISE

Python and TypeScript are growing fast, reflecting demand for data science and modern frameworks.

OPEN-SOURCE LEADS

PostgreSQL, MySQL, and MongoDB are the most used databases, with Redis showing strong future demand.

CLOUD-FIRST WORLD

AWS is the clear leader, but Microsoft Azure and Google Cloud are expanding rapidly.

YOUNG & EDUCATED

Majority of respondents are 18–34 years old, with higher education backgrounds, concentrated in the U.S., India, and Europe.

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INTRODUCTION

PURPOSE

Analyze survey data to uncover trends in programming languages, databases, and platforms.
Compare current technology usage with future technology trends.

AUDIENCE

Data analysts, developers, and decision-makers in the tech industry.
Organizations interested in workforce skills and future technology adoption.

VALUE

Provides insights into the most popular and emerging technologies.
Helps guide learning, hiring, and investment decisions.
Supports understanding of demographics influencing technology adoption.

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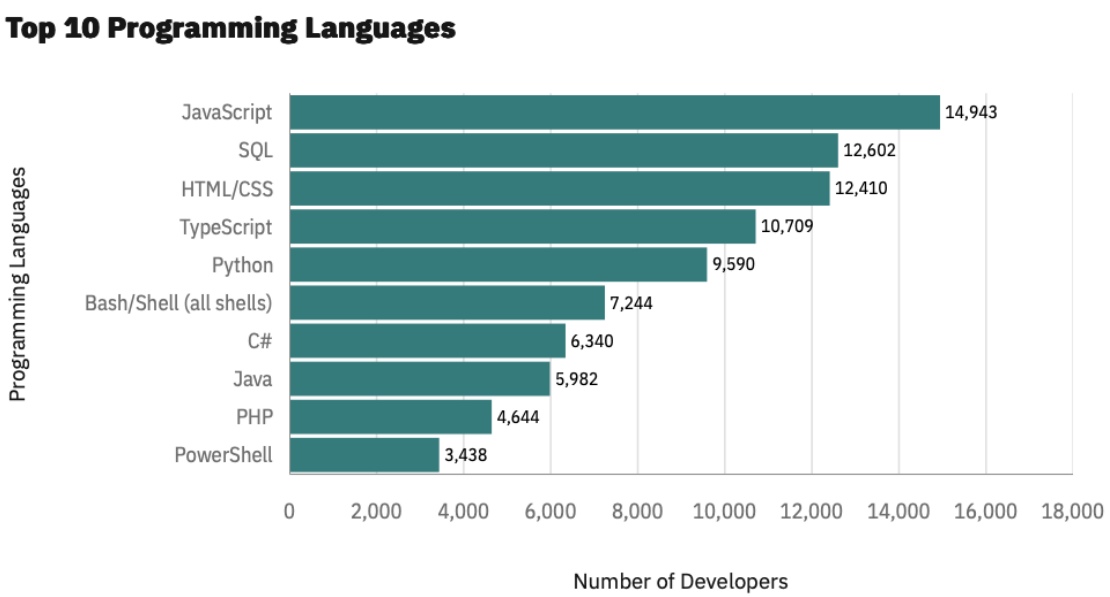
METHODOLOGY

DATA SOURCE
Stack Overflow Developer Survey (survey_data_updated.csv)

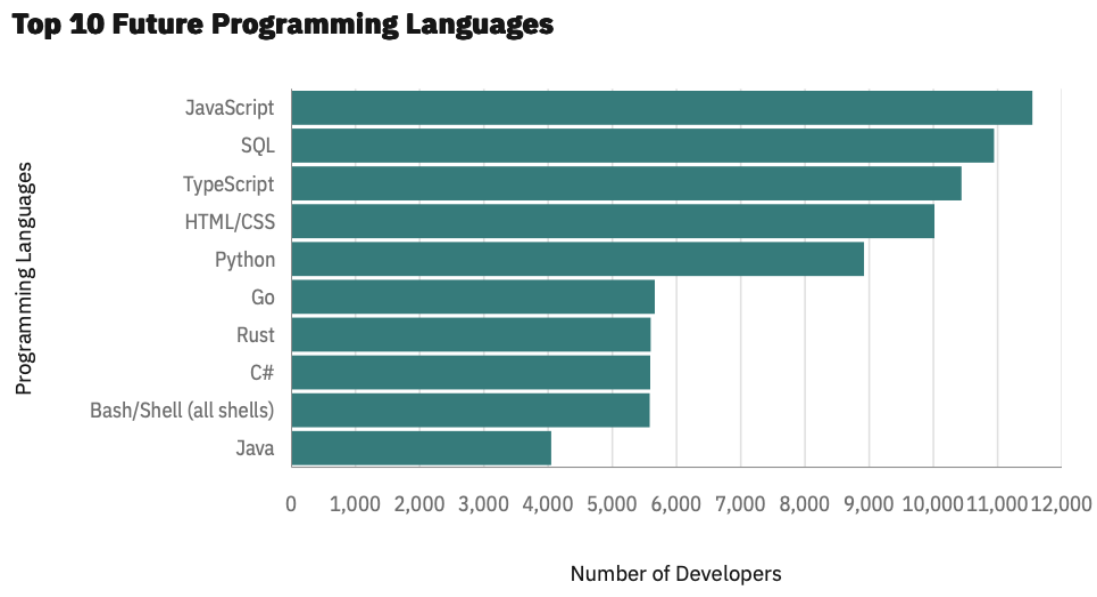
WRANGLING
Cleaned with Python (split multi-select ;, exploded rows, counted, saved Top-10 CSVs)

VISUALIZATION
Imported into Cognos, built dashboards (bar, pie, tree map, bubble, map)

Current Technology Usage



Future Technology Trend



PROGRAMMING LANGUAGES TRENDS

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FINDINGS

JavaScript remains the most widely used and desired programming language.

Python is rapidly growing in demand, signaling its importance in data science, AI, and automation.

SQL and **HTML/CSS** remain essential core skills.

Decline in interest for **Bash/Shell scripting** and older languages (PHP, Java).

IMPLICATIONS

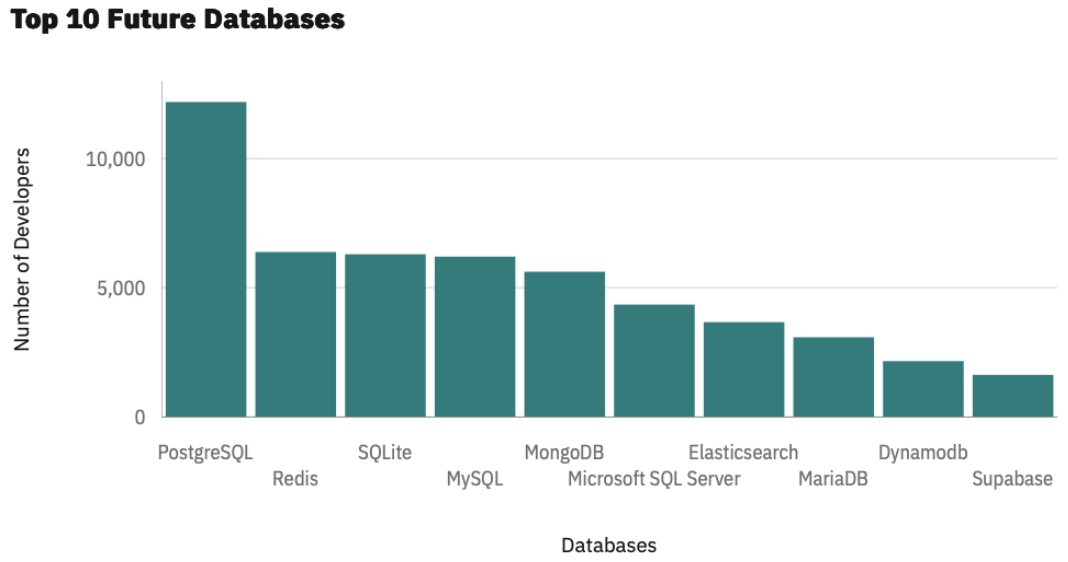
Web-based and easy-to-learn languages dominate because of their simplicity and broad applicability.

Companies will increasingly look for developers skilled in **Python** and **JavaScript** for future projects.

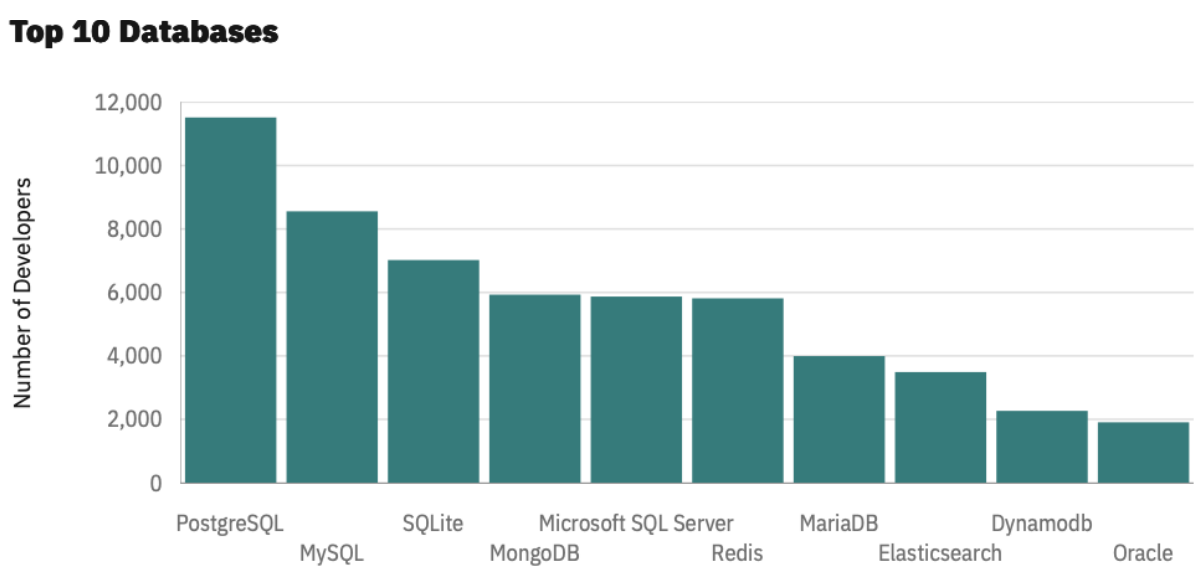
Declining interest in traditional languages suggests a shift toward **modern, versatile, and developer-friendly tools**.

Developers may prioritize learning languages with **simple syntax and high adaptability** (e.g., TypeScript, Go).

Future Technology Trend



Current Technology Usage



DATABASE TRENDS

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FINDINGS

PostgreSQL leads as the most widely used and anticipated database.

MySQL and **SQLite** remain strong in current use but show less growth in future demand.

MongoDB and **Redis** are gaining importance, especially for scalability and performance.

Microsoft SQL Server and **Oracle** are still relevant but show slower adoption compared to open-source options.

Supabase and **Elasticsearch** appe ar in future demand, signaling rising popularity of modern, flexible tools.

IMPLICATIONS

The dominance of **PostgreSQL** reflects a preference for **open-source, scalable, and versatile solutions**.

Companies are shifting towards **NoSQL and cloud-native databases** (MongoDB, Redis, Supabase) to handle modern data needs.

Traditional relational databases (SQL Server, Oracle) are steady but may gradually lose market share to open-source and lightweight solutions.

Developers and organizations should focus on **PostgreSQL + NoSQL skills** to stay aligned with future demand.

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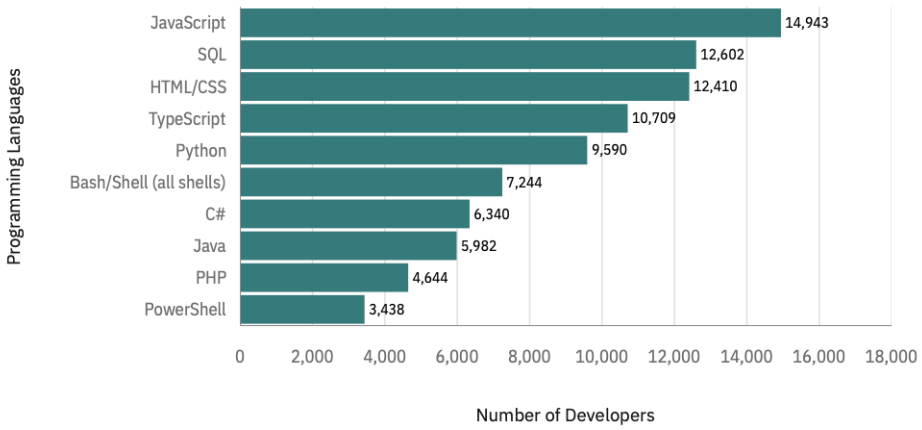
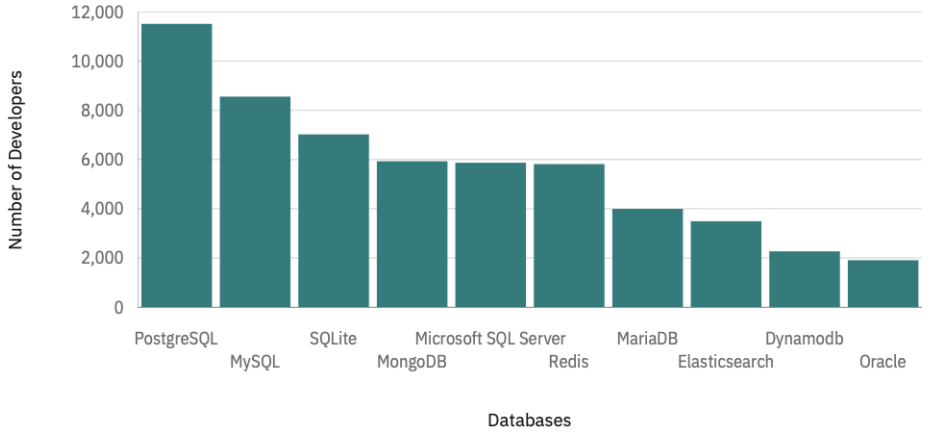
Top 10 Programming Languages

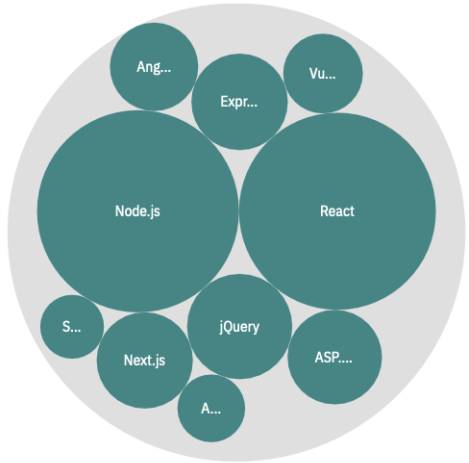


Top 10 Databases



Top 10 Platforms

Top 10 Webframes



CURRENT TECHNOLOGY USAGE

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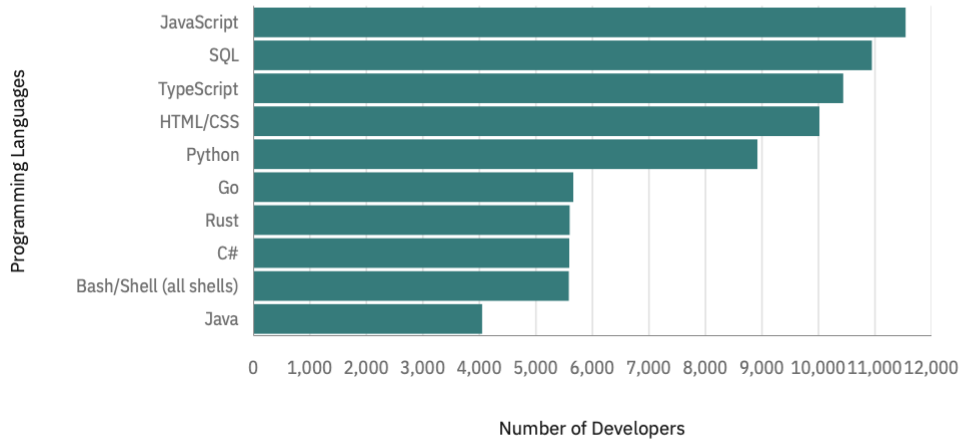
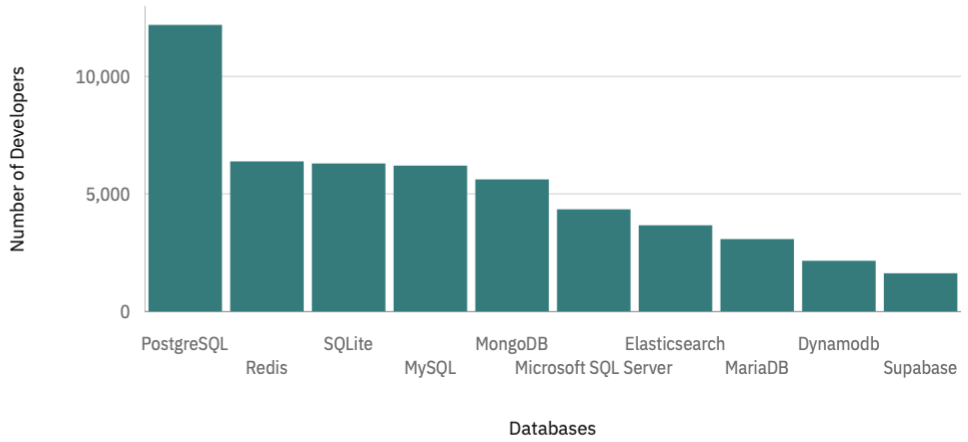
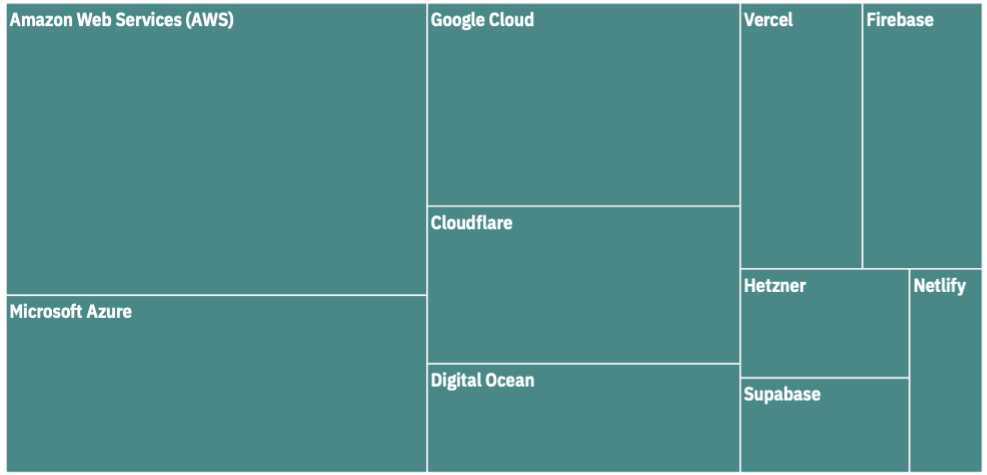
Top 10 Future Programming Languages



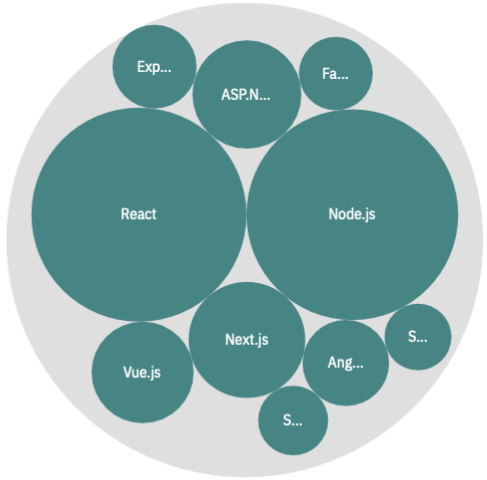
Top 10 Future Databases



Top 10 Future Platforms



Top 10 Future Webframes



FUTURE TECHNOLOGY TRENDS

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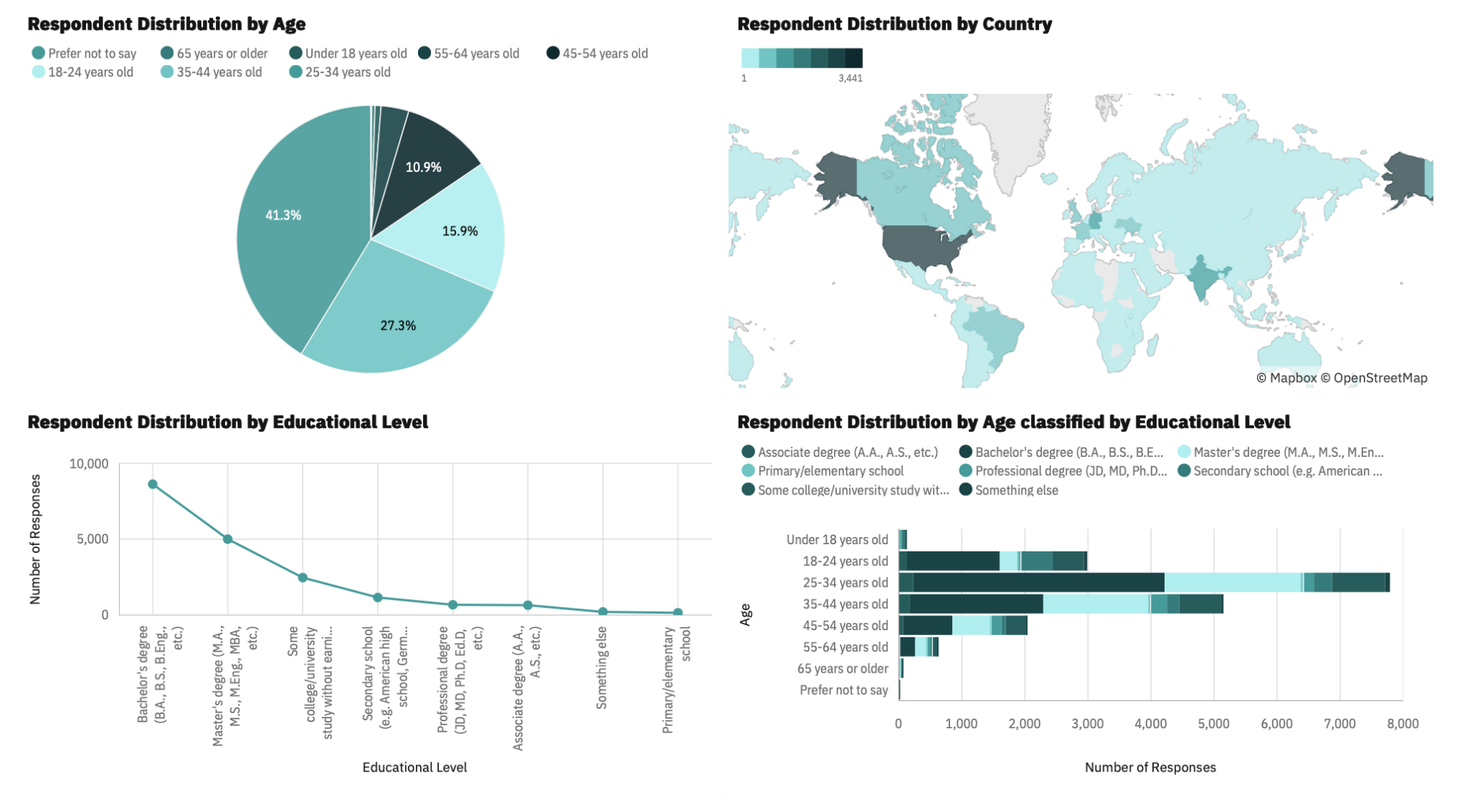

DEMOGRAPHICS

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DISCUSSION

Web rules

JavaScript & Python dominate current and future demand.

Databases

PostgreSQL & MySQL stay strong, NoSQL (MongoDB, Redis) is rising.

Platforms

AWS leads today, but Azure, Google Cloud, and emerging tools (Vercel, Firebase) are gaining.

Web frameworks

React, Node.js, and Next.js drive the future; older ones (jQuery) decline.

Demographics

Majority are young professionals (25–34) with higher education, mostly from tech hubs (US, India, Europe).

FINDINGS

Programming Languages: JavaScript remains dominant; Python demand is rising.

Databases: PostgreSQL and MySQL lead; MongoDB and Redis show future growth.

Platforms: AWS is most widely used; Azure and Google Cloud gaining traction.

Web Frameworks: React, Node.js, and Next.js are most popular; older frameworks are declining.

Demographics: Respondents are mostly young, well-educated, and globally distributed.

IMPLICATIONS

The future is **web-first and data-driven**, with Python and modern frameworks at the core.

Cloud adoption is diversifying, requiring multi-platform skills (AWS, Azure, Google Cloud).

Organizations must adapt to **scalable, flexible databases** (SQL + NoSQL).

A **younger global workforce** is driving rapid adoption of new technologies, accelerating innovation.

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The tech landscape is becoming web-first, cloud-enabled, and data-driven, powered by a young global workforce rapidly adopting modern tools.

CONCLUSION

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