

The logo for 'board' features a small icon of three colored squares (red, green, blue) to the left of the word 'board' in a lowercase, sans-serif font.The logo for 'DOMO' consists of the word 'DOMO' in a blue, uppercase, sans-serif font.The logo for 'IBM' is the classic eight horizontal stripes, with the letters 'IBM' in a bold, sans-serif font.The logo for 'Microsoft' features the four-colored square icon to the left of the word 'Microsoft' in a sans-serif font.

From Code to Insights: Stack Overflow Developer Survey

The logo for 'sisense' features a stylized 'S' icon to the left of the word 'sisense' in a sans-serif font.The logo for 'tableau' features a stylized icon of a tree or network of nodes to the left of the word 'tableau' in a lowercase, sans-serif font.The logo for 'TIBCO' features the word 'TIBCO' in a blue, uppercase, sans-serif font, followed by a stylized circular icon.The logo for 'ZOHIO' features four overlapping colored squares (red, green, blue, yellow) above the word 'ZOHIO' in a sans-serif font.

Outline

1) Executive Summary

2) Introduction

3) Methodology

4) Results

- Visualization – Charts & Dashboards

5) Discussion

- Findings & Implications

6) Conclusion

7) Appendix

Executive Summary

- This report analyzes trends among developers. The majority of respondents are 25–34 years of age, working in Software Development, and hold at least a Bachelor's degree, with job satisfaction averaging 8/10.
- In terms of technology, JavaScript, SQL, HTML/CSS, TypeScript, and Python remain the most widely used languages, while PHP and PowerShell are declining. Go and Rust are gaining interest. React and Node.js dominate web frameworks, AWS leads cloud platforms, and PostgreSQL continues as the dominant database. Swift developers command the highest salaries, reflecting the high demand for iOS development skills.



Introduction

- To analyze the 2025 Stack Overflow Developer Survey and uncover trends in developers' demographics, technology usage, and workplace preferences.
- To provide actionable insights for tech companies, educators and developers globally.
- Software development languages and technologies are evolving rapidly.
- Which direction do you see the industry moving? Where do global tech demands meet developers' expectations?

Methodology

Data Collection

- Jobs API via GitHub
- Web Scrapping
- Stack Overflow Developer Survey



Data Wrangling

- Duplicates, Outliers, Missing values, ETL
- Normalization

Data Exploration & Visualization

- Python
- IBM Cognos Analytics

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Results

tableau

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ZOHO

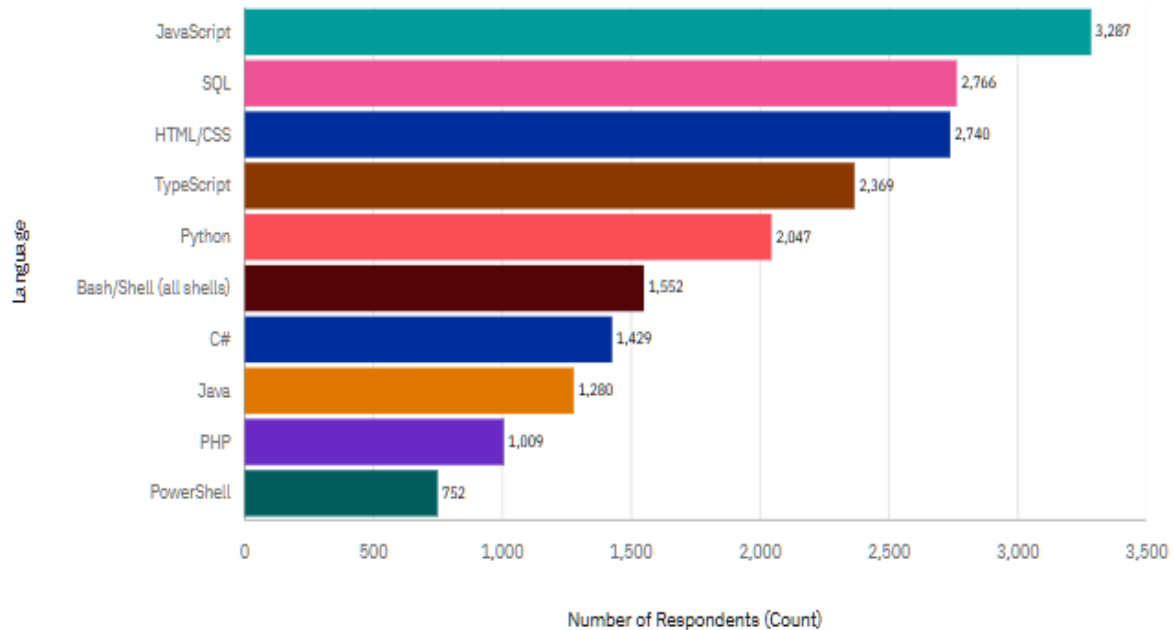
Programming Languages Trend

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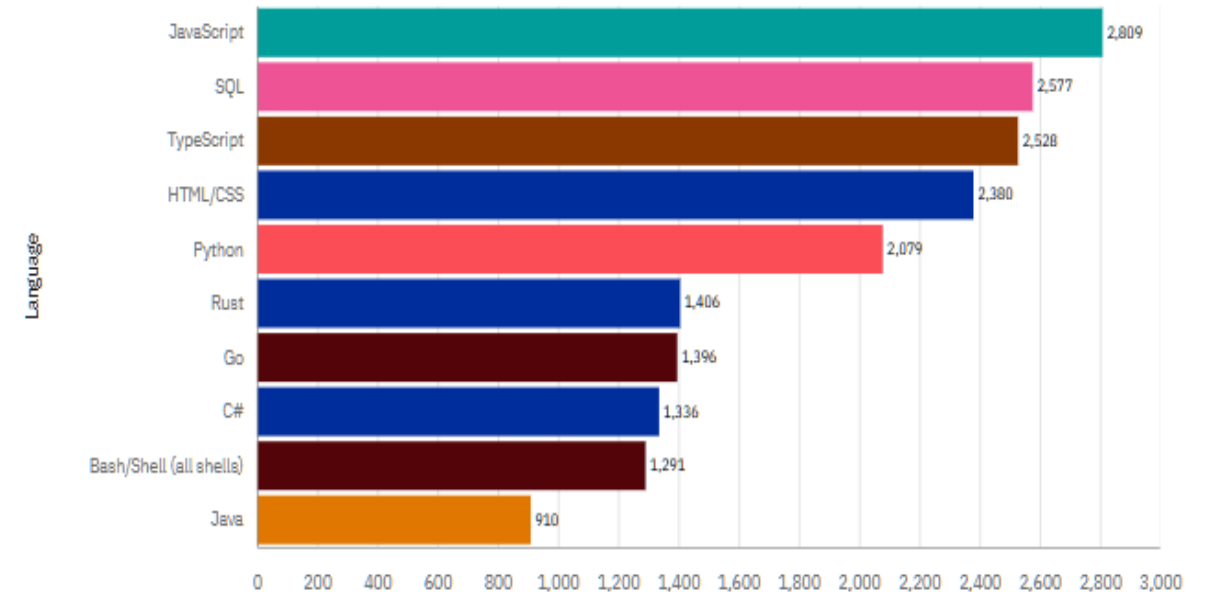
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Top 10 Languages Worked With



Top 10 Languages Desire to Work With



Programming Language Trends: Findings & Implications

Findings

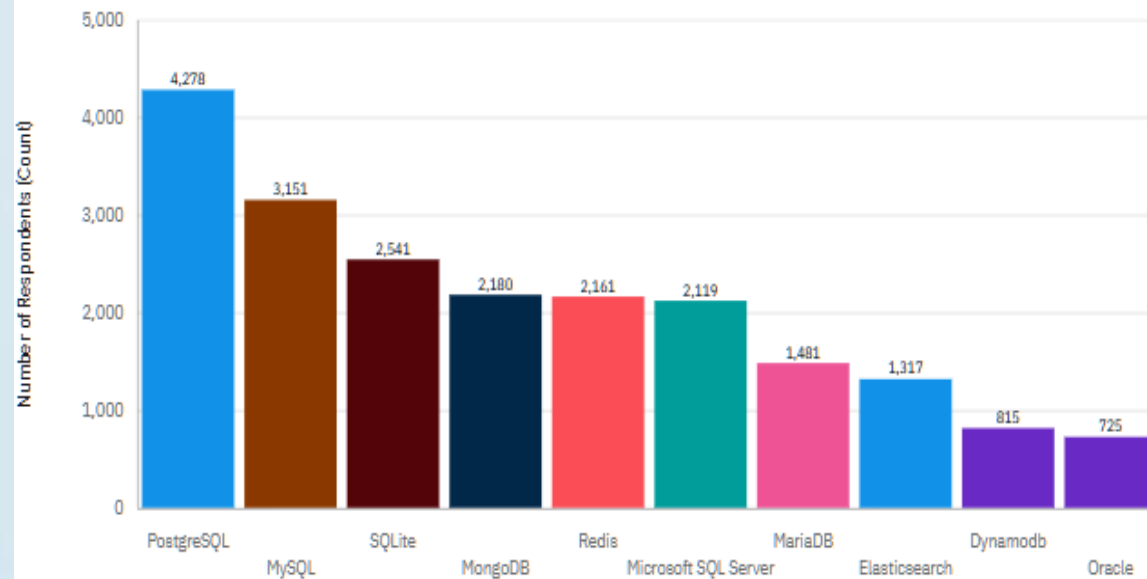
- JavaScript, SQL, HTML/CSS, TypeScript and Python continues to be the leading programming languages.
- PHP and PowerShell seems to be of declining interest.
- Go and Rust have garnered increasing interest.

Implications

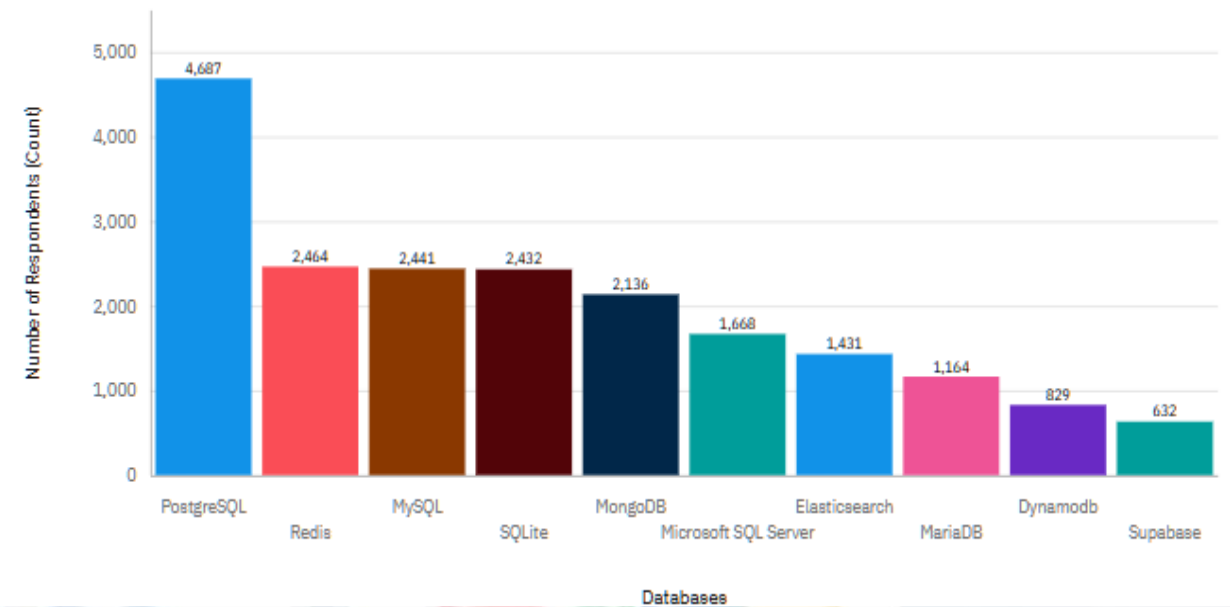
- Developers may need to consider upskilling in emerging languages like Go and Rust to stay competitive in areas like system programming & backend development.
- Organizations relying on PHP or PowerShell may need to evaluate the long-term viability of these technologies and consider migration or diversification.

Database Trends

Top 10 Databases Worked With



Top 10 Databases Desire to Work With



Database Trends: Findings & Implications

Findings

- PostgreSQL continues to be dominant database.
- There is a surge interest in Redis, possibly due to its quick Retrieval-Augmented Generation (RAG) applications.
- Other databases such as Firebase is not in the Top 10 trends, possibly due to limited adoption in large-scale applications.

Implications

- Developers and organizations should continue investing in skills for relational databases like PostgreSQL and MySQL, as demand remains strong.
- Emerging or niche databases may require strategic evaluation before adoption, as they may not yet have widespread market demand.

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Dashboards

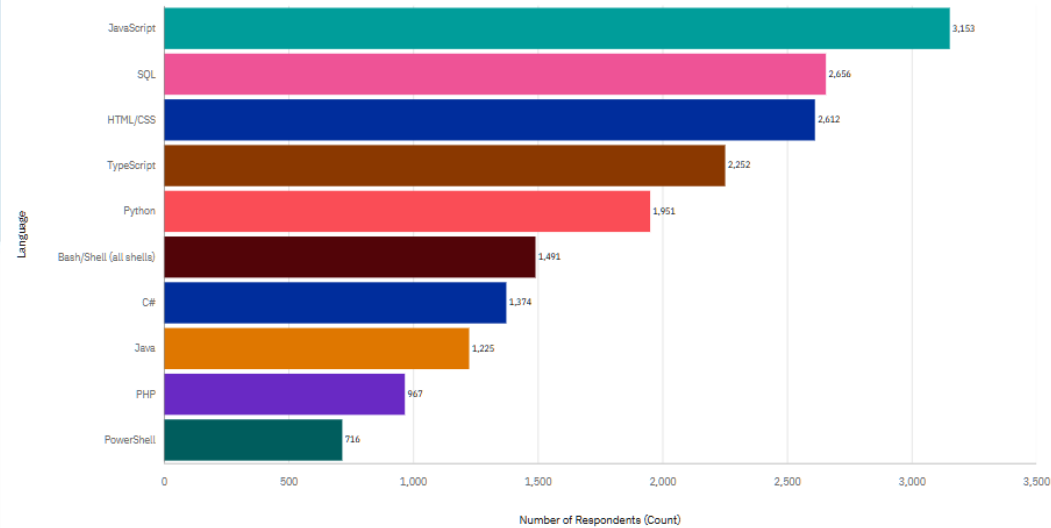
The logo for 'sisense' features a stylized circular icon to the left of the word 'sisense' in a gray, sans-serif font.

Link: https://github.com/meldrop66/IBMDDataAnalyst_/blob/main/Dashboards_Module9.pdf

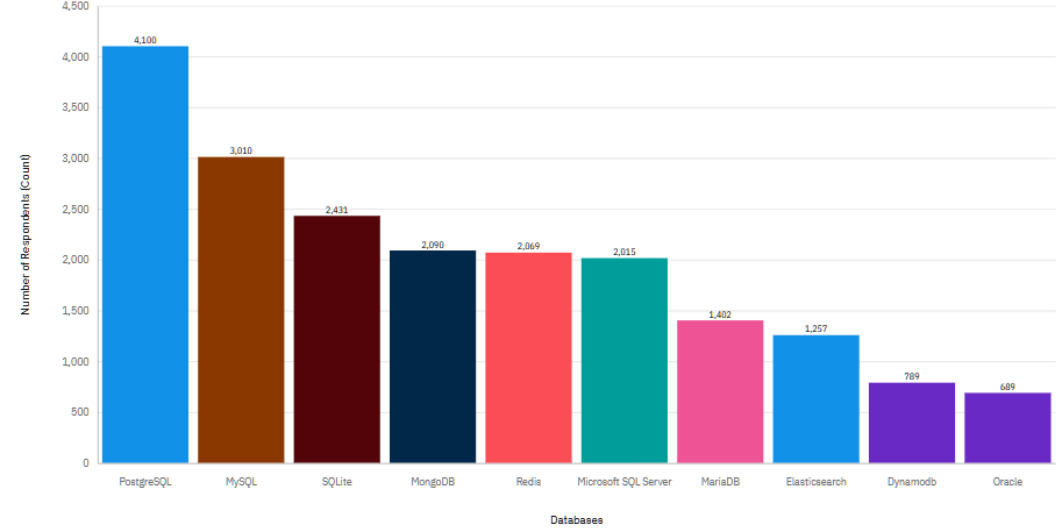
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Current Technology Usage

Top 10 Languages Worked With



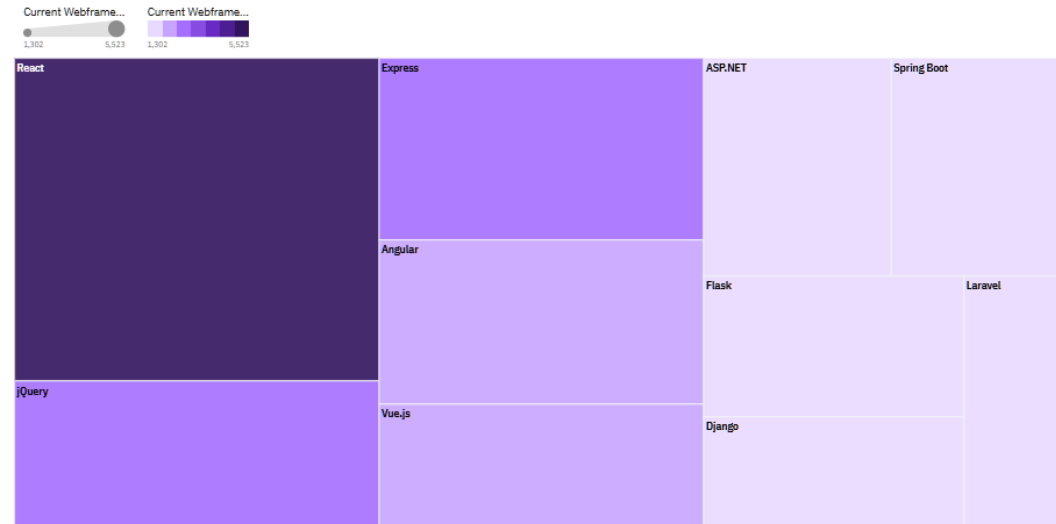
Top 10 Databases Worked With



Top Platforms Worked With

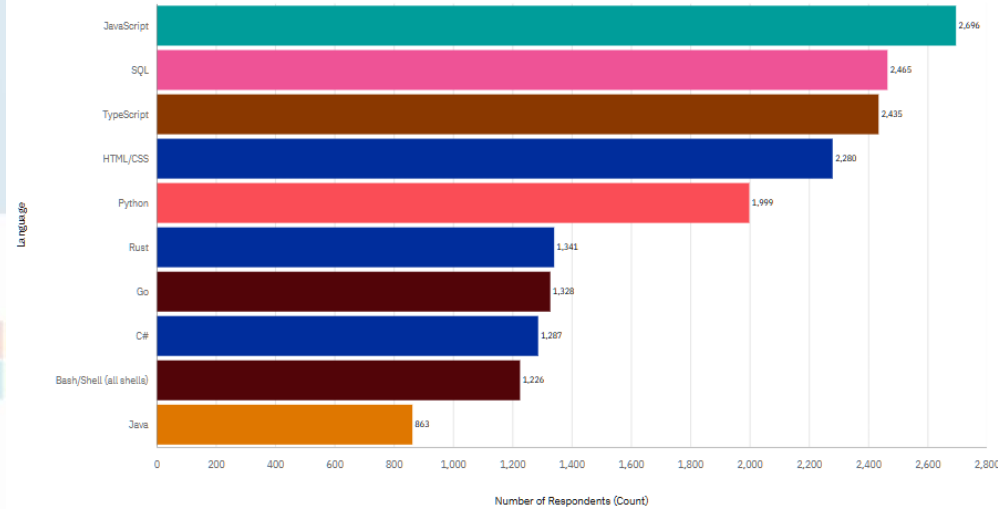


Top 10 Web Frameworks Worked With

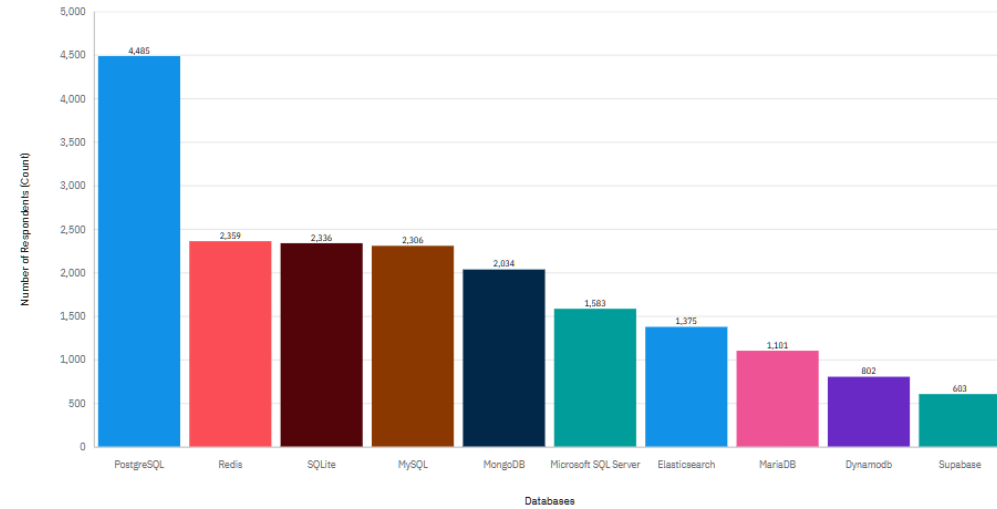


Future Technology Trend

Top 10 Languages Desire to Work With



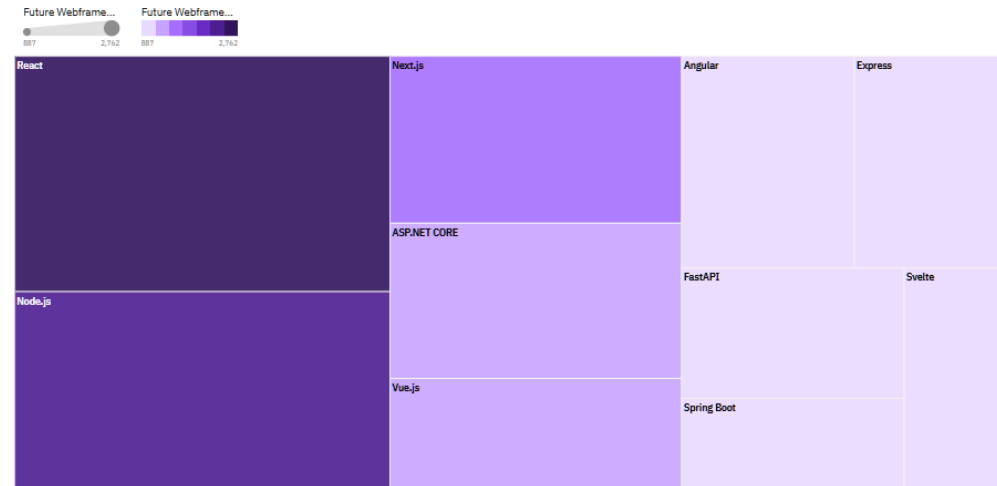
Top 10 Databases Desire to Work With



Top Platforms Desire to Work With

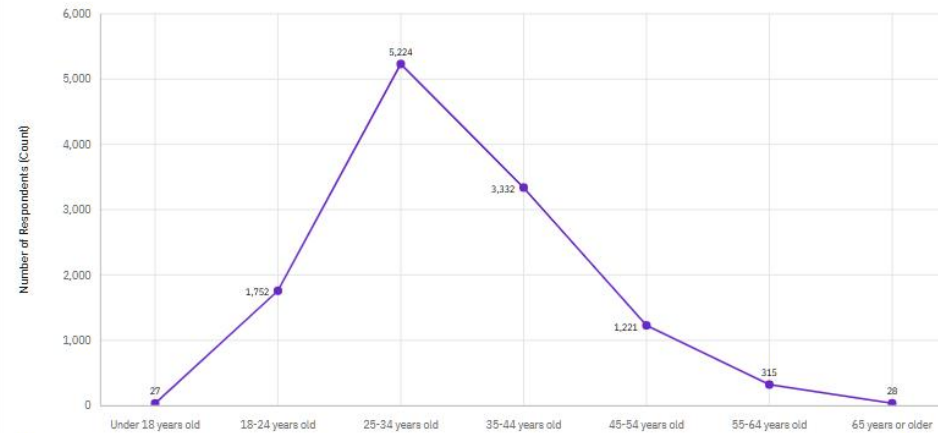


Top 10 Web Frameworks Desire to Work With



Demographics

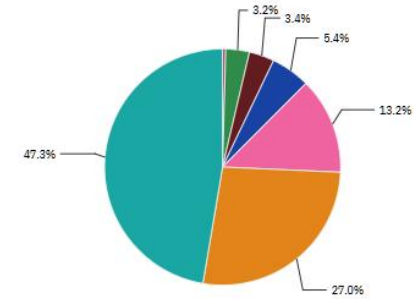
Respondents by Age



Respondents by Educational Level

EdLevel

- Primary/elementary school
- Some college/university study wit...
- Professional degree (JD, MD, Ph.D...
- Master's degree (M.A., M.S., M.En...
- Associate degree (A.A., A.S., etc.)
- Bachelor's degree (B.A., B.S., B.E...
- Secondary school (e.g. American ...



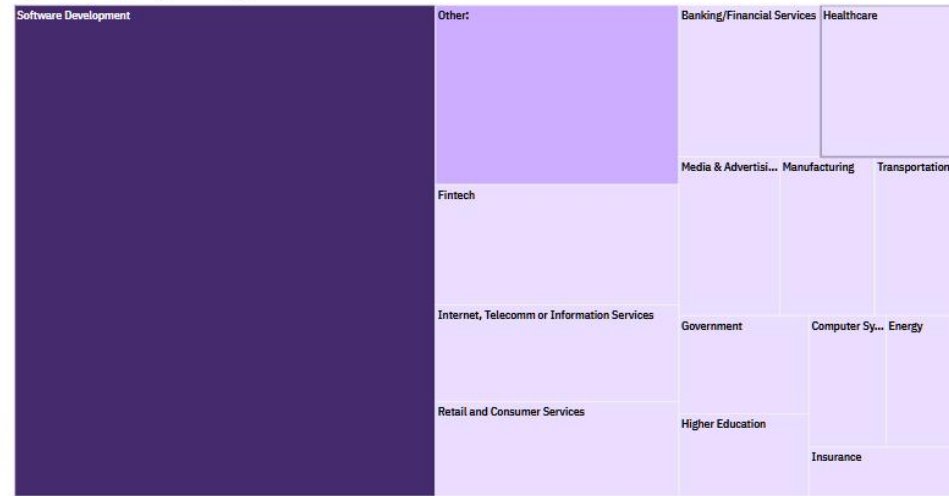
Respondents by Country



Respondents by Industry

Industry (Count)

189 5,306 189 5,306



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Microsoft

Discussions

sisense

tableau

TIBCO

ZOHO

Overall Findings & Implications

Findings

- Majority of the respondents fall between the age of 25-34 years old.
- Majority of the respondents are in the Software Development industry.
- Majority of the respondents hold at least a Bachelor's Degree.
- AWS remains to be the dominant cloud platform.
- React & Node.js continue lead as the preferred the web frameworks.

Implications

- Companies should continue investing in AWS infrastructure.
- Continuous learning initiatives are important to help developers stay current in cloud and web technologies.
- Employers can focus recruitment efforts on young professionals (25–34) with at least a bachelor's degree.

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Appendixes

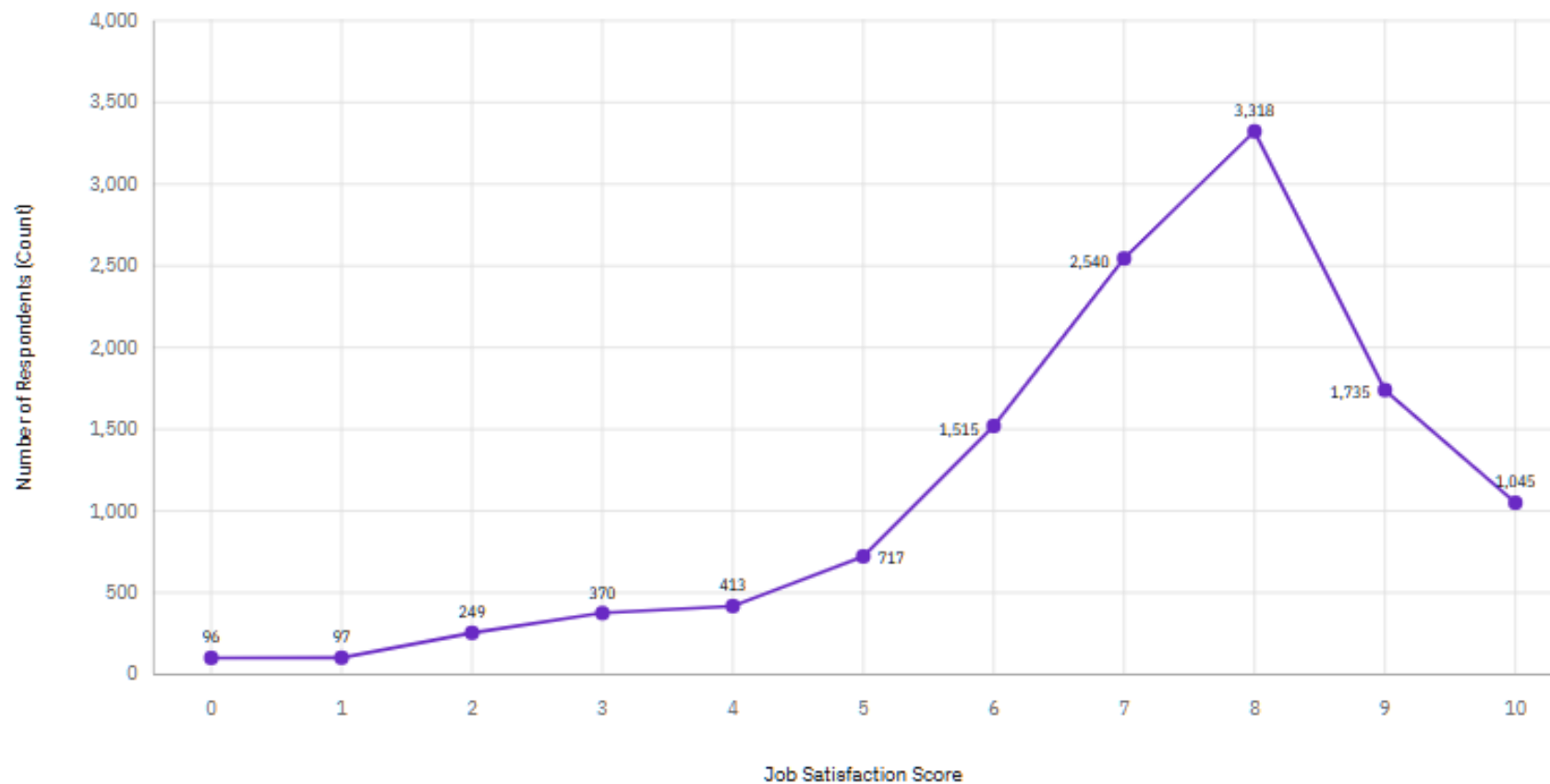
tableau

TIBCO

ZOHO

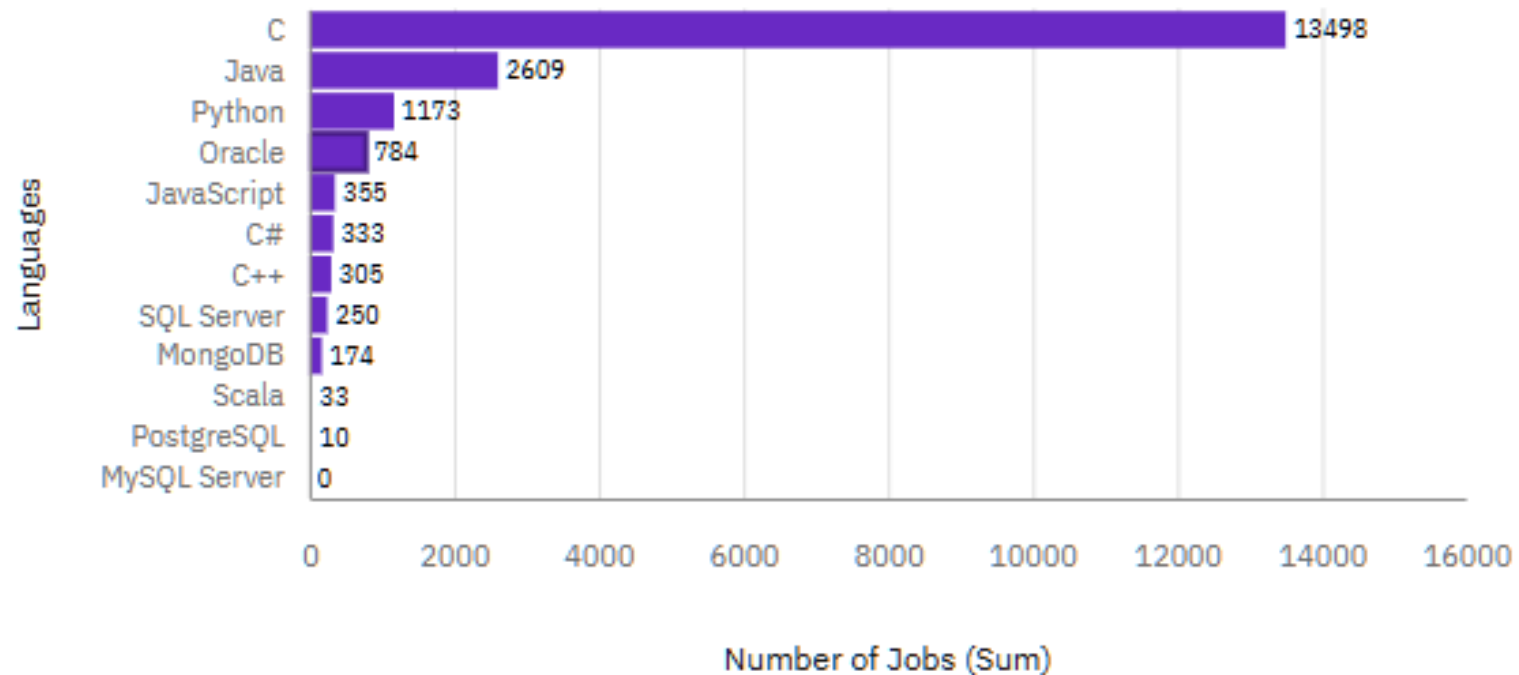
Job Satisfaction

Job Satisfaction



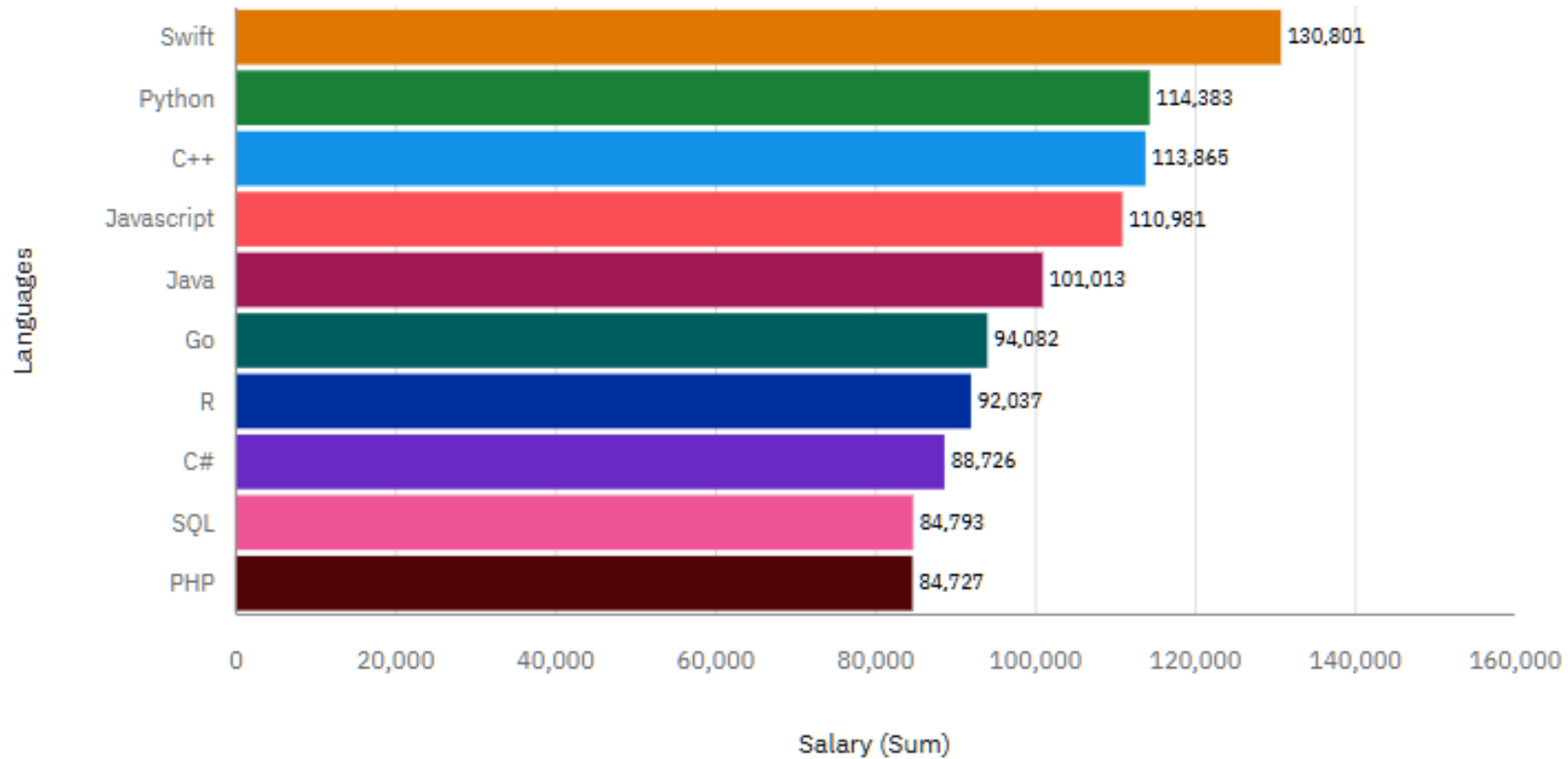
Job Postings by Languages

Number of Jobs by Languages



Job Postings by Languages

Average Salary by Languages Required



Findings & Implications

Findings

- Majority of the respondents generally have a high job satisfaction (8/10).
- Most jobs today requires C, Java & Python skills.
- The highest average annual salary is associated with Swift developers.

Implications

- Since most jobs require C, Java, and Python, educational institutions and training courses should prioritize these languages to prepare job-ready candidates.
- While job satisfaction is generally high, employers could explore initiatives to improve satisfaction further, such as work-life balance programs.
- Upskilling in Swift could be advantageous for developers aiming for higher-paying roles.