



# Technology Trends 2025

"An Analytical Overview of Programming Languages, Databases, and  
Developer Demographics"

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## Executive Summary

- This project explores current and future trends in programming languages, databases, platforms, and developer demographics based on survey data from a diverse respondent pool

### Key Findings:

- **Top Programming Languages (Current):**

JavaScript, HTML/CSS, and SQL dominate current usage. C# and TypeScript are also widely adopted.

- **Future Language Interest:**

Python and TypeScript are gaining strong momentum, with developers increasingly expressing interest in them.

- **Database Trends:**

PostgreSQL, Microsoft SQL Server, and MySQL are the most commonly used databases. However, MongoDB and PostgreSQL show rising future demand.

- **Platform Preferences:**

Amazon Web Services (AWS) leads current and future platform preferences, followed by Microsoft Azure and Google Cloud.

- **Demographics:**

The majority of respondents are aged 25–34 and 18–24, with Bachelor's and Master's degrees being the most common education levels.

- **Key Insight:**

There is a clear shift toward cloud-native platforms, NoSQL databases, and modern web development stacks, reflecting the industry's evolving priorities.



# Introduction

## Purpose of the Report:

To analyze and present insights into current and future trends in technology usage—specifically programming languages, databases, development platforms, and developer demographics—based on survey data.

## Target Audience:

- **Technology Leaders** – CTOs, IT Managers, and Tech Strategists
- **Developers & Engineers** – Professionals planning career moves
- **Recruiters & Hiring Managers** – Understanding skill trends for hiring
- **Educators & Curriculum Designers** – Aligning course content with industry needs

## Value of the Report:

- Provides **data-driven guidance** on which technologies are in demand now and in the future
- Helps companies **optimize training and hiring strategies**
- Supports developers in **career planning and upskilling**
- Offers educators insight into the **skills most needed in the market**



# Methodology



- **Data Source:**

- Survey data collected via **IBM Cognos Analytics**, with global respondents across varied age and education levels.

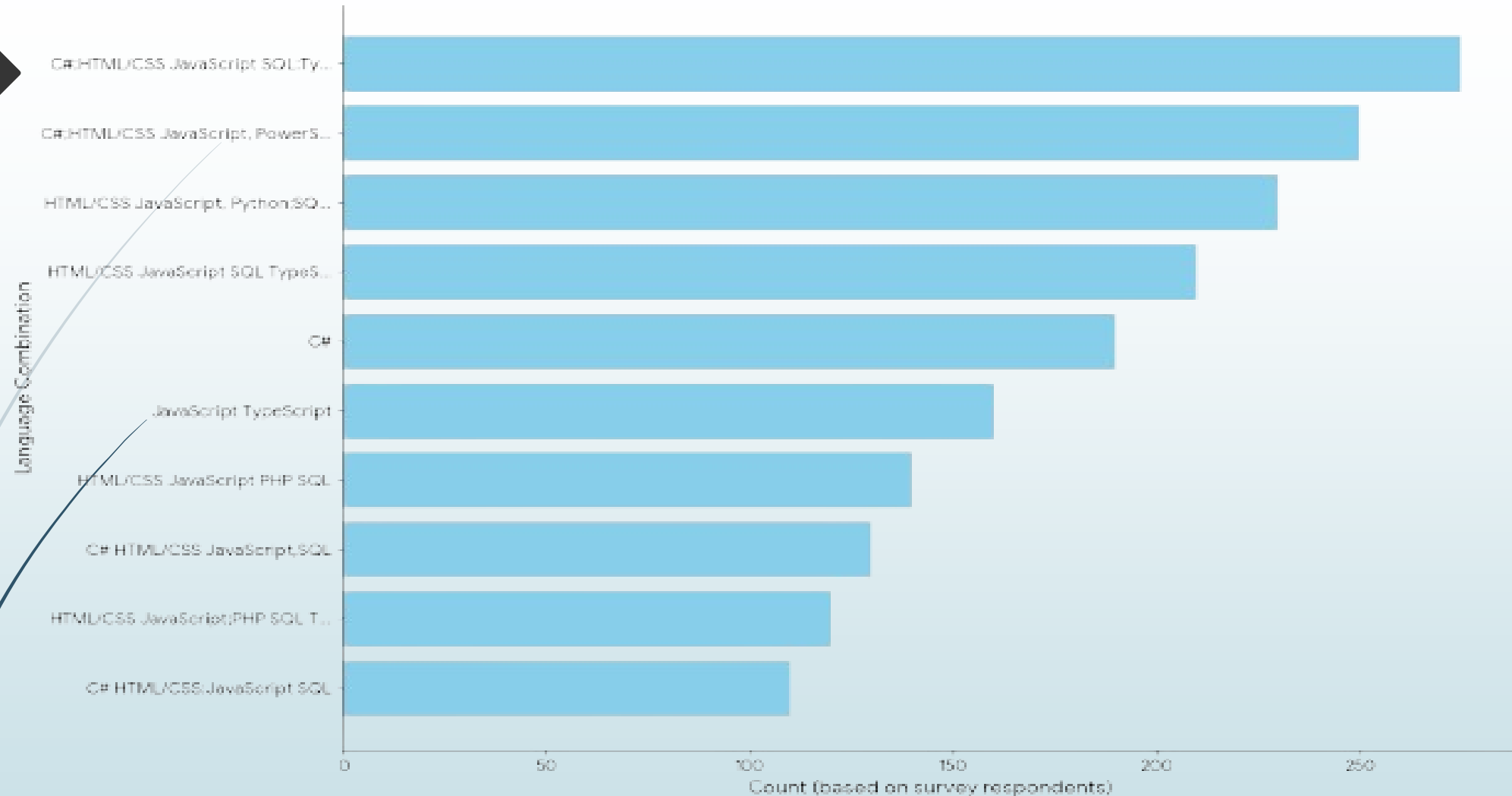
- **Collection Method:**

- Online survey shared through professional and developer networks.
- Covered topics: programming languages, databases, platforms, and demographics.

- **Data Processing:**

- Cleaned and standardized multi-value responses (e.g., "JavaScript;TypeScript").
- Grouped technologies by usage ("Have Worked With") and interest ("Want To Work With").
- Tools used: **Cognos Analytics, Jupyter Notebook, Numpy, Seaborn, Matplotlib, and Python (Pandas).**

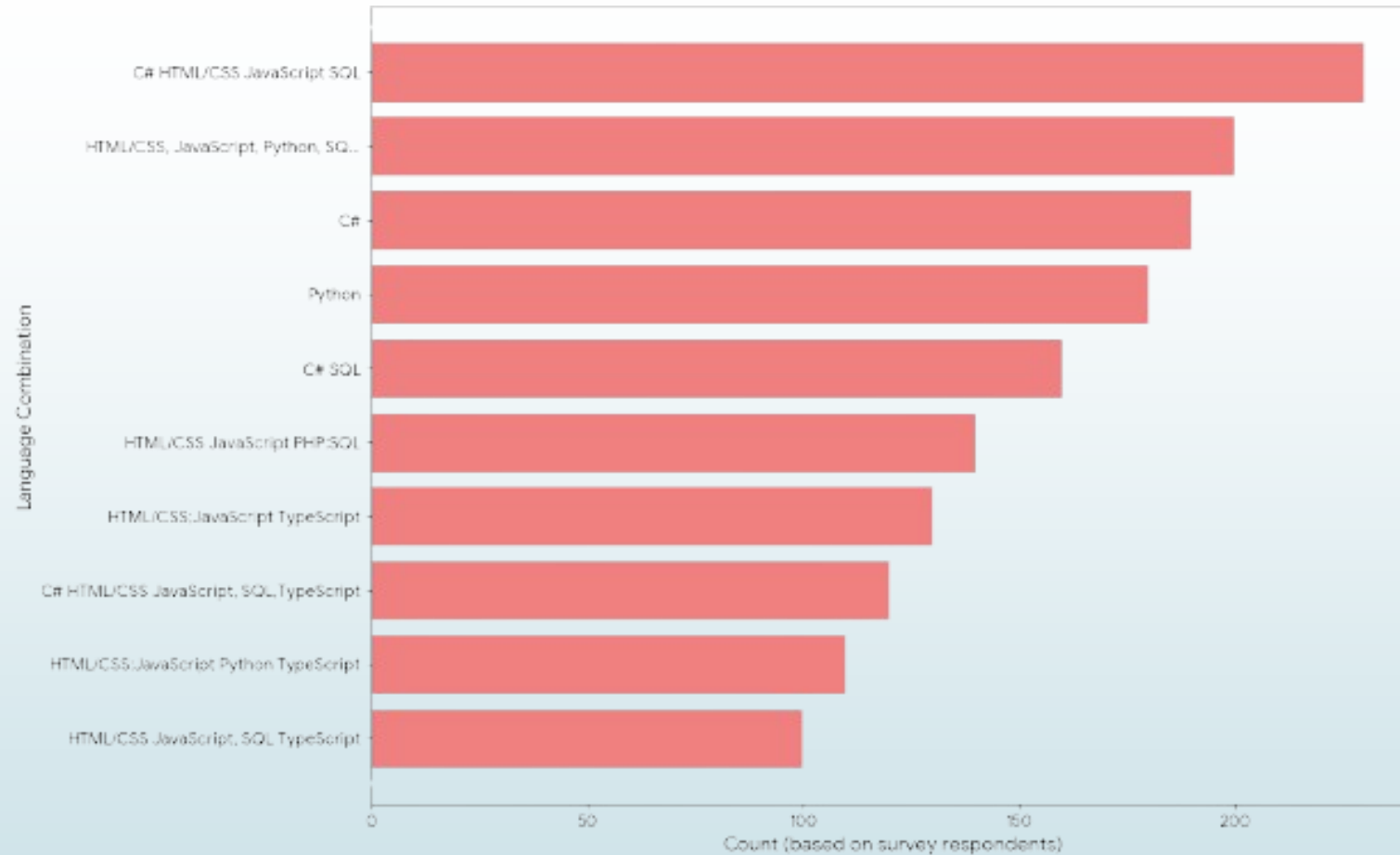
## Top 10 Programming Languages Currently Worked With



**Findings:** The current tech landscape is dominated by web development (HTML/CSS, JavaScript) and data management (SQL), often combined. C# and Python are also highly prevalent.

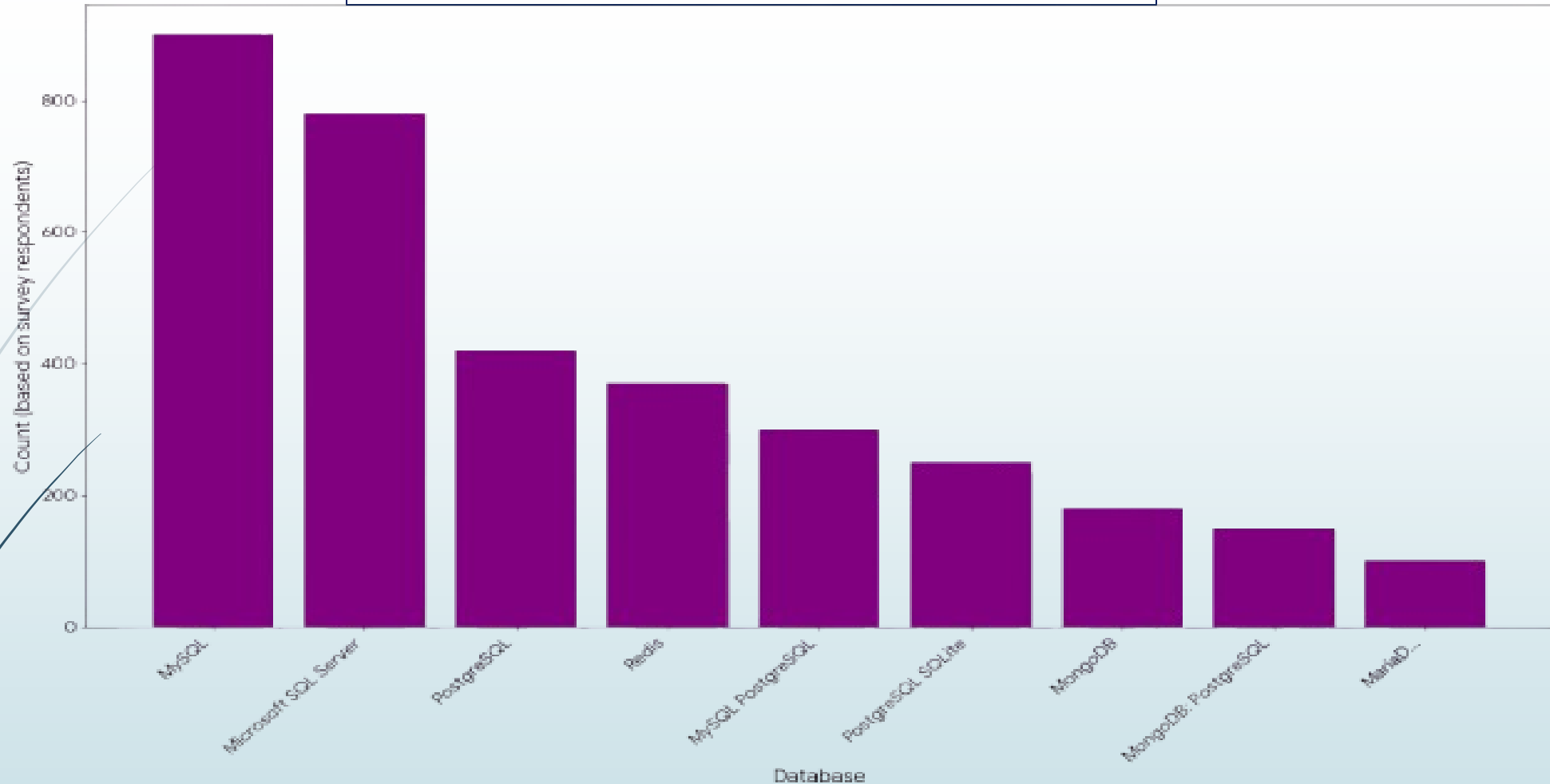
**Implications:** To thrive now, developers need strong web fundamentals, C#, and Python skills. Businesses should prioritize these proficiencies in their teams.

## Top 10 Programming Languages Respondent Wants to Work With



- **Findings:** Future interest remains strong in web/data technologies, with a clear surge in demand for Python and sustained interest in C#. TypeScript is also gaining significant traction.
- **Implications:** Developers should learn Python and TypeScript for future readiness, while C# skills remain valuable. Businesses should invest in these trending languages for future innovation.

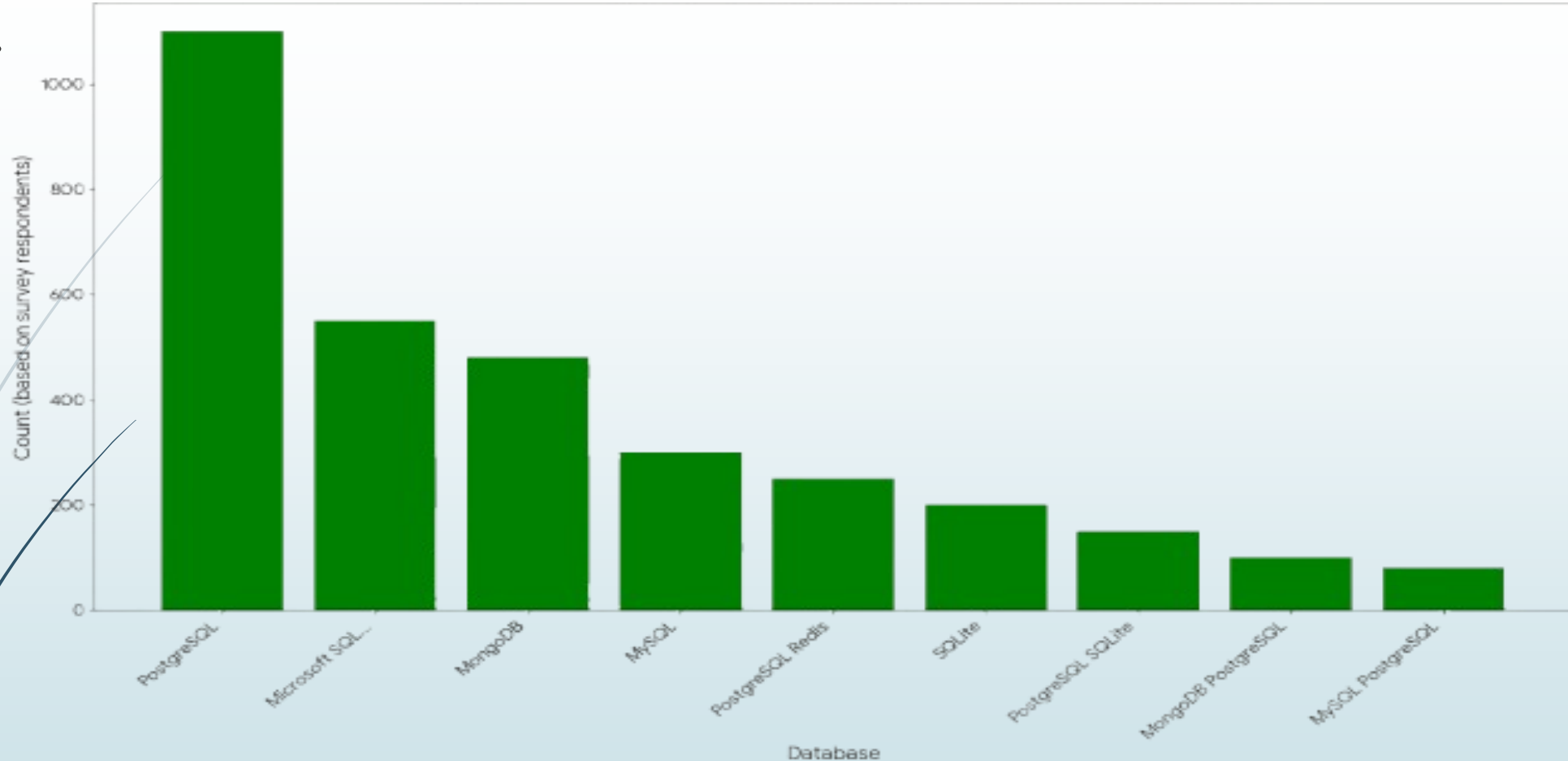
## Top 10 Databases Currently Worked With



- **Findings:** MySQL and Microsoft SQL Server are most widely used, followed by PostgreSQL. NoSQL databases like Redis and MongoDB also have significant current use.
- **Implications:** Current database skills should focus on relational databases (MySQL, SQL Server, PostgreSQL) and familiarity with NoSQL.

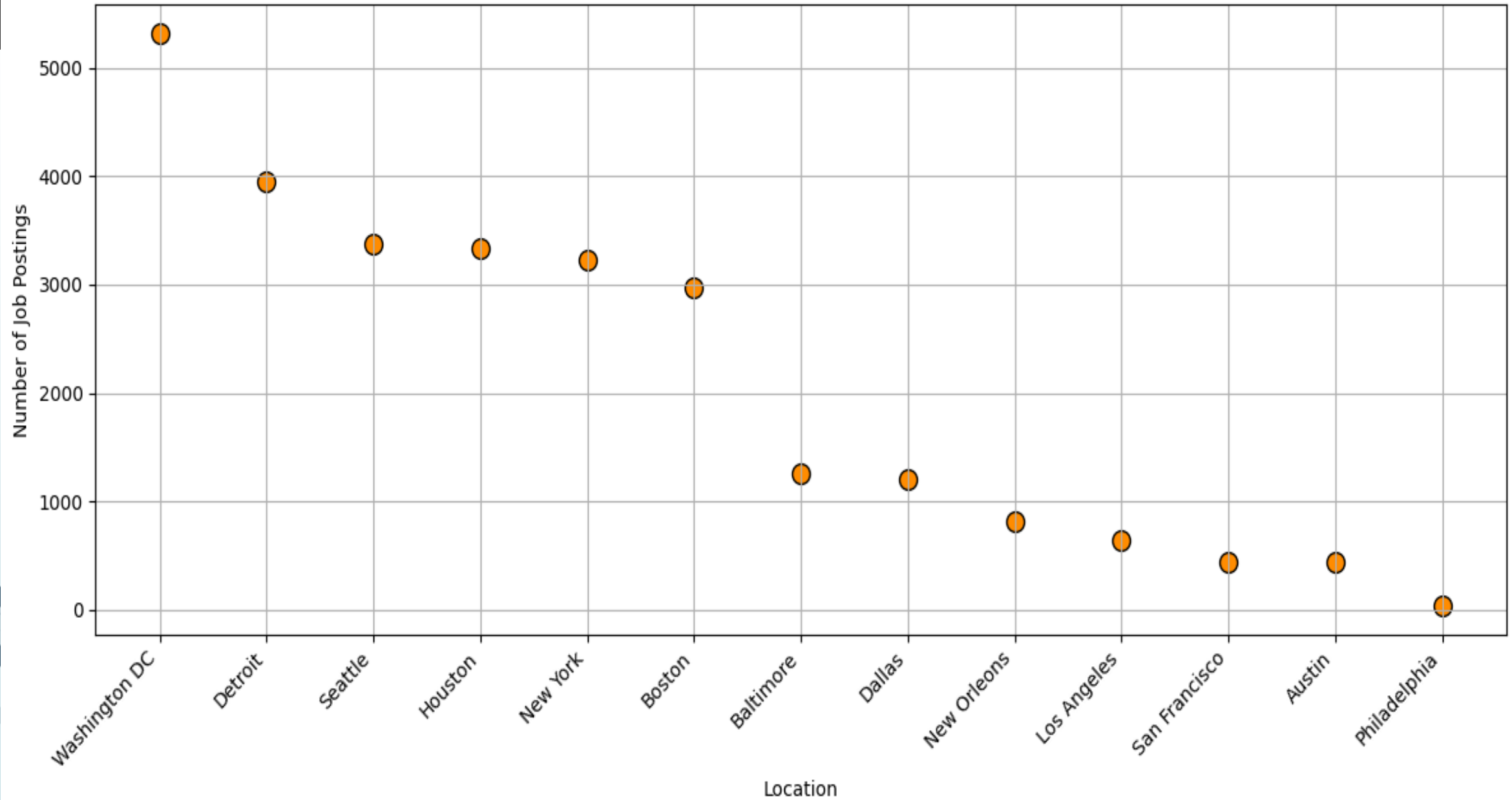


## Top 10 Databases wants to work With



- **Findings:** PostgreSQL is the most desired future database, with continued strong interest in Microsoft SQL Server and significant growth in MongoDB.
- **Implications:** Developers should learn PostgreSQL and MongoDB for future roles. Businesses should consider adopting these for future growth and talent attraction.

# Jobs Posting by Location

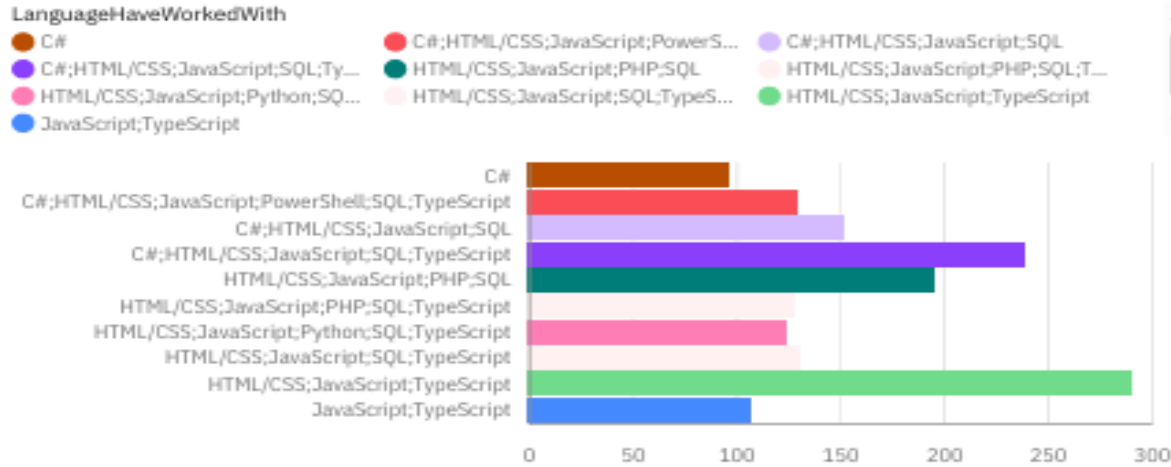


# Current Technology Usage

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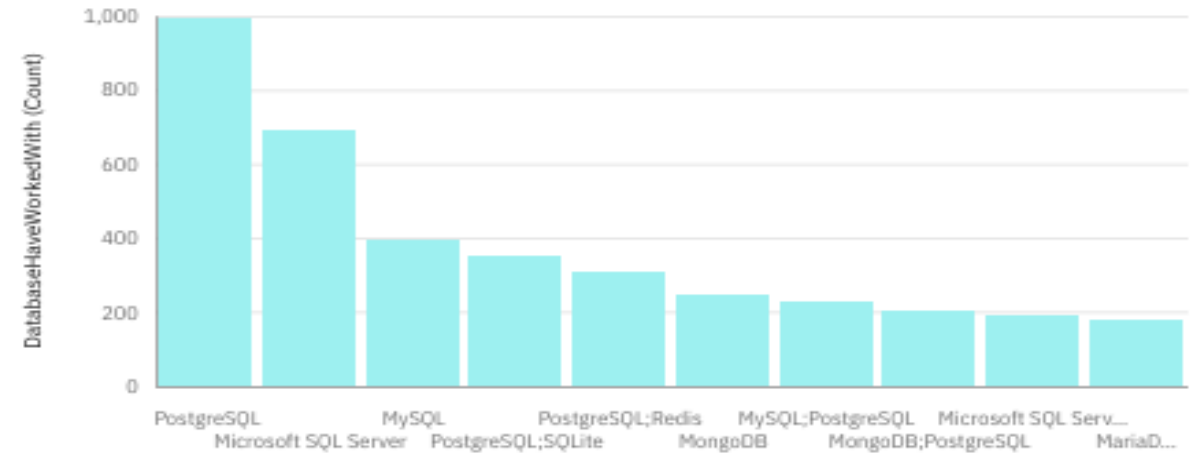
## Current Technology Usage

Top 10 Language Worked With

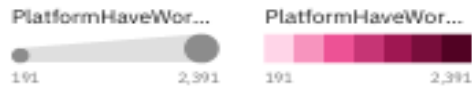


Survey

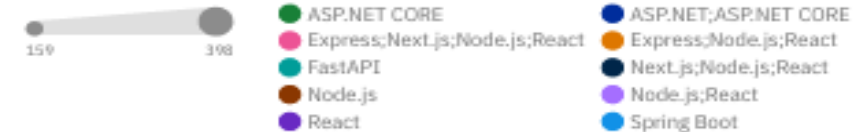
Top 10 Database Worked With



Top 10 Platform Worked With



Top 10 Web Frame Worked With



Amazon Web Services (AWS)

Amazon Web Services (AWS);Microsoft Azure

Amazon Web Services (AWS);Google Cloud

Google Cloud

Microsoft Azure



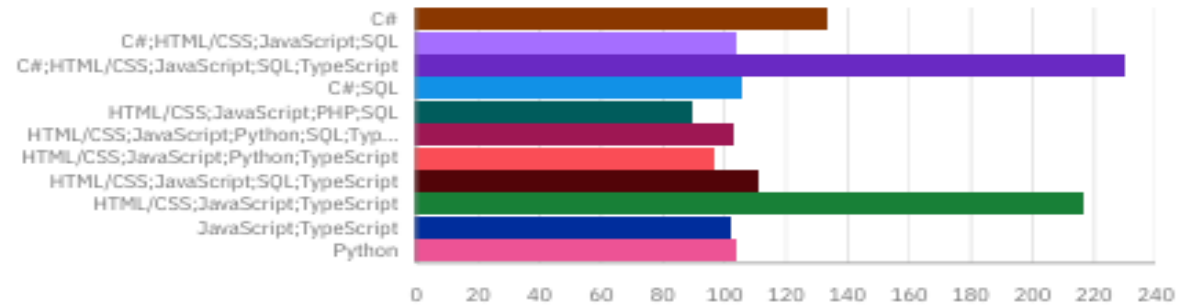
# Future Technology Usage

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## Future Technology Trend

### Top 10 Language Want To Work With

LanguageWantToWorkWith



### Top 10 Platform Want To Work With

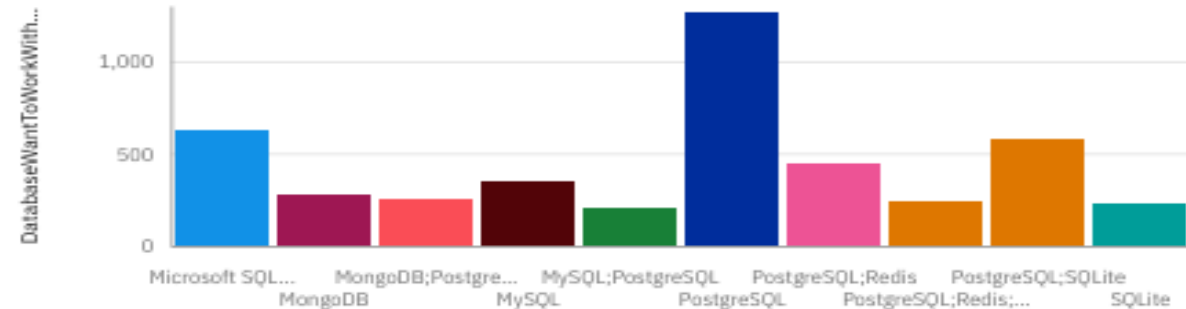
PlatformWantToW...



Survey

### Top 10 Database Want To Work With

DatabaseWantToWorkWith



### Top 10 Webframe Want To Work With

WebframeWantTo...



WebframeWantToWorkWith



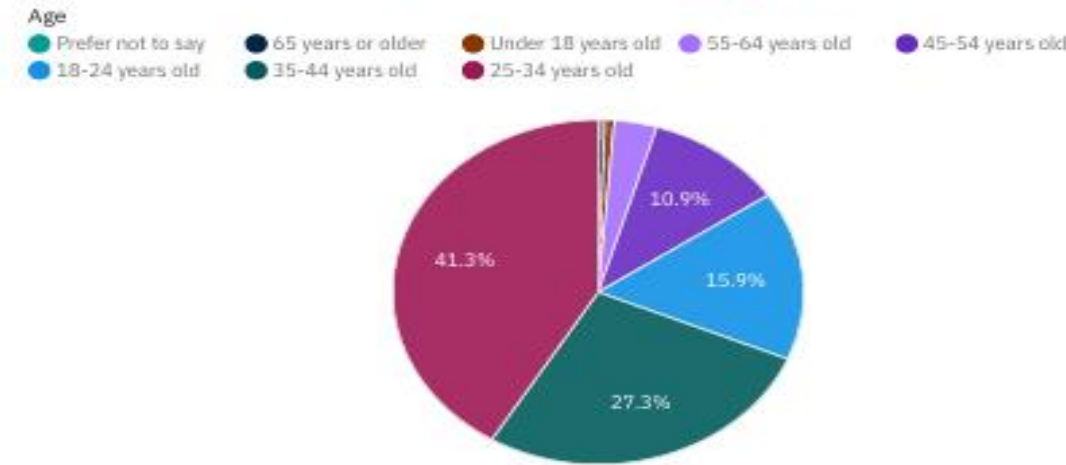
# Demographics

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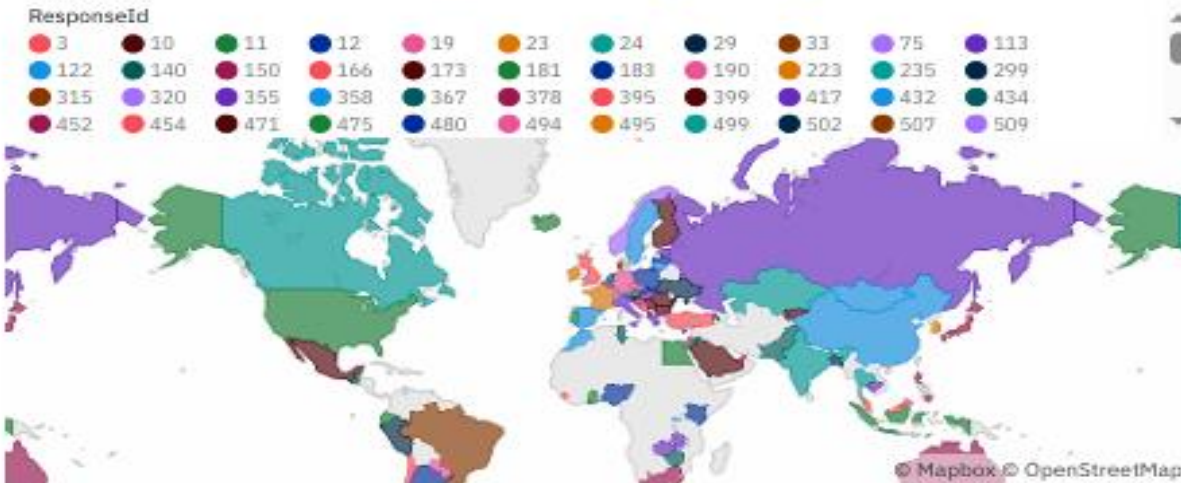
Survey

## Demographics

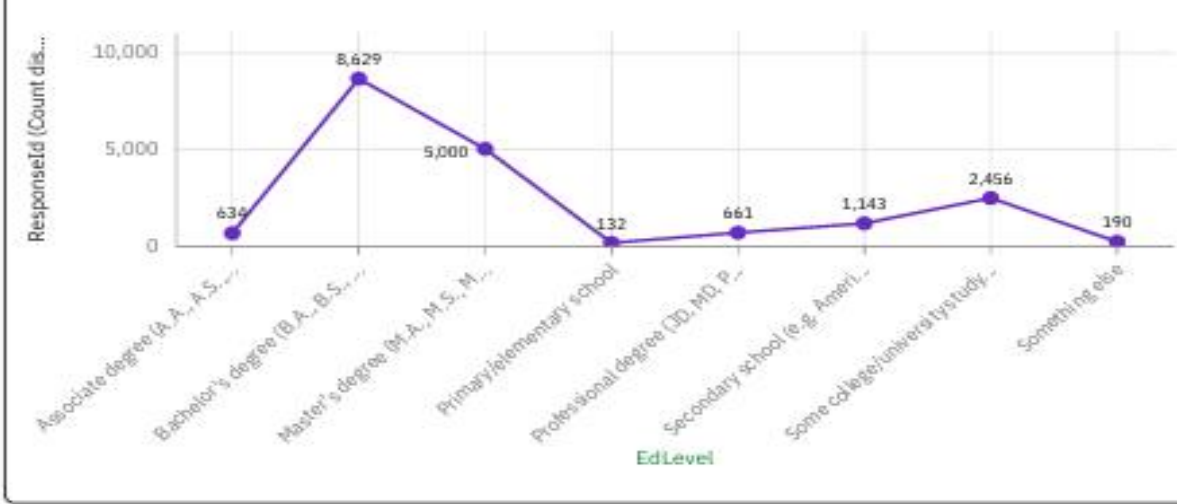
Respondent Distribution by Age (%)



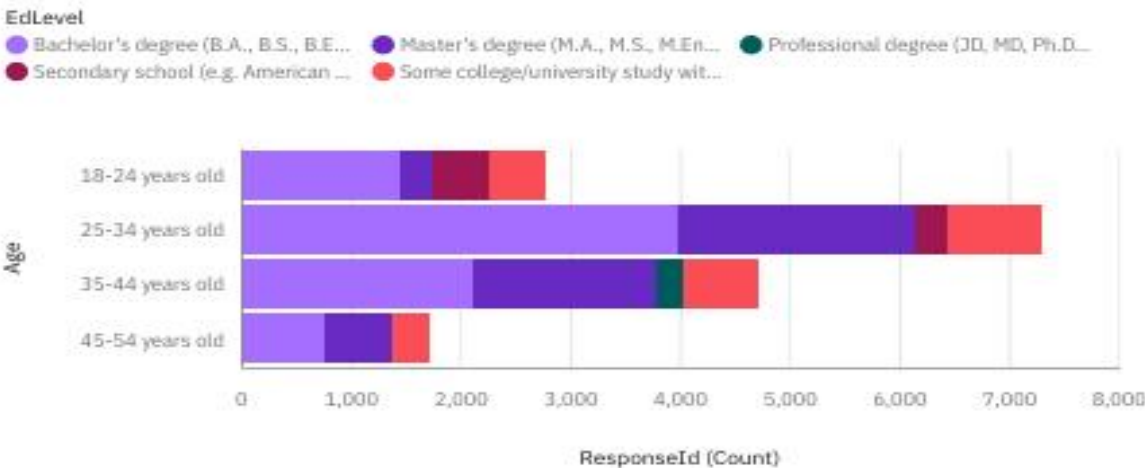
Respondent Count by Country



Respondent Distribution by EdLevel



Respondent Count by Age and Education Level



# Summary

The dashboard visualizations offer a comprehensive overview of current technological trends and future directions based on respondent data.

**Programming Languages:** Web dev (HTML/CSS, JavaScript) and data management (SQL) are current foundations, often with C# and Python. Future trends show Python, C#, and TypeScript gaining significant traction for diverse and scalable applications.

**Databases:** MySQL and SQL Server are dominant now. PostgreSQL is the most desired future database, alongside growing interest in NoSQL solutions like MongoDB.

**Platforms:** Amazon Web Service and Azure lead current and future cloud computing, demonstrating a strong commitment to cloud infrastructure, with Google Cloud also showing notable interest.

## Overall Strategic Implications:

The combined insights suggest a clear trajectory where the core of technological development remains centered around web and data-intensive applications, increasingly powered by cloud infrastructure. There's a strong emphasis on continuous learning and adaptation, with Python, TypeScript, PostgreSQL, and MongoDB appearing as critical skills for future professionals. For businesses, aligning technology strategies with these trends, particularly in cloud adoption and talent development in these key areas, will be crucial for sustained innovation and competitiveness.



## Findings and Implications

The dashboard insights highlight a tech landscape shifting towards data-driven, cloud-centric, and scalable solutions.

### Overall Findings:

Current trends show strong reliance on web development (HTML/CSS, JavaScript) and traditional databases (MySQL, SQL Server), with cloud platforms (AWS, Azure) already dominant. Future demand points to Python and PostgreSQL leading the way in languages and databases respectively, signaling growth in AI, data science, and open-source solutions. TypeScript and NoSQL databases like MongoDB are also gaining significant traction, indicating a move towards more robust and flexible application architectures.

### Broader Implications:

For developers, prioritizing skills in Python, PostgreSQL, TypeScript, and cloud platforms will be essential for future career relevance. For businesses, strategic investment in cloud infrastructure, data analytics capabilities, and fostering talent in these emerging yet critical technologies will be key to driving innovation and maintaining a competitive advantage in a rapidly evolving digital environment.



# Conclusion of the Project

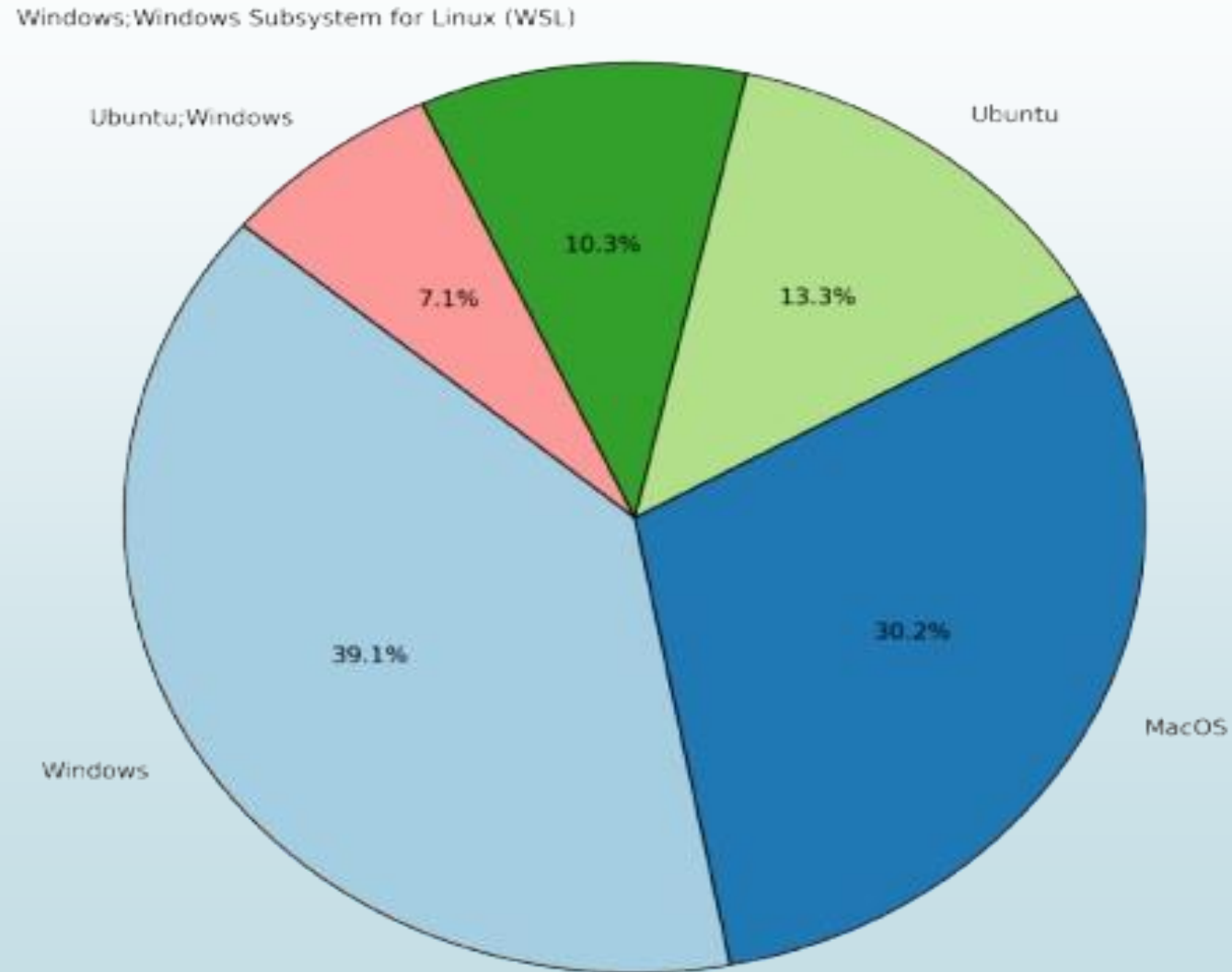
The analysis of the survey dashboard reveals several key conclusions regarding technology trends:

- **Web and Data Remain Core:** Web development and data management continue to be foundational pillars of the tech industry, with consistent demand for associated languages and databases.
- **Cloud Dominance is Solidified:** Cloud platforms, particularly AWS and Azure, are unequivocally leading the industry, cementing their role as the preferred infrastructure for current and future development.
- **Open-Source and Modernization Drive Future:** There's a clear trajectory towards increased adoption of powerful open-source solutions like Python (for AI/data science/versatility) and PostgreSQL (as a preferred database). TypeScript also signals a move towards more robust and scalable JavaScript applications.
- **Continuous Skill Evolution is Essential:** The dynamic nature of these trends underscores the critical need for continuous learning and adaptation for developers to remain relevant, and for businesses to invest strategically in talent development in these evolving areas.

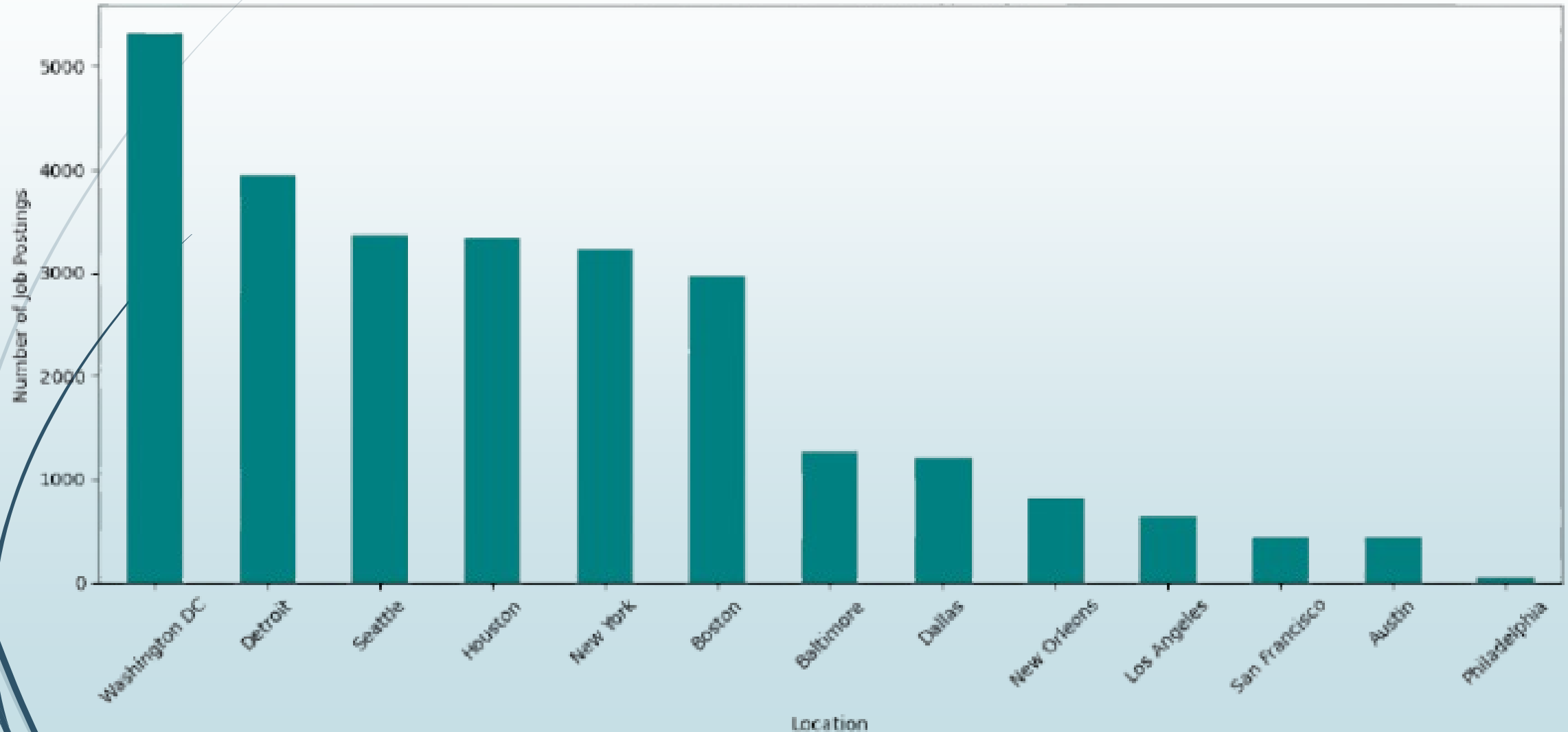


# Top 5 Most Desired Developers

Top 5 Most Desired Dev OS to Work With



# Jobs Posting By Location



## Average Annual Salary vs. Language

