



# Current technology trends

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# OUTLINE

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

# EXECUTIVE SUMMARY

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- Data collection and objective
- Methodology
  - Data sources
  - Data analysis
  - Data visualization
- Results of findings
- Discussions
- Conclusion

# INTRODUCTION

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- Stack Overflow's annual Developer Survey is the largest survey of people who code around the world.
- It provides insights into global software development trends, tools, and developer experiences.
- Trends to predict where the developers are going.
- Characterization of developers around the globe.
- Nearly 90,000 developers.
- Covers a wide range of topics such as demographics, technology preferences, and work environment.

# METHODOLOGY

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- Collect survey data & explore its content
  - Web Scraping.
  - APIs.
  - Request library.
- Data Wrangling
- Exploratory data analysis
  - Analyzing data distribution..
  - Handling outliers..
  - Correlations.
- Data Visualization
  - Highlight distribution of data, relationships, the composition and comparison of data.
- Dashboards

# RESULTS

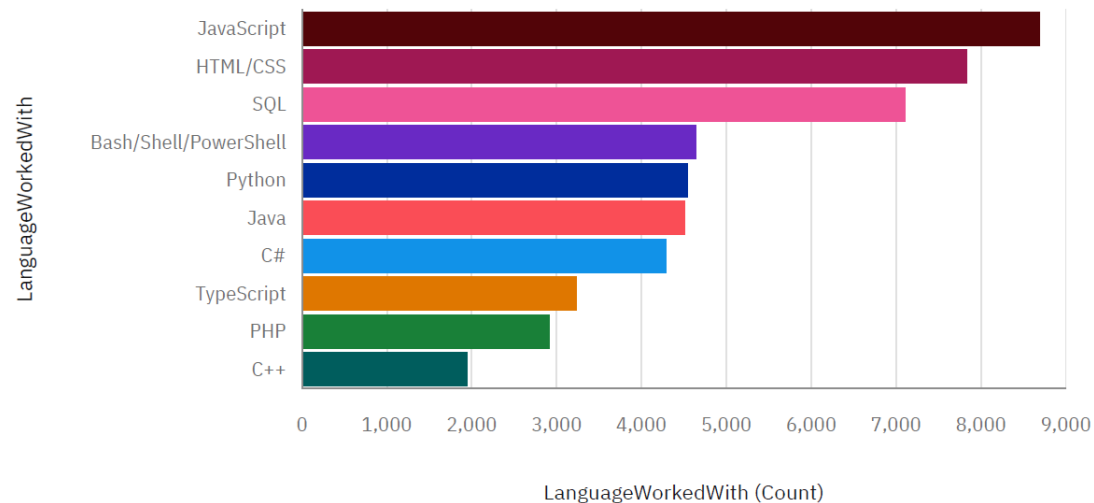
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# PROGRAMMING LANGUAGE TRENDS

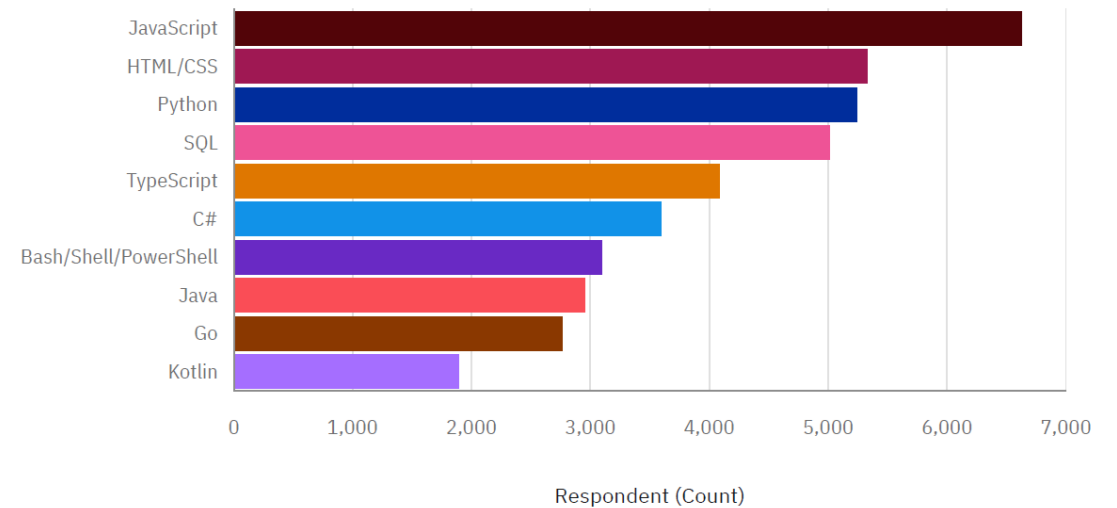
## Current Year

Top 10 Languages worked with



## Next Year

Top 10 Desired Languages next year



# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- JavaScript and HTML/CSS are the leading languages among the respondents
- JavaScript and HTML/CSS are projected to remain the top interest of respondents
- Python is on the rise and so is TypeScript
- PHP is in decline however

## Implications

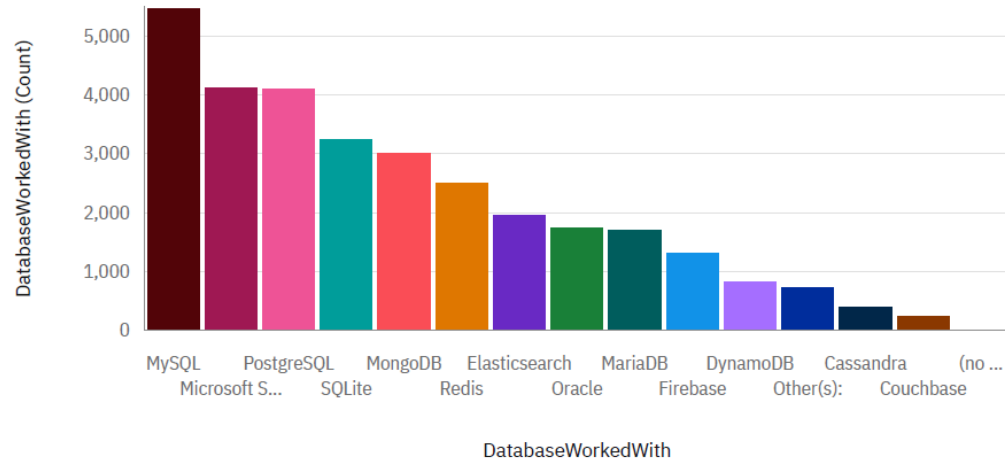
- The high usage of JavaScript and HTML/CSS suggests that web development is the most important for respondent.
- Web development will remain the most important
- Mastery of SQL remains crucial due to its widespread application in database management



# DATABASE TRENDS

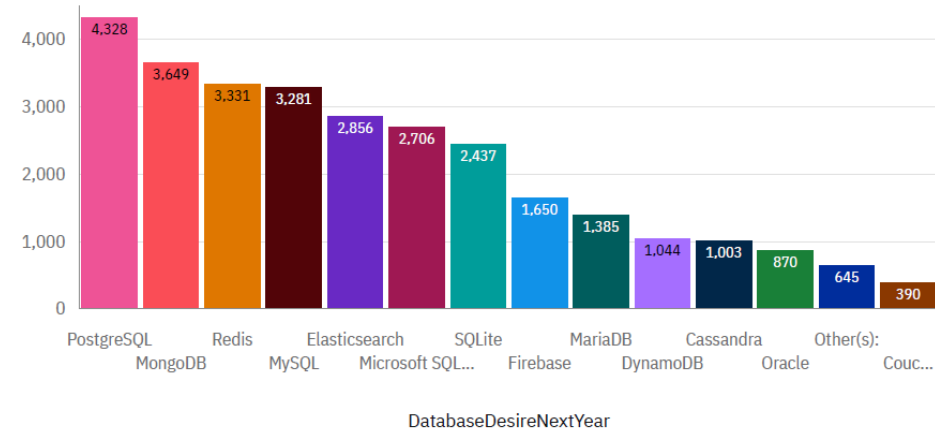
## Current Year

Top 10 Databases Worked With



## Next Year

Top 10 Desired Databases Next Year



# DATABASE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- PostgreSQL is on the rise: it's the most desired database for next year
- Shift toward NoSQL: MongoDB and Redis are gaining traction, reflecting the need for scalable, real-time, and unstructured data handling.
- MySQL and Microsoft SQL Server are declining in demand: Despite their heavy usage now, interest in these traditional databases is fading as developers turn to modern, open-source alternatives.
- Cloud-native solutions: DynamoDB and Firebase are growing in demand, indicating the industry's shift toward serverless and cloud-native infrastructures.

## Implications

- Developers should focus on learning PostgreSQL and NoSQL databases like MongoDB and Redis to align with future industry demand.
- Employers may need to adopt more flexible, open-source solutions such as PostgreSQL and consider transitioning from legacy systems like Microsoft SQL Server and Oracle.
- Cloud-native databases like DynamoDB and Firebase are set to rise, reflecting a broader shift toward serverless architectures.

# DASHBOARD

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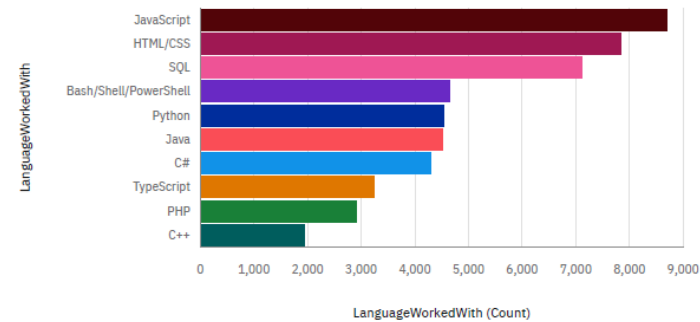
<https://github.com/radrhm/IBM-Capstone/blob/7dbce96a5f346bcacbbc347a9e71b1ba641451c1/Dashboard.pdf>

# DASHBOARD TAB 1

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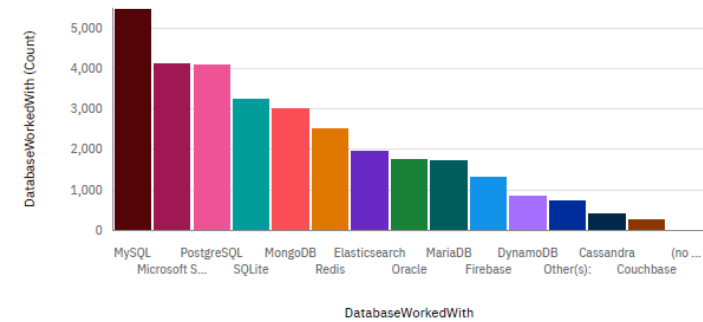
## Current Technology Usage

### Top 10 Languages worked with



## Current technology Usage

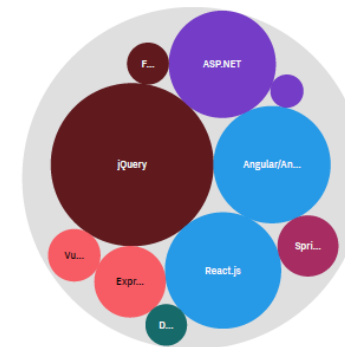
### Top 10 Databases Worked With



### Platform Worked With



### WebFrame Worked With

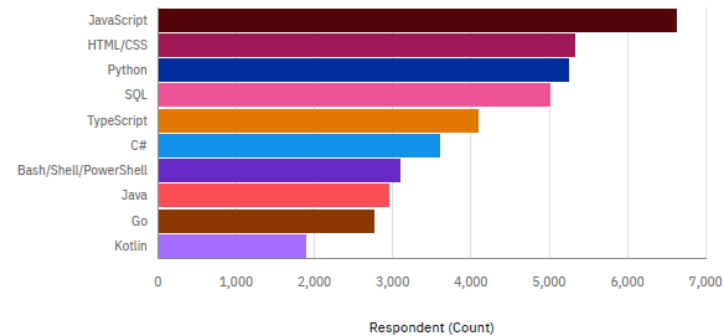


# DASHBOARD TAB 2

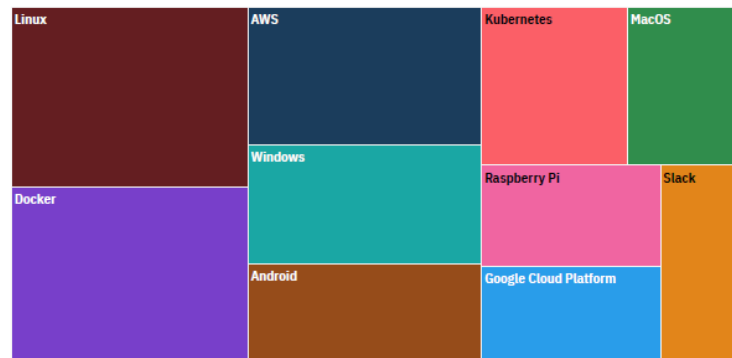
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## Future Technology Trend

### Top 10 Desired Languages next year

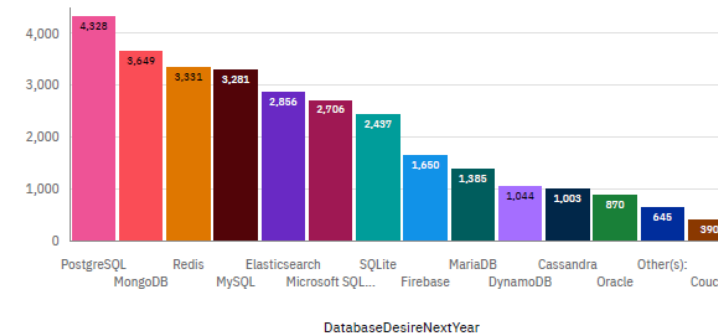


### Top 10 Desired Platform next Year

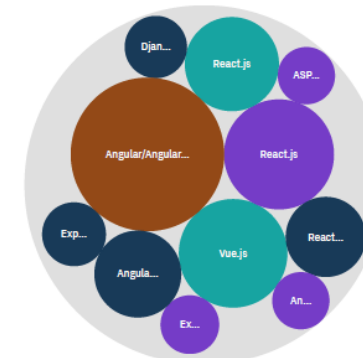


## Current technology Usage

### Top 10 Desired Databases Next Year



### Top 10 Desired Webframe Next Year

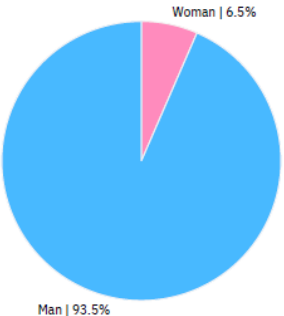


# DASHBOARD TAB 3

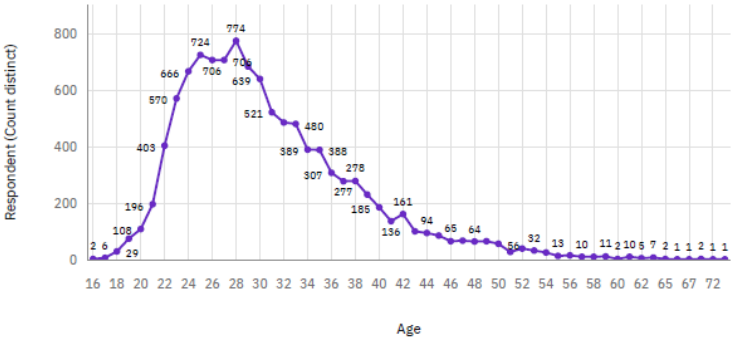
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## Demographics

### Respondents by Gender

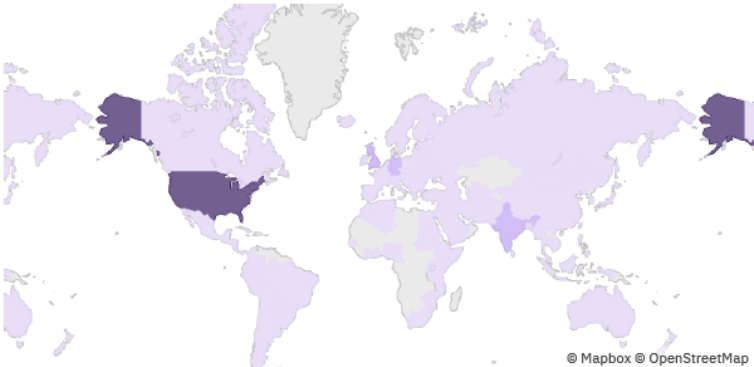


### Respondent by Age

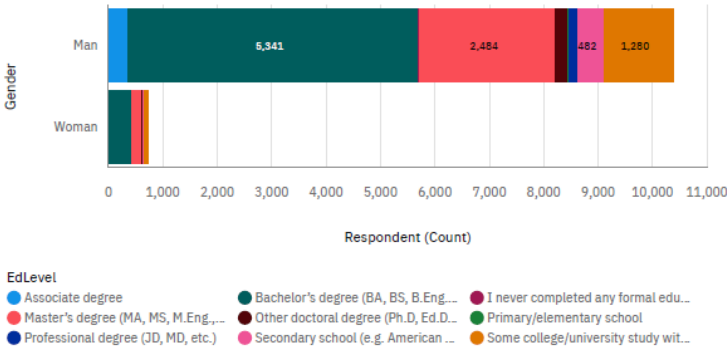


## Current technology Usage

### Respondent for Country regions



### Respondent by Gender classified by Education Level



# DISCUSSION

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# OVERALL FINDINGS & IMPLICATIONS

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## Findings

- JavaScript remains and projected to remain dominant. Python is increasingly desired.
- SQL databases are dominant yet there is a shift toward NoSQL databases
- Most respondent are male, young, highly educated and located in the US and other advanced countries

## Implications

- Focus on learning PostgreSQL, NoSQL databases, Python, and modern languages like Go.
- Cloud-native architectures are becoming critical—Firebase and DynamoDB demand is growing.



# CONCLUSION

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- Stable Demand: JavaScript and SQL remain key technologies.
- New Trends: Growing interest in Go, Kotlin, PostgreSQL, and MongoDB.
- Platform Shift: Increased focus on Linux, Docker, and AWS for future use.
- Frameworks: React.js, Angular, and Vue.js lead in web development.
- Demographics: Predominantly young, highly educated, and male workforce.

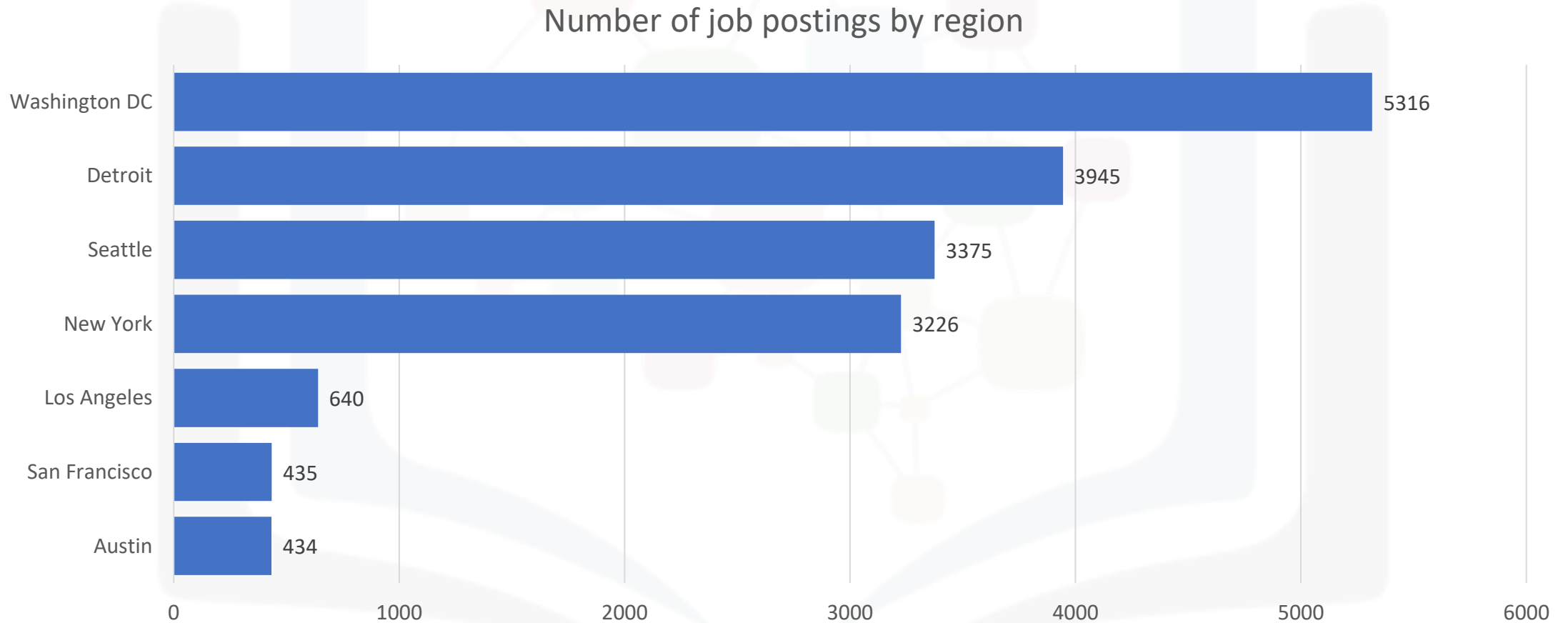
# APPENDIX

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- Include any relevant additional charts, or tables that you may have created during the analysis phase.

# JOB POSTINGS



# POPULAR LANGUAGES

