

# Data Analyst Capstone Project

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# OUTLINE

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

# EXECUTIVE SUMMARY

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- Python, PostgreSQL, AWS, and React are trending to be the most used technologies
- Respondents are mostly young adults aged 25–34
- Most respondents hold a Bachelor's degree and are from the USA, Germany, and India



# INTRODUCTION

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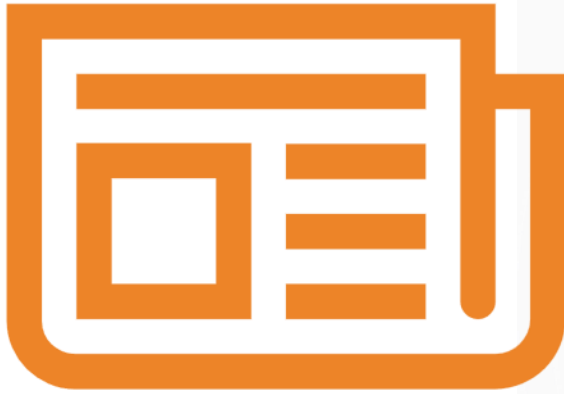


- **Purpose:** To highlight current trends in technology usage based on developer survey data
- **Target Audience:** Hiring managers, tech leads, educators, and policy makers in the tech sector
- **Value:** Informs strategic decisions on tech stack adoption, hiring focus, and curriculum planning



# METHODOLOGY

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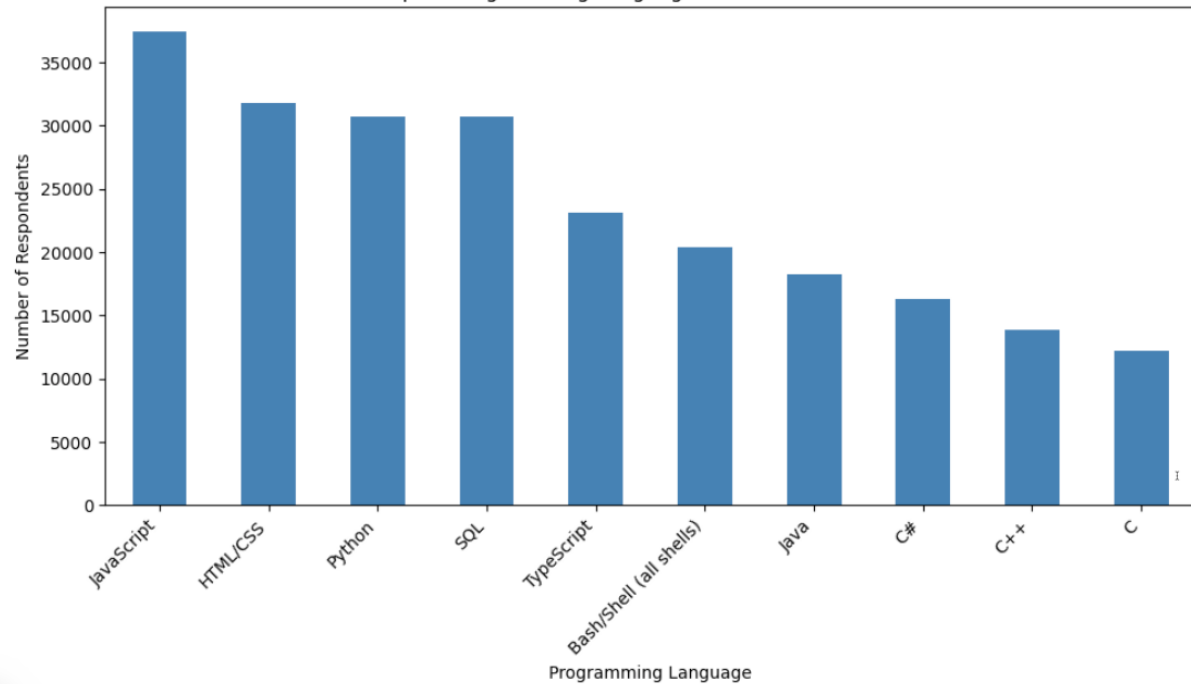


- **Data Source:** Stack Overflow Developer Survey (Year 2024)
- **Collection Method:** Self-reported responses collected via online questionnaire
- **Data Wrangling:**
  - Removed null and duplicate entries
  - Split multi-choice fields (e.g., languages, databases)
  - Aggregated and grouped data (e.g. top technologies and demographics)
  - Data mapping to shorten data values

# PROGRAMMING LANGUAGE TRENDS

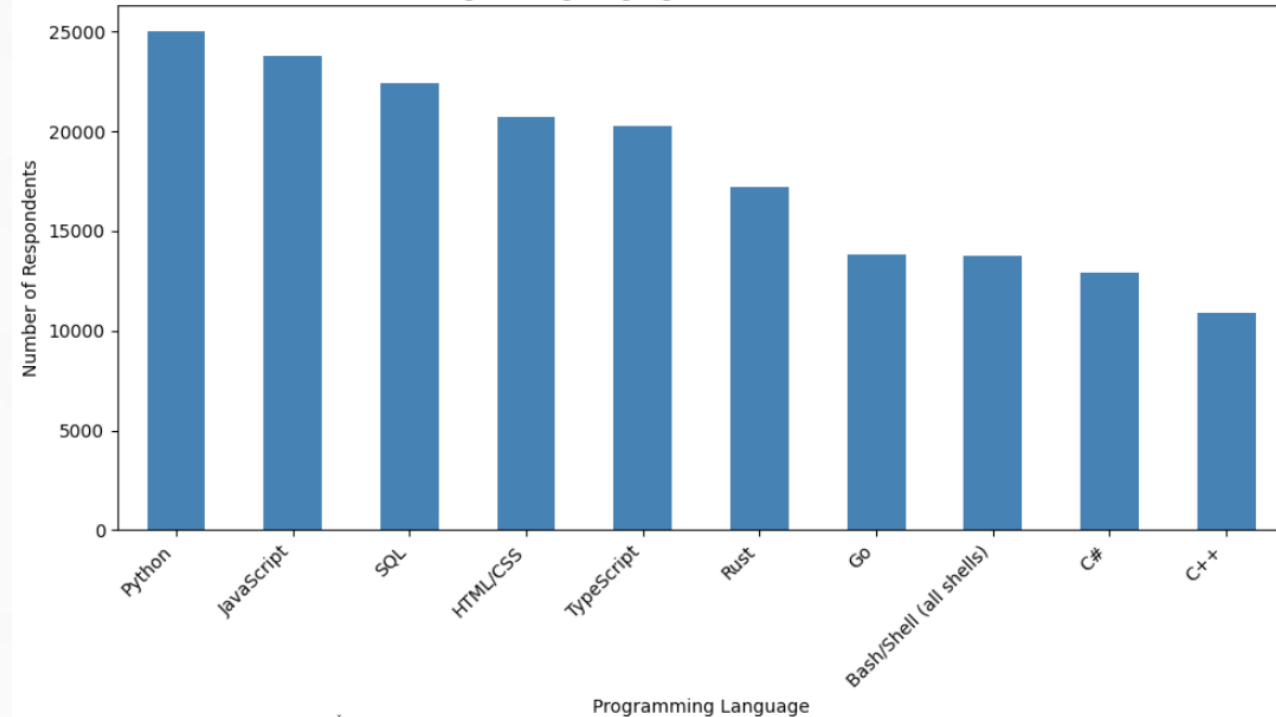
## Current Year

Top 10 Programming Languages For The Current Year



## Next Year

Programming Languages Trends For The Next Year



# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- Python is trending to be the most used programming language.
- Java and C are dropping out of top 10.
- Rust and Go have entered the top 10.

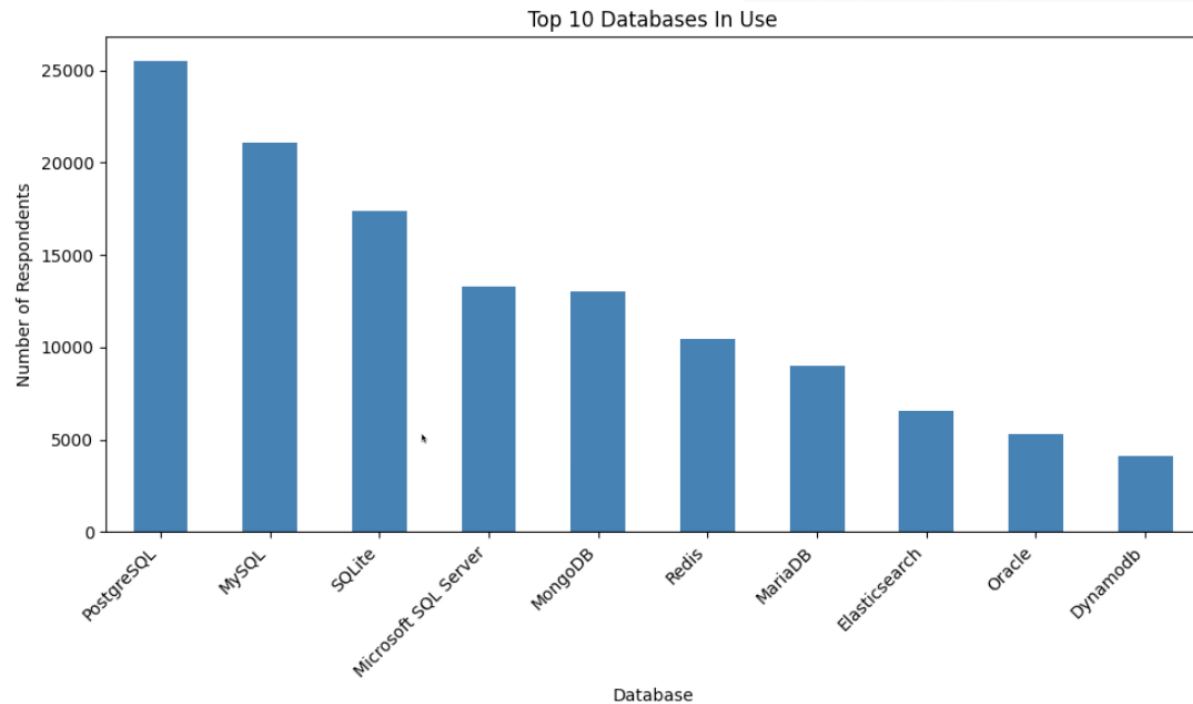
## Implications

- Prioritize learning and hiring around Python, JavaScript, and SQL.
- Invest in upskilling for Rust and Go.

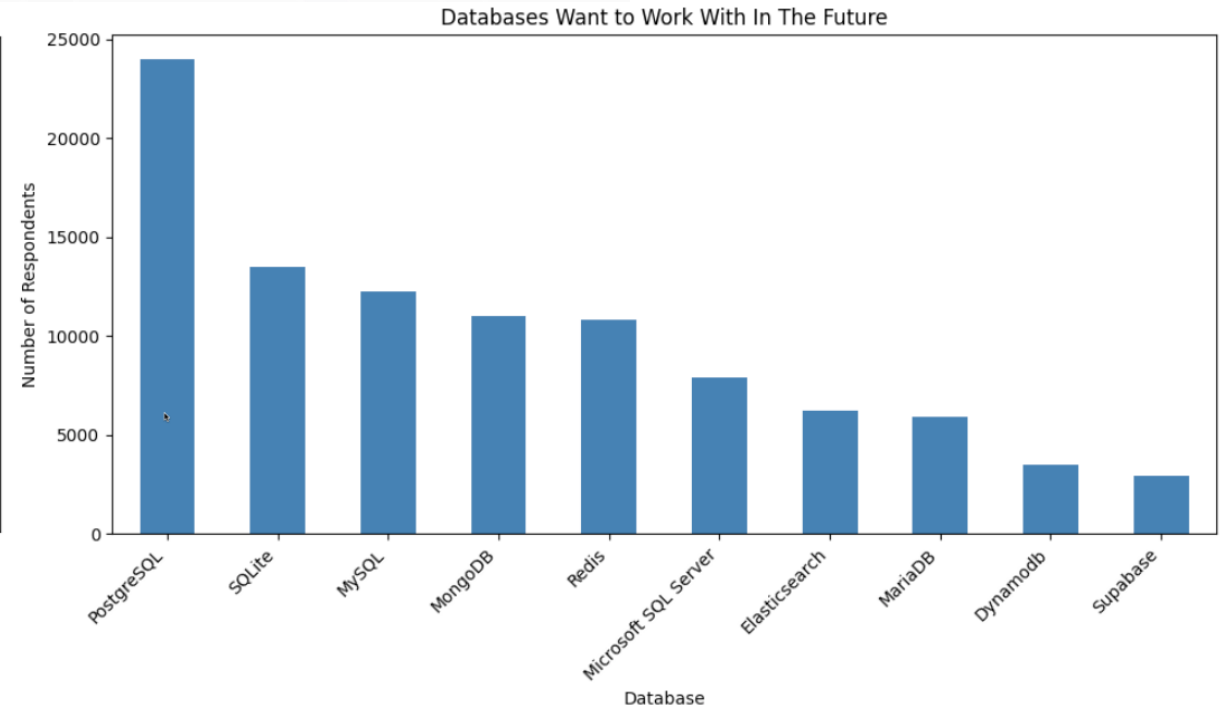


# DATABASE TRENDS

## Current Year



## Next Year





# DATABASE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- PostgreSQL is trending to be the most used database.
- Java is dropping out of top 10.
- Supabase has entered the top 10.

## Implications

- Prioritize learning and hiring around PostgreSQL, MySQL, and SQLite.
- Invest in upskilling for Supabase.



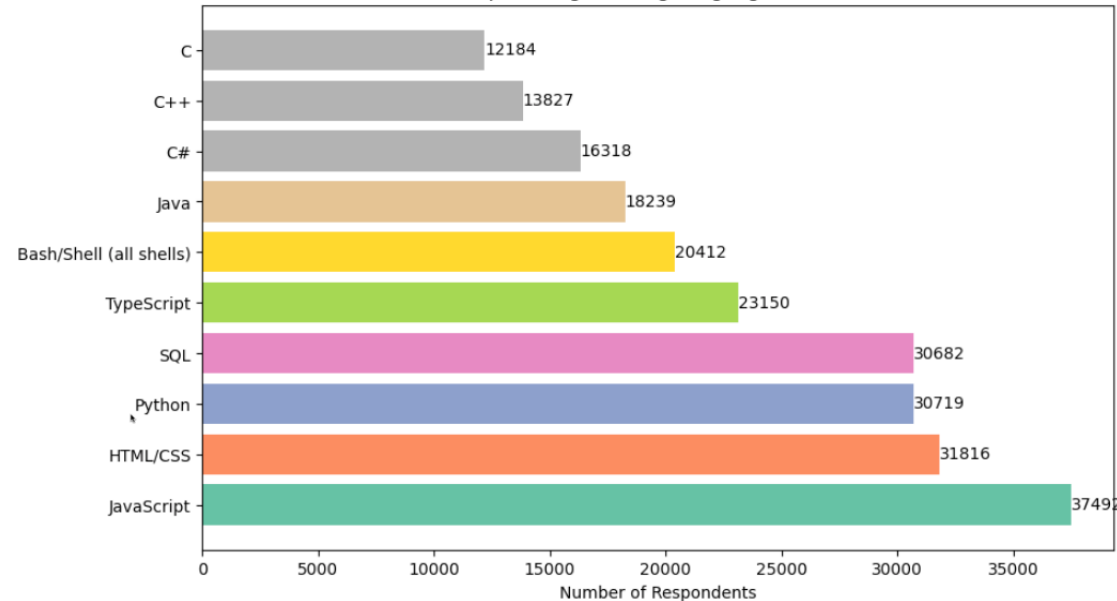
# DASHBOARD

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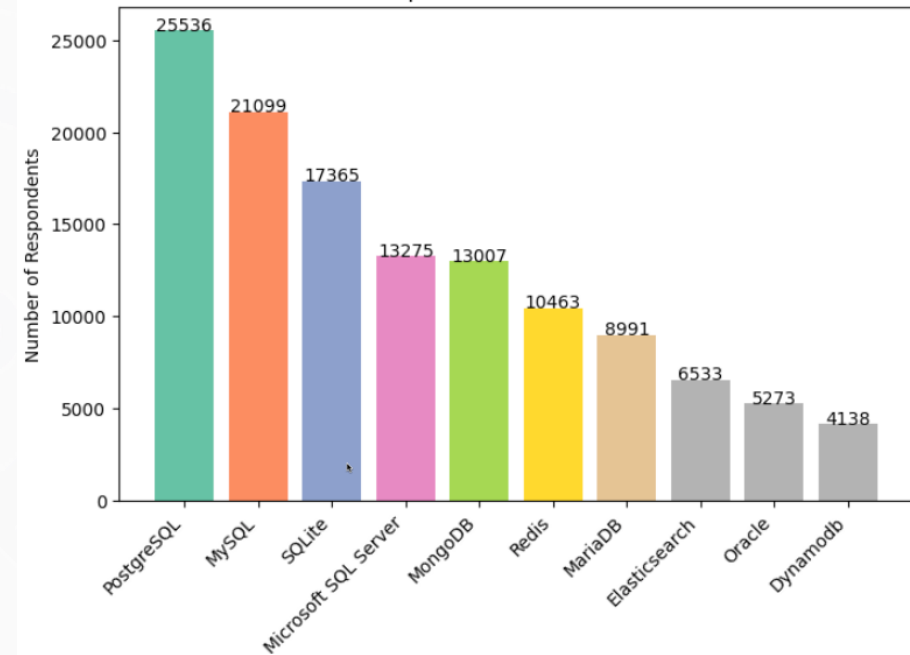


# Current Technology Usage

Top 10 Programming Languages In Use



Top 10 Databases In Use



Top 10 Platforms In Use

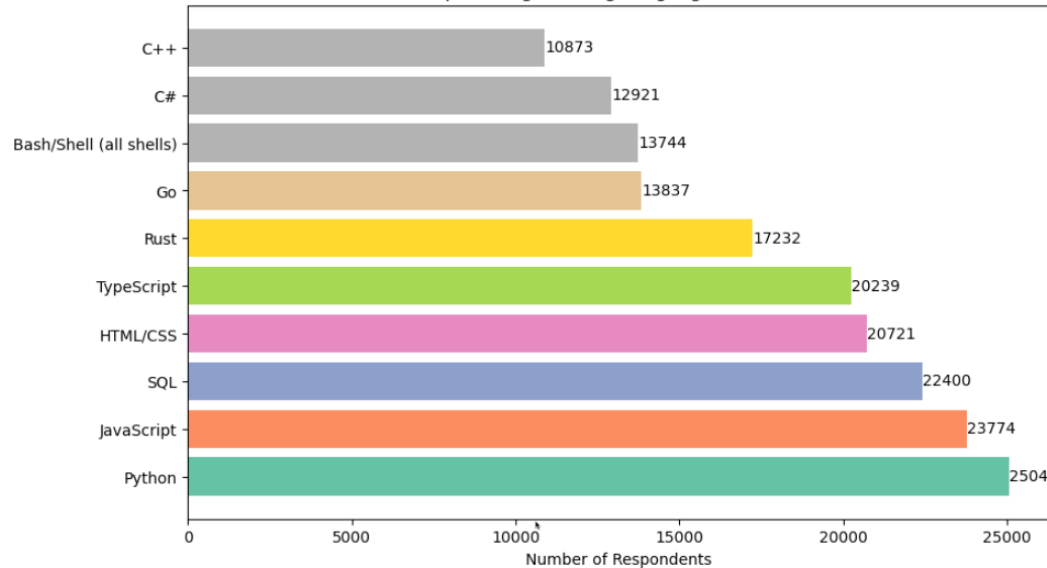


Top 10 Web Frameworks In Use

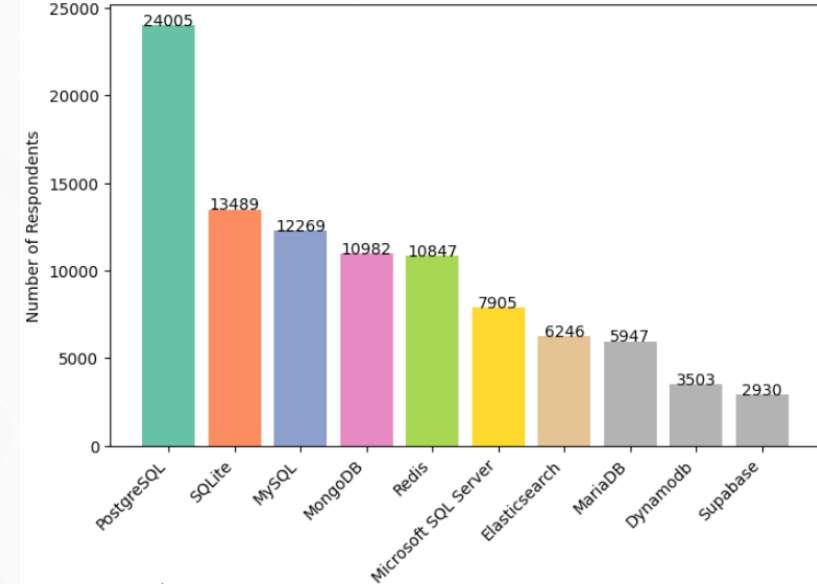


# Future Technology Trend

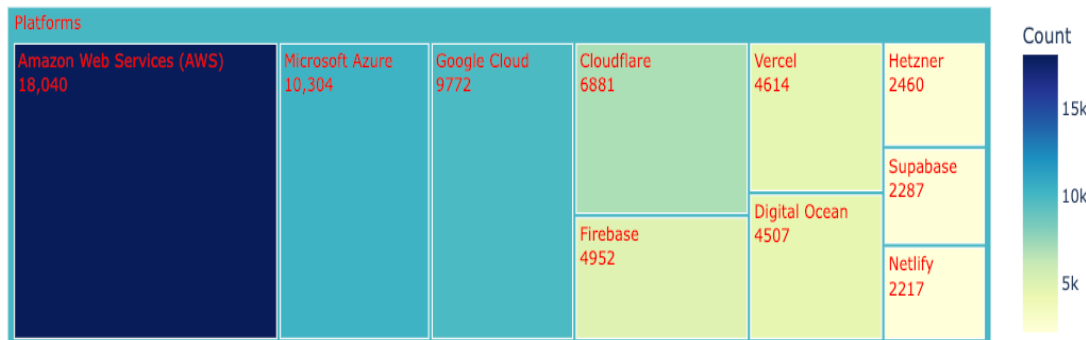
Top 10 Programming Languages In Trends



Top 10 Databases In Trends



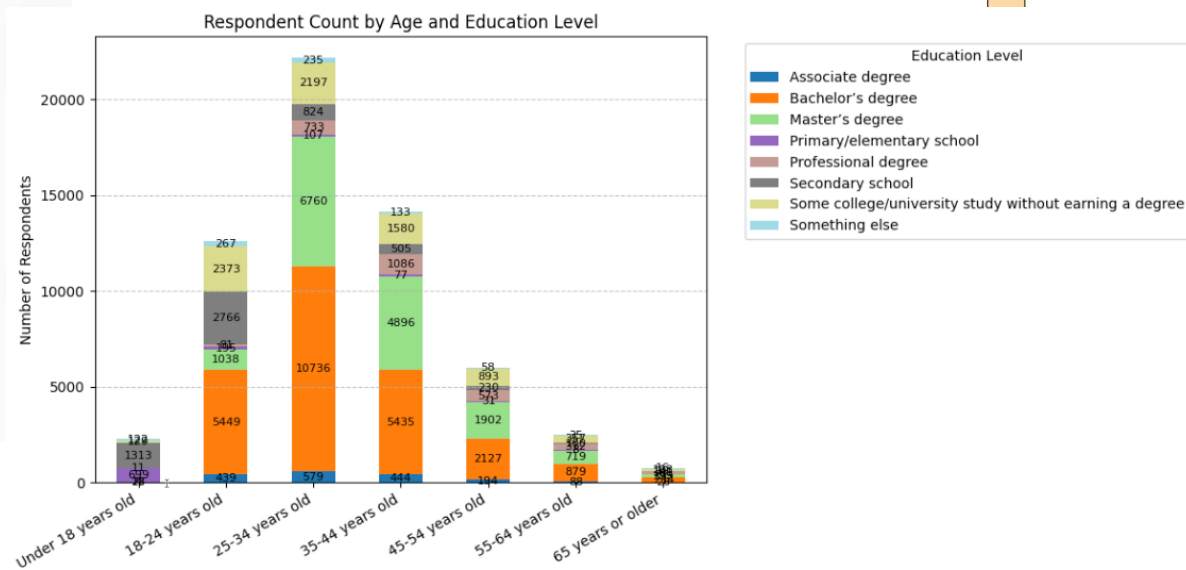
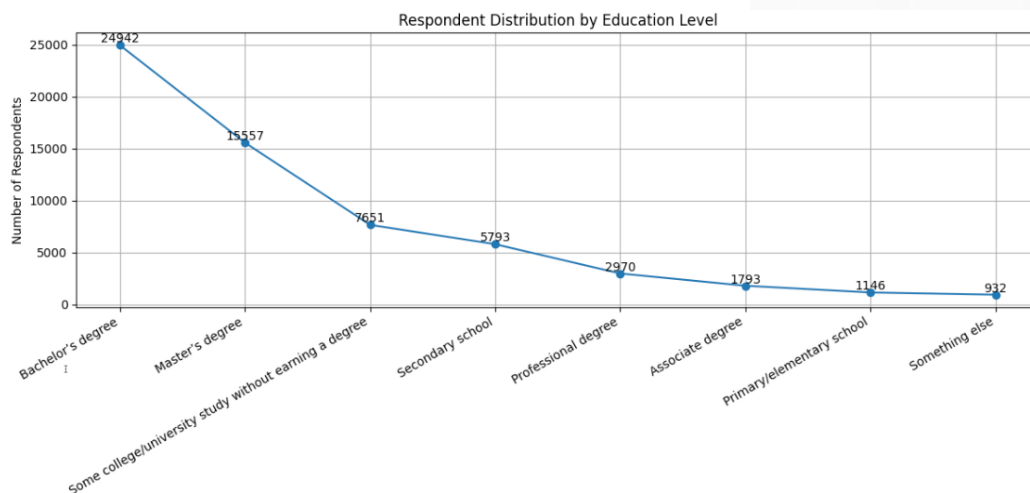
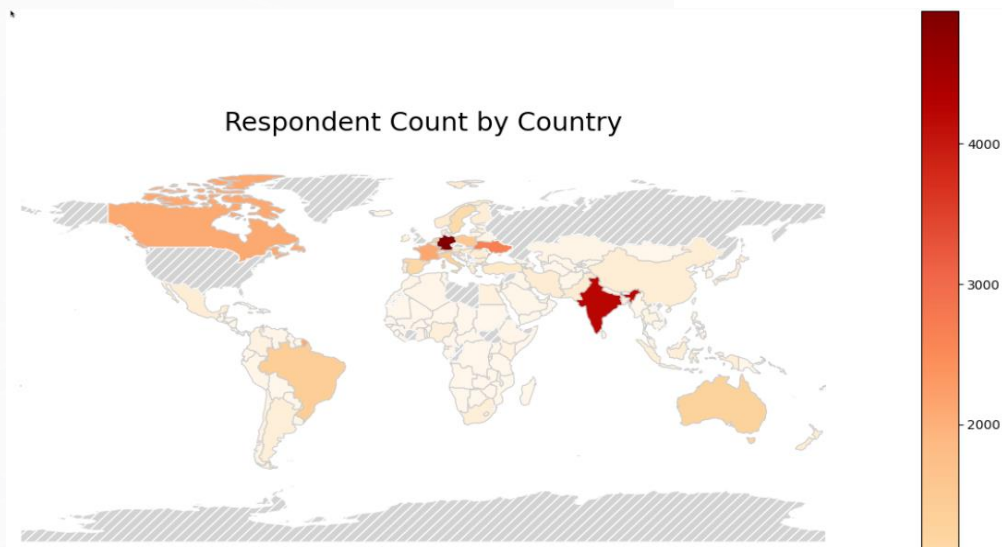
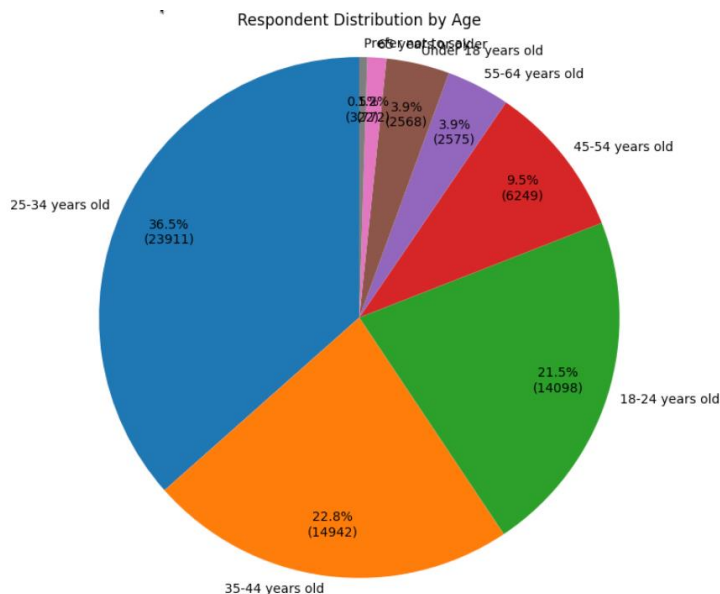
Top 10 Platforms In Trends



Top 10 Webframes In Trends



# Demographics



# DISCUSSION

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- Focus training, hiring, and tooling efforts around dominant technologies like Python, AWS, and React.
- Tailor recruitment and outreach strategies toward young, degree-holding professionals in major tech regions.
- Stable trends suggest minimal disruption, allowing teams to confidently invest in current tech stacks

# OVERALL FINDINGS & IMPLICATIONS

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## Findings

- Python, PostgreSQL, AWS
- 25–34 years old
- Bachelor's degree
- USA, Germany, and India

## Implications

- Organizations can confidently invest in these core technologies for long-term value
- Talent acquisition should focus on emerging professionals in key global markets
- Stable tech trends reduce risk for companies standardizing their development stacks

# CONCLUSION

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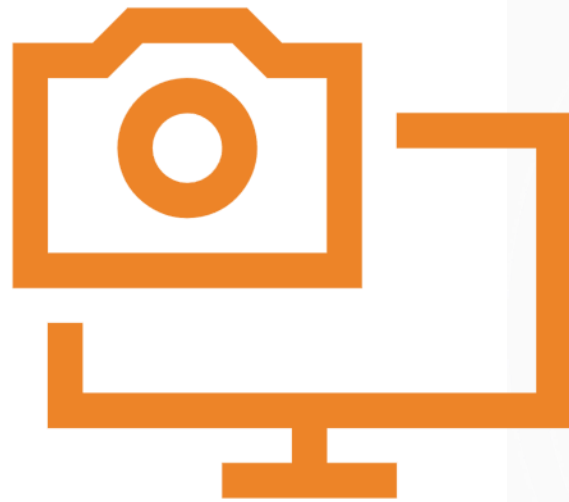
- Python, React, and AWS continue to dominate across developer roles
- Young, educated professionals form the core of the tech workforce
- Technology preferences remain stable, supporting long-term planning
- Data-driven insights can guide hiring, training, and tech adoption decisions



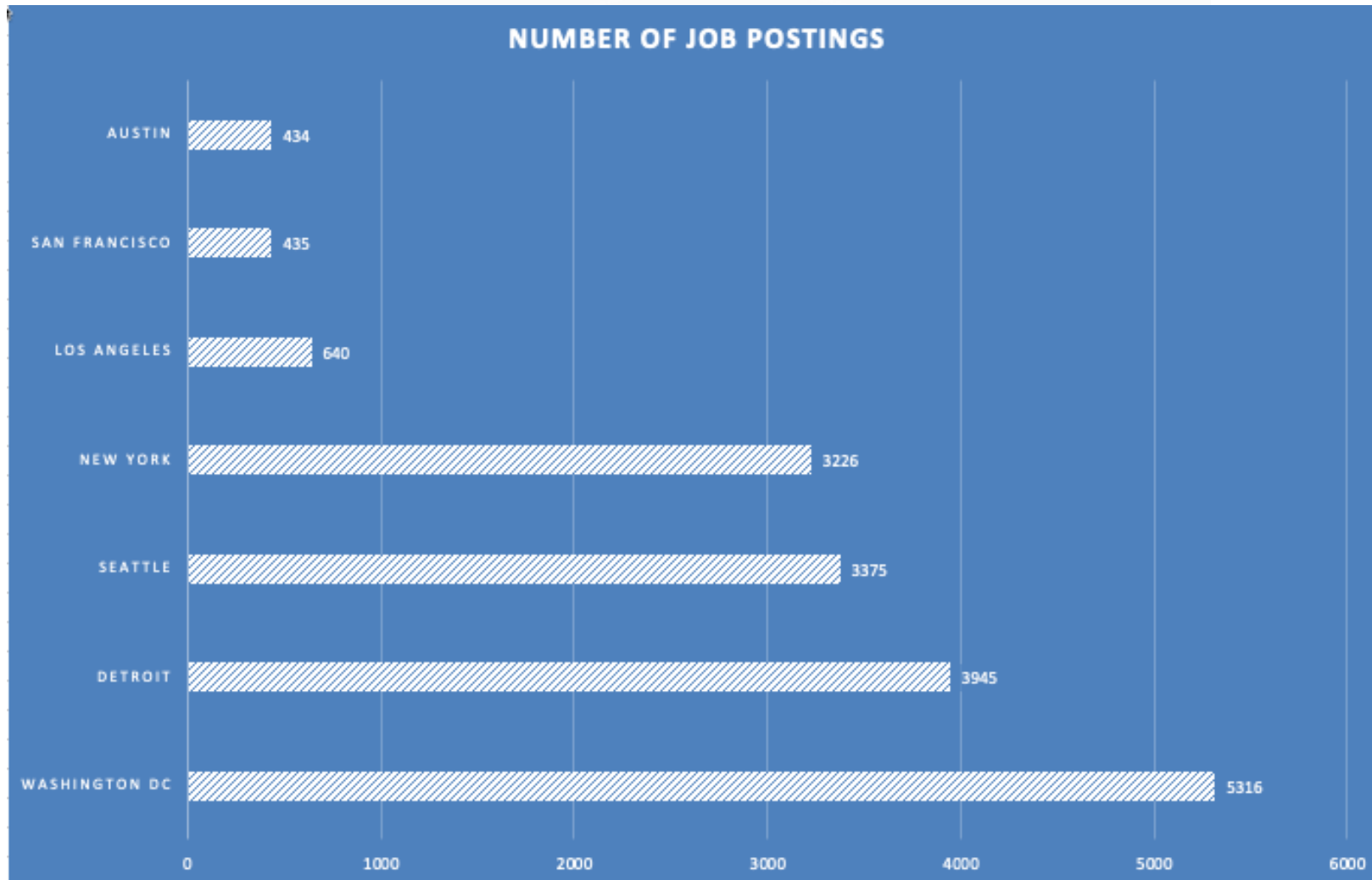


# APPENDIX

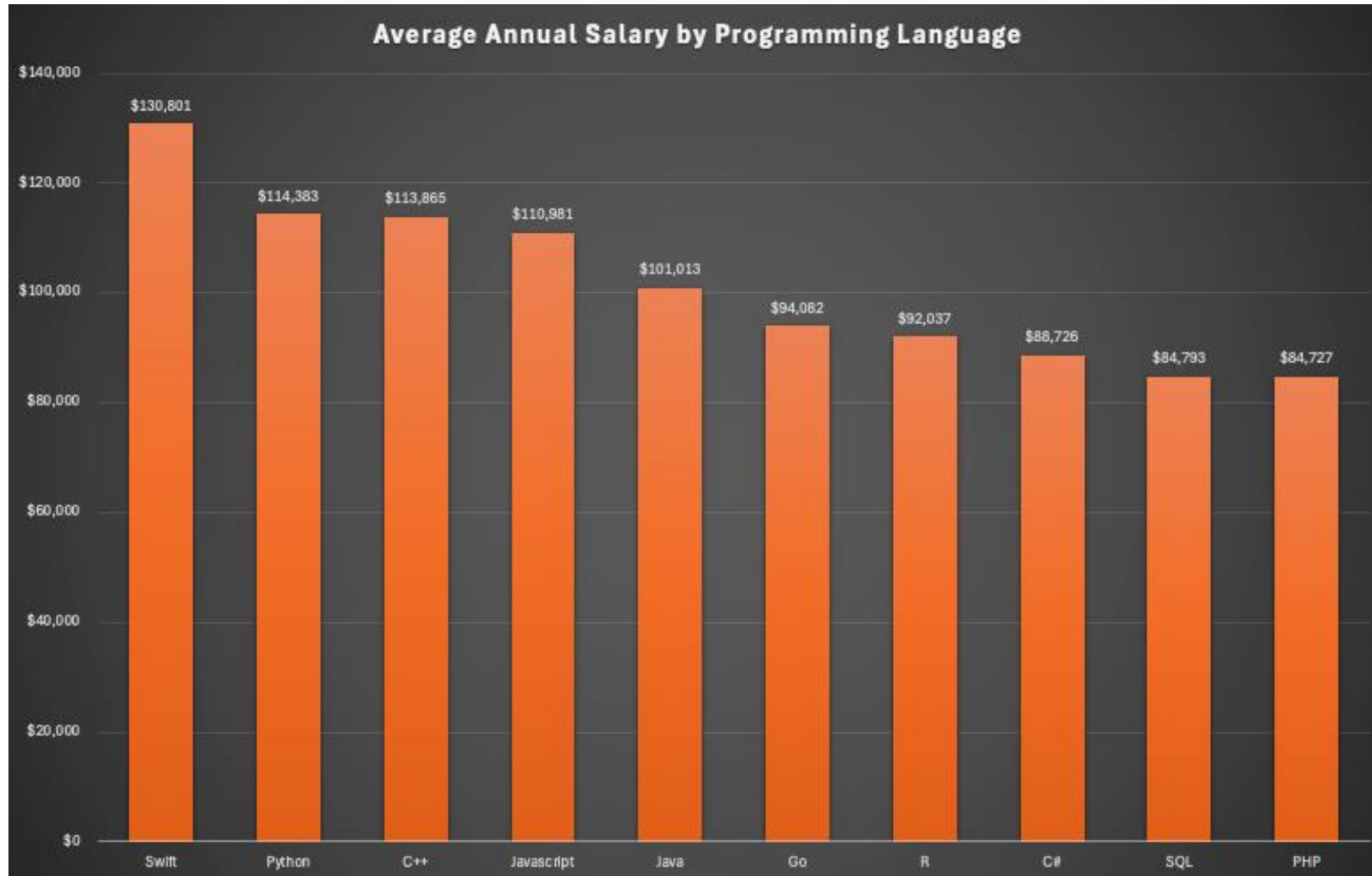
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# JOB POSTINGS

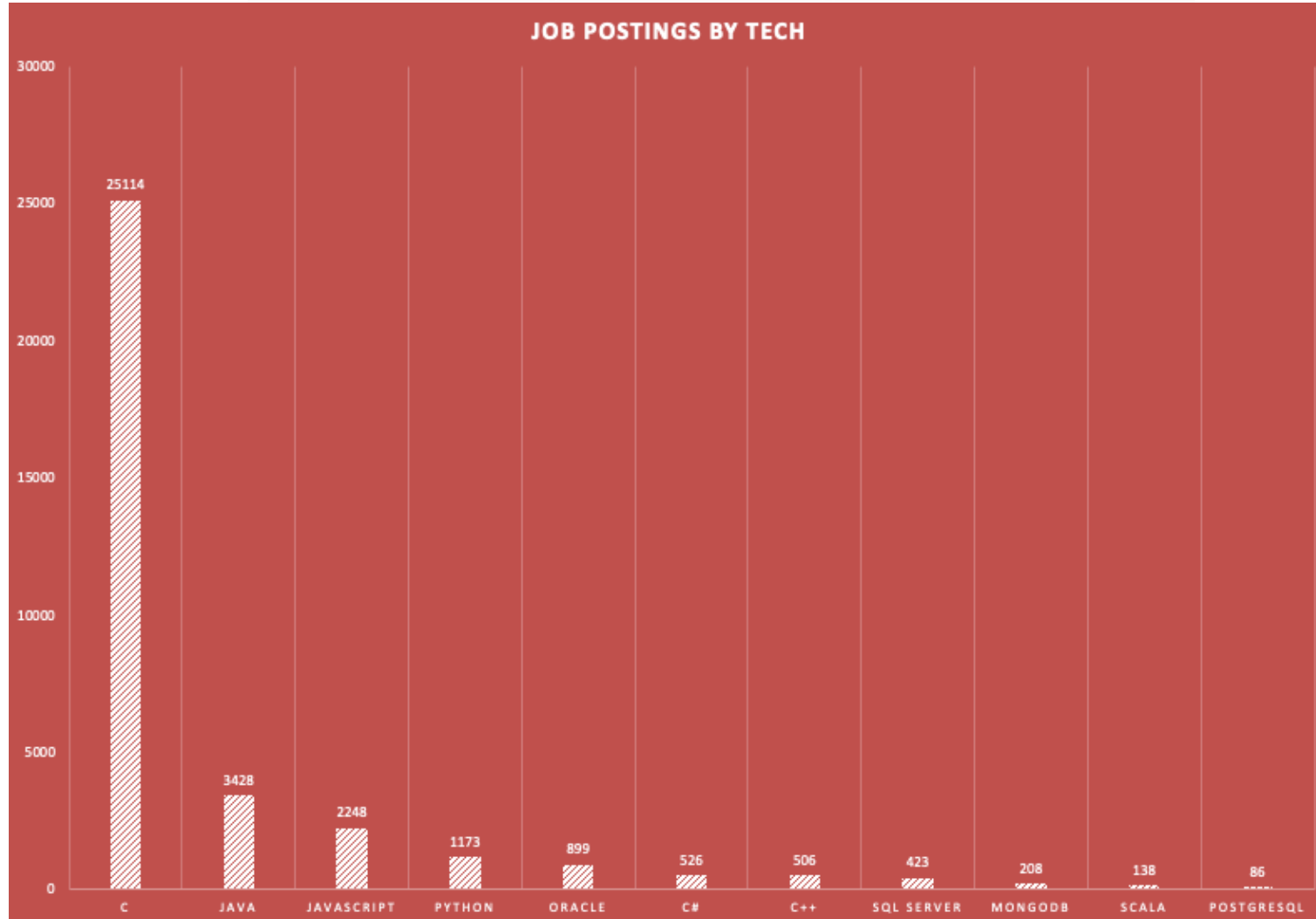


# POPULAR LANGUAGES



# JOB POSTINGS BY TECH

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# JOB SATISFACTION BY EXPERIENCE LEVEL

