

# StackOverflow Developer Survey 2024

Presentation by Pham Ba Loc

Date: 06/04/2024



**Skills** Network



# OUTLINE

---



- Executive Summary
- Introduction
- Methodology
- Results
  - Visualization – Charts
  - Dashboard
- Discussion
  - Findings & Implications
- Conclusion
- Appendix



# EXECUTIVE SUMMARY

---

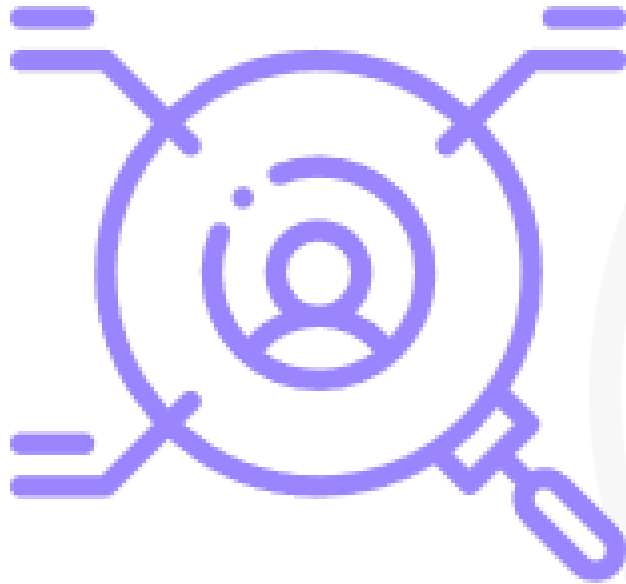


A few highlights to get you started:

- Most popular technologies
- Most admired and desired programming languages
- Demographic of the respondents

# INTRODUCTION

---



- Purpose:
  - To provide insights into the state of the global developer community, including technologies, career trends, and work environments.
- Target Audience:
  - Developers, tech industry leaders, researchers, and organizations interested in understanding trends in software development.
- Value:
  - Informs decision-making for companies, career planning for developers, and offers data-driven insights into tech industry trends.



# METHODOLOGY

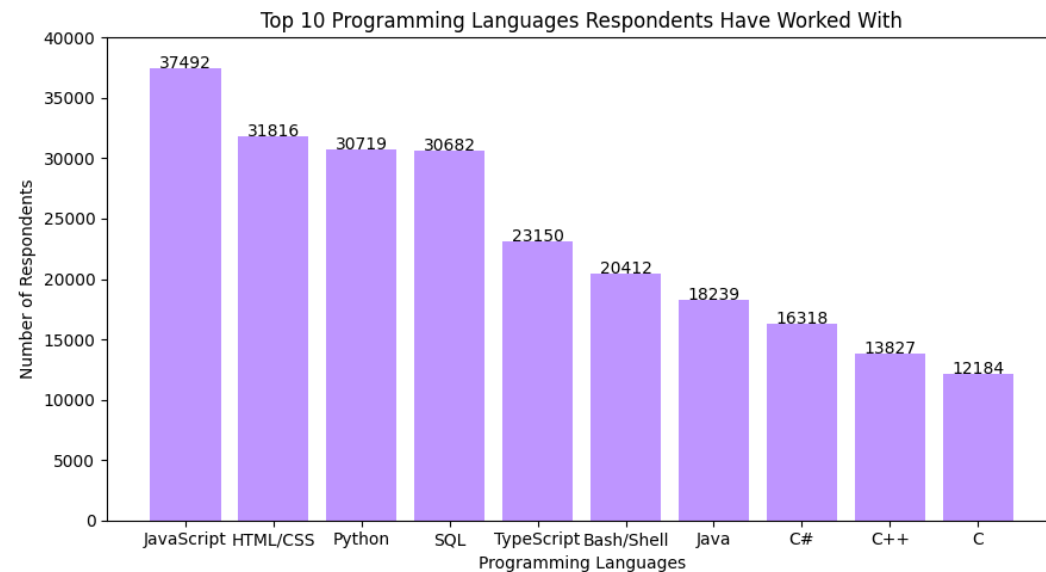
---



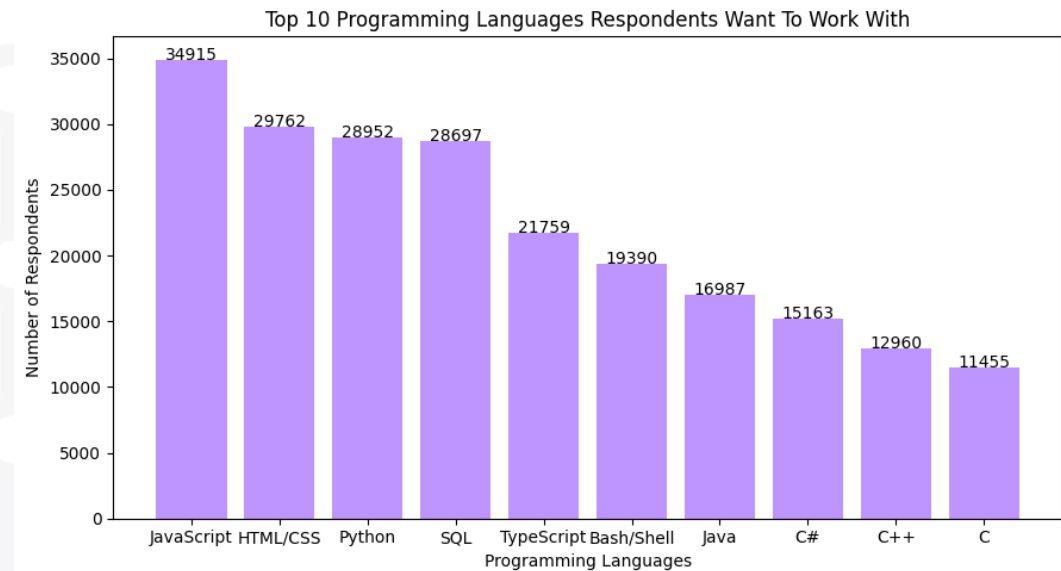
- **Data Sources:**
  - 2024 Stack Overflow Developer Survey responses from global developers.
  - Covers programming languages, frameworks, career, and work culture.
- **Collection Methods:**
  - Online survey administered via Stack Overflow platform.
  - Voluntary, self-reported data from developers worldwide.
- **Key Wrangling Steps:**
  - Removal of incomplete or inconsistent responses.
  - Handling of outliers and missing data.
  - Standardization of categorical data (e.g., job roles, technologies).
  - Data normalization for comparative analysis.

# PROGRAMMING LANGUAGE TRENDS

## Current Year



## Next Year



# PROGRAMMING LANGUAGE TRENDS

---

## Findings

- JavaScript leads both usage and interest with most widely used
- HTML/CSS, Python, and SQL remain consistently strong
- TypeScript shows strong future interest.
- Bash/Shell and Java still have solid user bases.
- C, C++, and C# have lower appeal

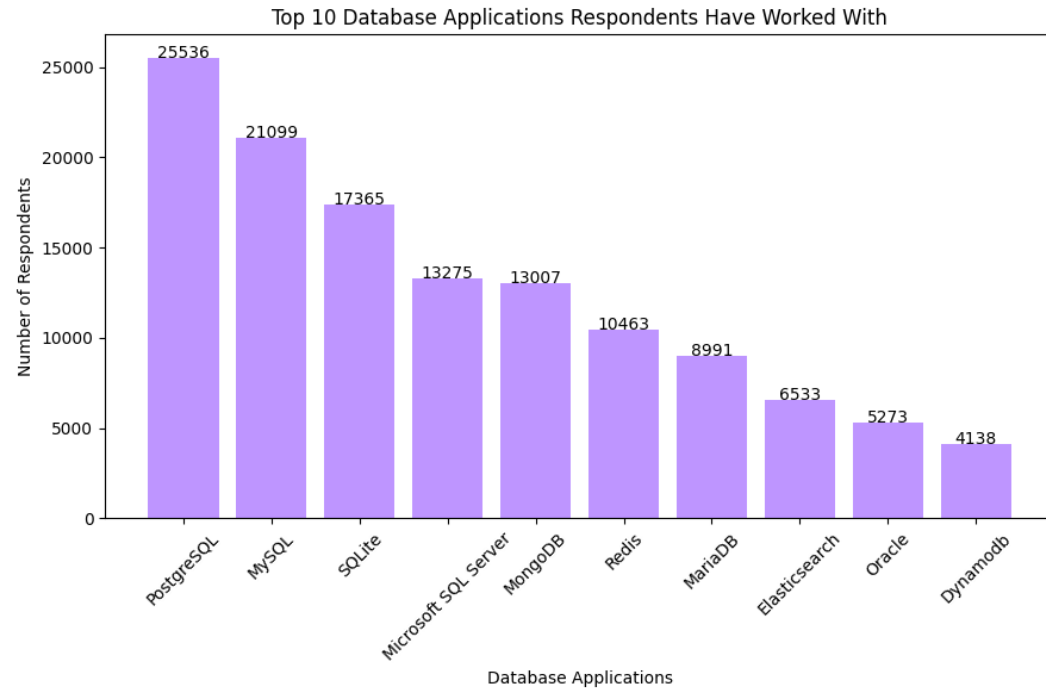
## Implications

- Learning JavaScript, Python, SQL, and TypeScript increases relevance in today's job market.
- Focusing on JavaScript, Python, and SQL aligns with both current use and learner demand.
- Jobs involving JavaScript and Python are more likely to attract talent.

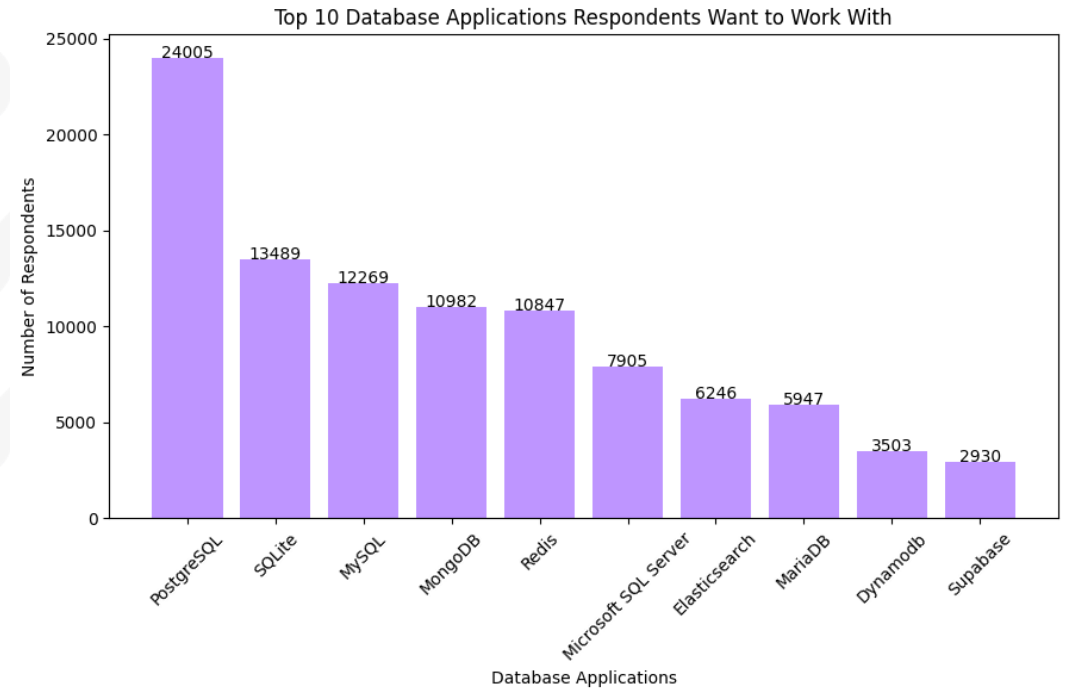


# DATABASE TRENDS

## Current Year



## Next Year





# DATABASE TRENDS

---

## Findings

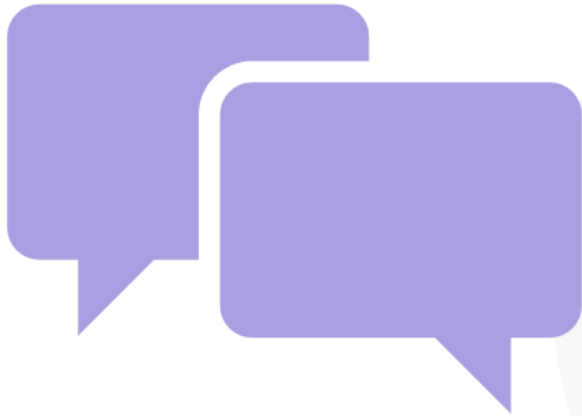
- PostgreSQL leads both usage and interest, being the most widely used database.
- SQLite and MySQL remain consistently strong in both current use and future interest.
- Redis shows significant future interest alongside solid current usage.

## Implications

- Increasing popularity of PostgreSQL indicates a shift in database preferences.
- Growth in demand for lightweight databases like SQLite and performance-oriented databases like Redis.
- Focus on skills related to PostgreSQL and Redis to align with job market demands.

# DASHBOARD

---



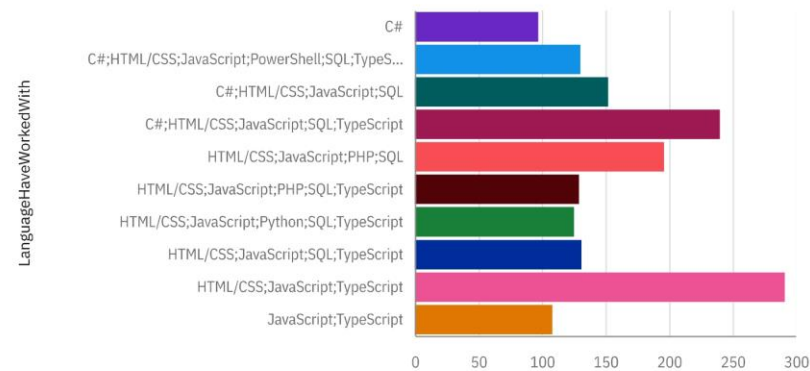
<Please present your dashboard in the following slides.>



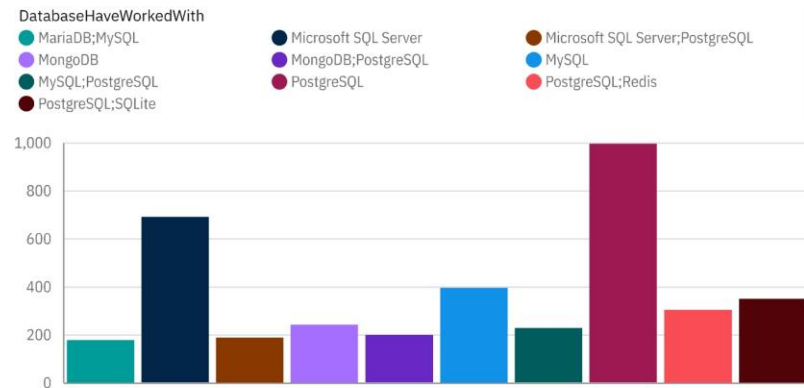
# DASHBOARD TAB 1

## Current Technology Usage

### Top 10 Language Have Worked With



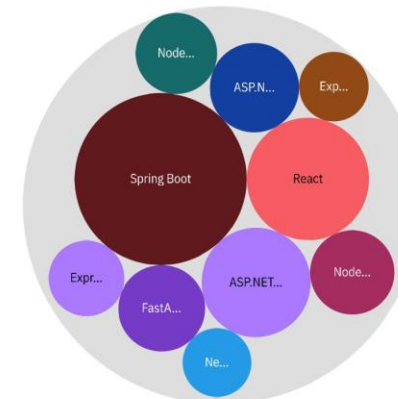
### Top 10 Database Have Worked With



### Top 10 Platform Have Worked With



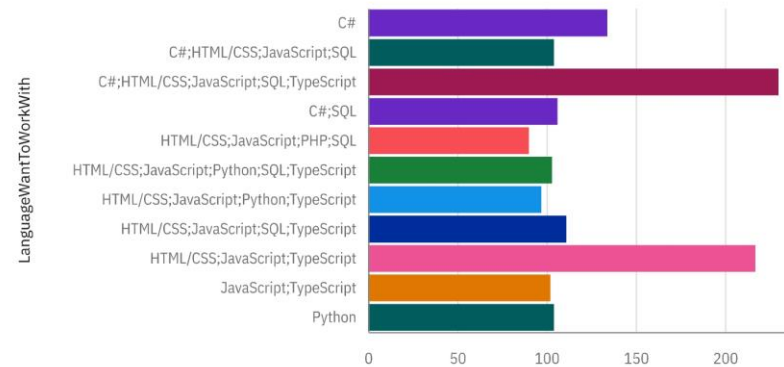
### Top 10 WebFrame Have Worked With



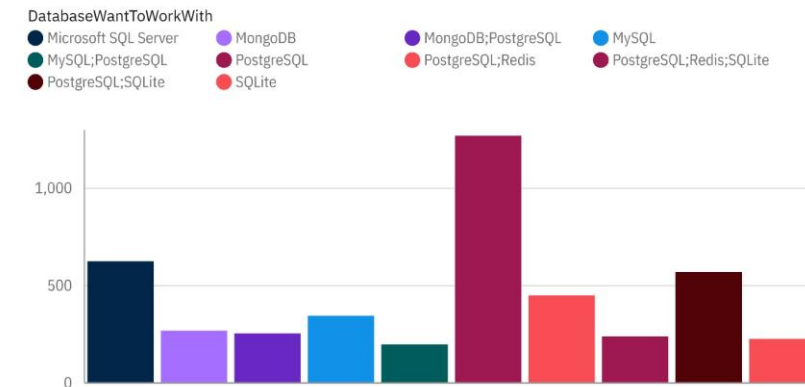
# DASHBOARD TAB 2

## Future Technology Trend

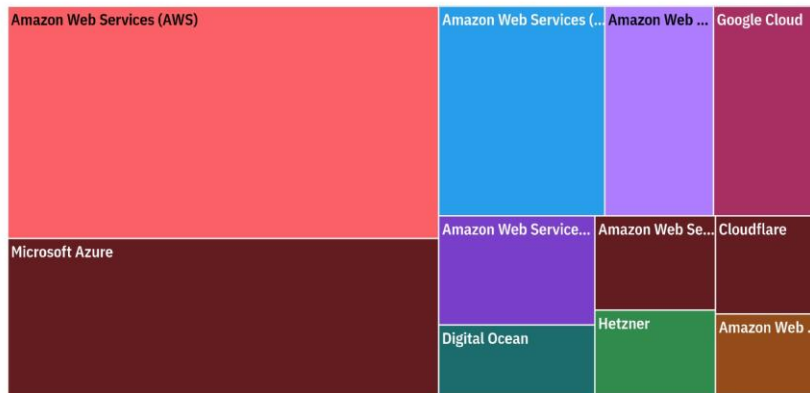
### Top 10 Language Want To Work With



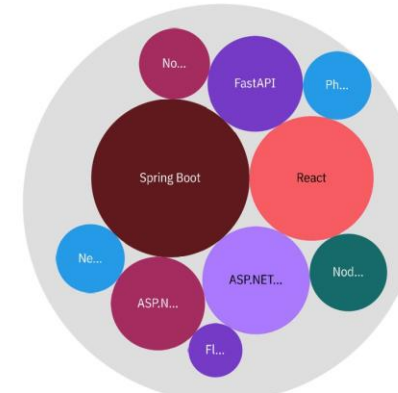
### Top 10 Database Want To Work With



### Top 10 Platform Want To Work With



### Top 10 Webframe Want To Work With



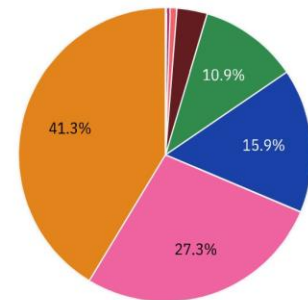
# DASHBOARD TAB 3

## Demographics

Respondent distribution by Age

Age

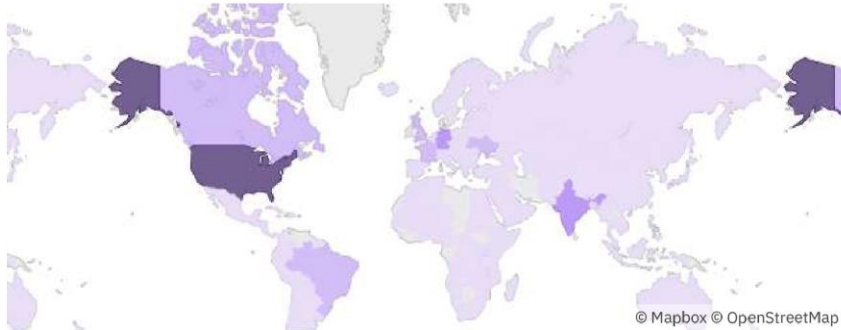
- Prefer not to say
- 18-24 years old
- 65 years or older
- 35-44 years old
- Under 18 years old
- 25-34 years old
- 55-64 years old
- 45-54 years old



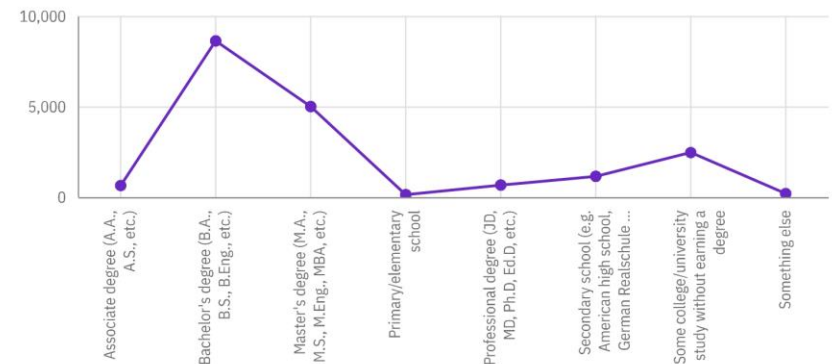
Respondent Count by Country

Country (Count)

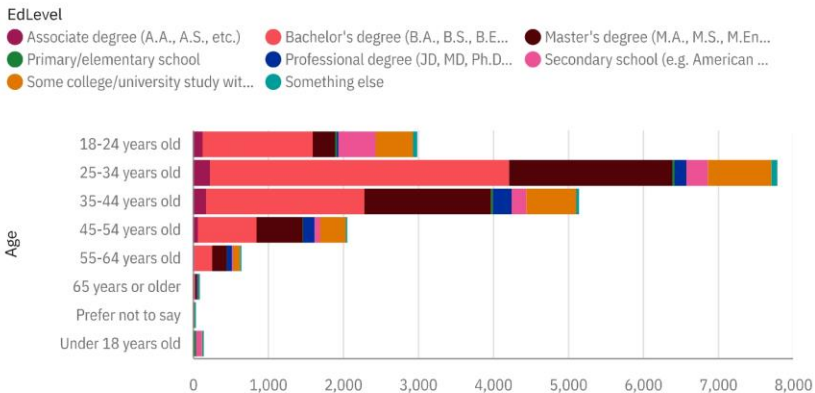
1 3,441



Respondent distribution by Formal Education Level



Respondent Count by Age, classified by Education Level



# DISCUSSION

---



- **Current tech favorites:** JavaScript and Python are the go-to languages; PostgreSQL and MySQL are the top databases; React and Angular lead in web frameworks while AWS is the most used cloud platform.
- **What's gaining traction:** Python and TypeScript are getting a lot of interest; PostgreSQL and MongoDB are the most wanted databases.
- **Frameworks & cloud trends:** Spring Boot and Angular are expected to stay popular; AWS and Google Cloud are the top picks moving forward.

# OVERALL FINDINGS & IMPLICATIONS

---

## Dominant Languages

JavaScript leads in both usage and interest, with HTML/CSS, Python, and SQL maintaining consistent strength.

## Leading Databases

PostgreSQL is the most widely used and desired database, followed closely by SQLite and MySQL, which also show strong current and future interest.

## Emerging Trends

There is a noticeable shift towards Python and TypeScript, indicating a demand for skills in these areas, along with PostgreSQL and MongoDB as the most sought-after databases.

## Web Frameworks and Cloud Platforms

React and Angular are the preferred web frameworks, while AWS is the leading cloud platform. Looking ahead, Spring Boot and Angular are expected to remain popular, with AWS and Google Cloud as top choices for future work.



# CONCLUSION

---



**Evolving Technology  
Landscape**



**Database Dominance**



**Future Trends**



**Importance of Trends**



**Focus on key areas to prepare for  
future opportunities.**

