

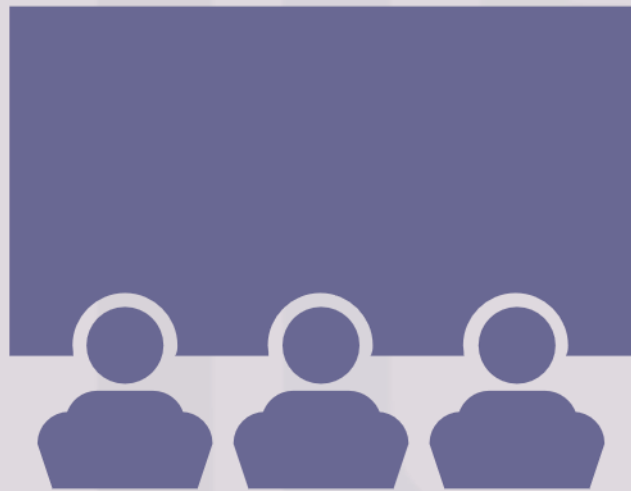


# 2019 Stack Overflow Developer Survey Findings

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27<sup>th</sup> March 2024

# OUTLINE

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

# EXECUTIVE SUMMARY

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- Discovering current and future trends in programming languages and databases
- Demographic survey to show the gender gap in jobs and education
- Analysing the technological gap in developing and developed countries

# INTRODUCTION

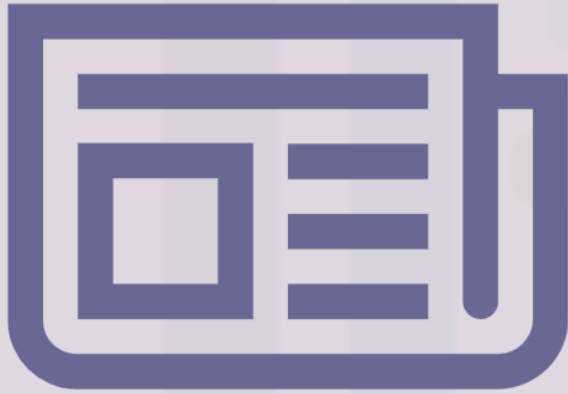
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- Analysing trends in software development
- Predicting the state of the programming world in the next few years
- For developers wanting to see what to add to their skillset, and for companies to stay ahead of the curve
- What technologies will be rising in demand?
- Which will decline?

# METHODOLOGY

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- Sources
  - [Stack Overflow Developer Survey Results 2019](#)
  - 90,000 developers
- Data cleaning
- Data analysis
  - Handling outliers
  - Identifying correlations
- Data visualization
  - Presenting distribution of data, and the relationships identified

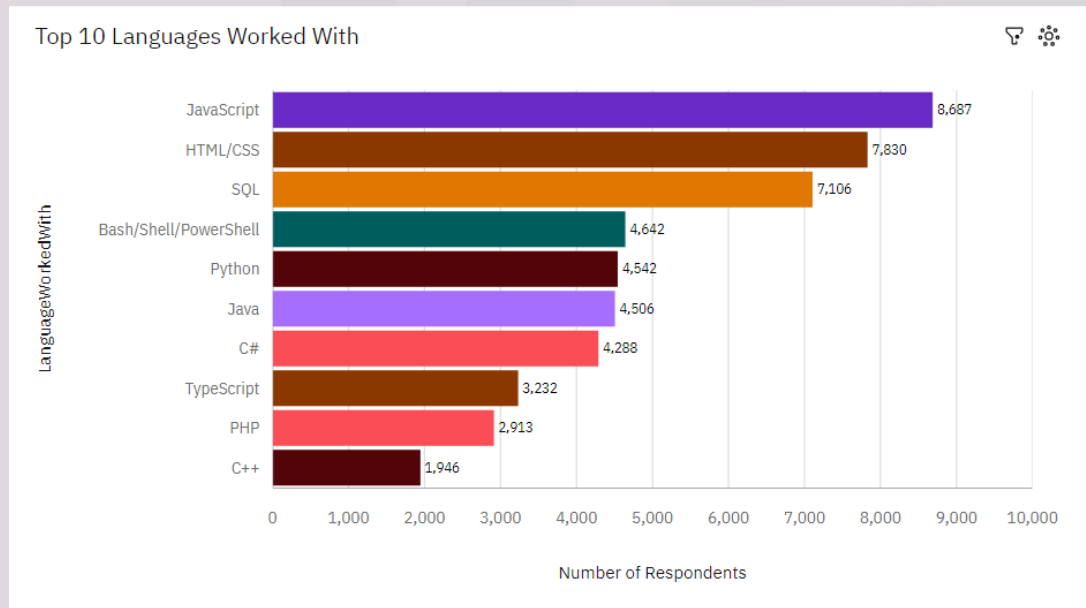
# RESULTS

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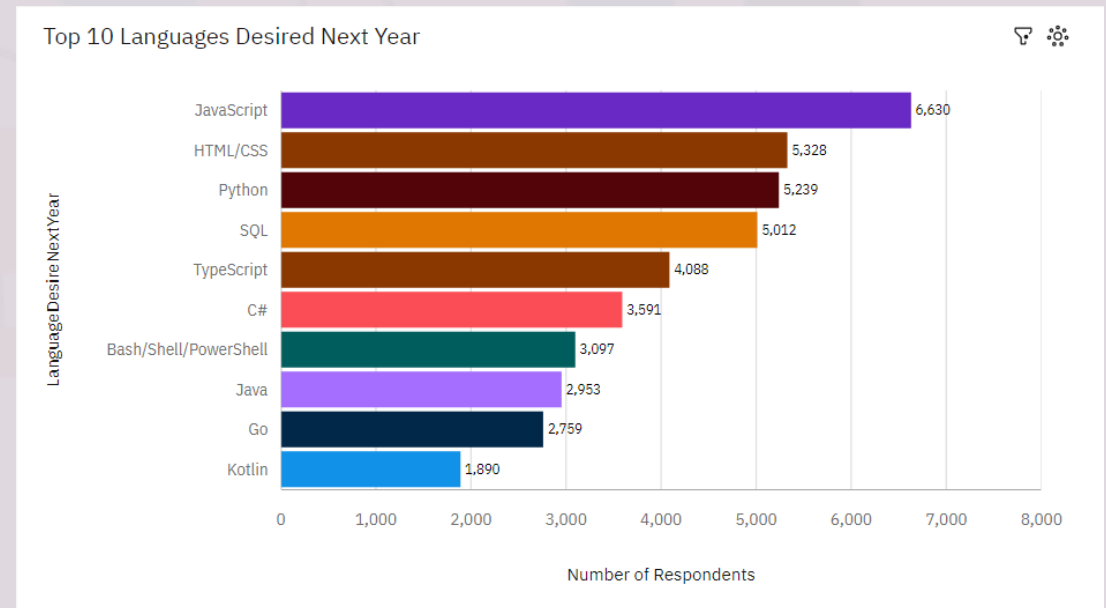


# PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- JavaScript and HTML still the most desirable languages among front end developers
- Python fastest growing major language
- C# overtaking Java
- Go and Kotlin appearing in the top 10

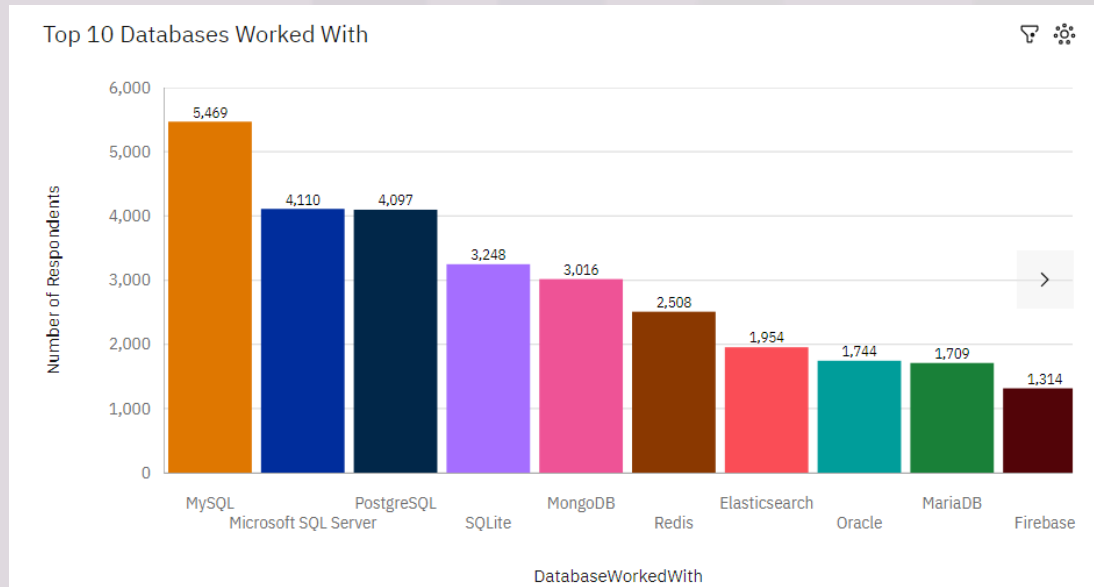
## Implications

- Front end development still in high demand, with Typescript growing in popularity
- SQL is still required for big data roles
- The AI space growing explains growing demand for Python

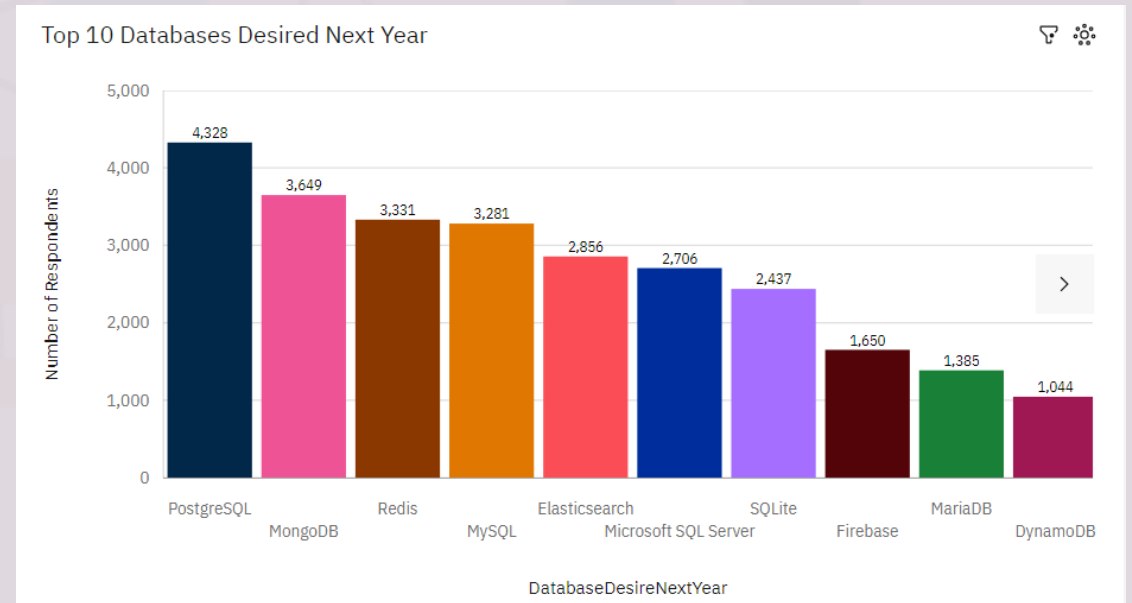


# DATABASE TRENDS

## Current Year



## Next Year



# DATABASE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- MySQL and Microsoft SQL Server losing demand
- PostgreSQL and MongoDB rising in demand
- Oracle declining in demand

## Implications

- Open-source databases still the most favoured
- MongoDB rising could hint at demand for non-relational databases
- Developers are finding Oracle outdated

# DASHBOARD

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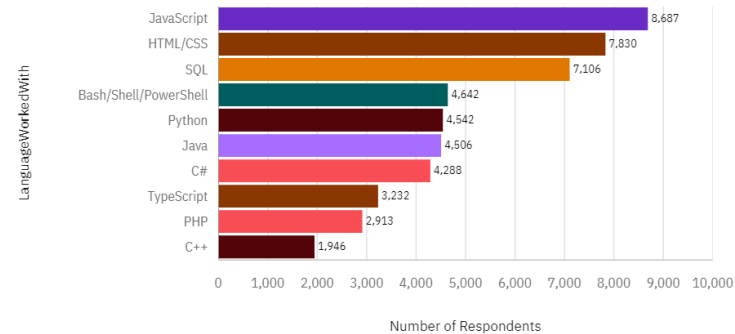


Dashboard Visualisations

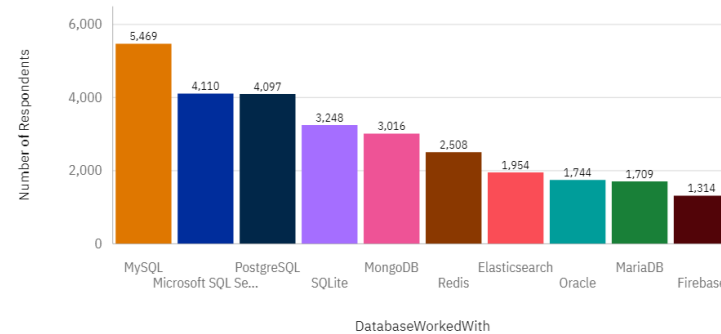
# CURRENT TECHNOLOGY USAGE

## Current Technology Usage

Top 10 Languages Worked With



1 Top 10 Databases Worked With

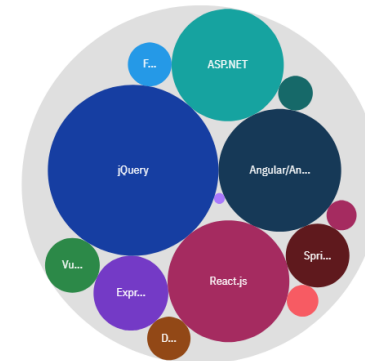


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Top Platforms Worked With (visualised by a Word Bubble)



3 Top Web Frames Worked With (visualised by a Hierarchy Bubble)

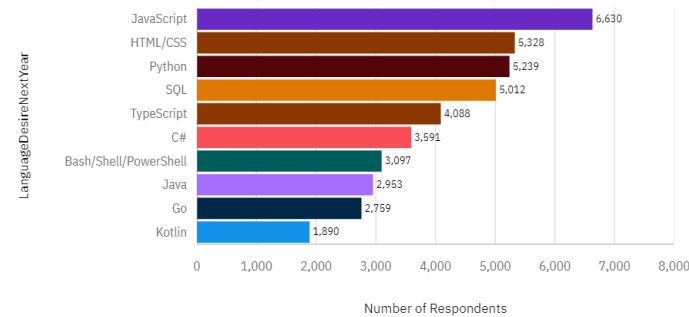


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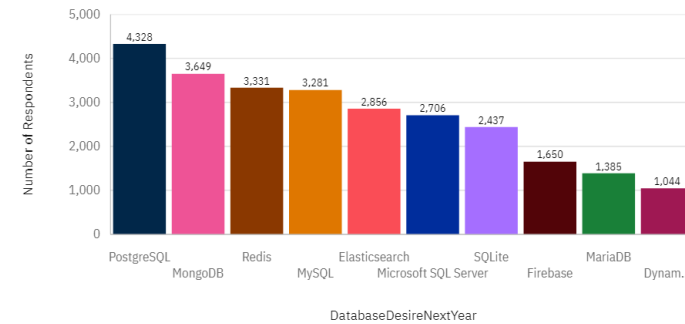
# FUTURE TECHNOLOGY TREND

## Future Technology Trend

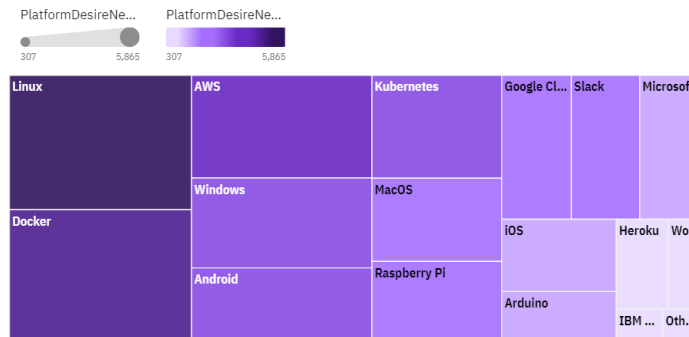
Top 10 Languages Desired Next Year



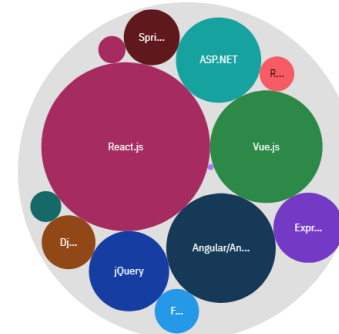
5 Top 10 Databases Desired Next Year



Top Platforms Desired (visualised by a Tree Map)



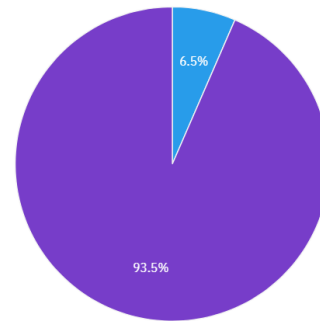
7 Top Web Frames Desired With (visualised by a Hierarchy Bubble)



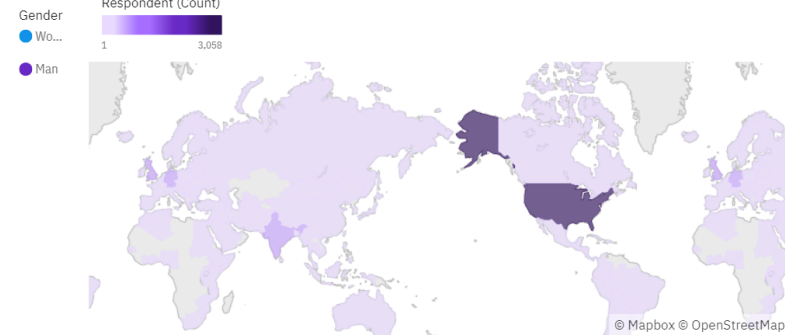
# DEMOGRAPHICS

## Demographics

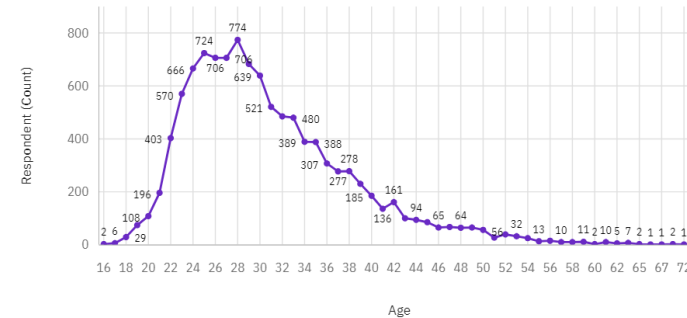
Respondent classified by Gender



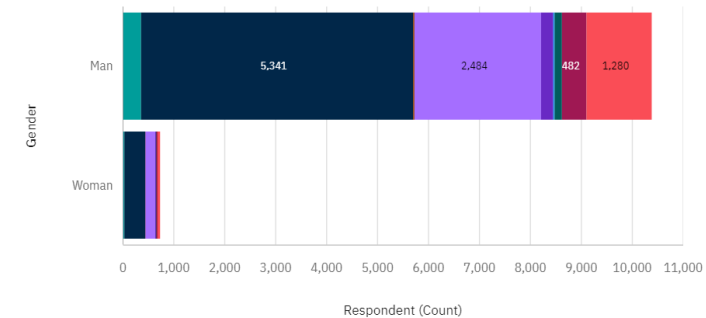
## 8 Respondent Count for Countries



Respondent Count by Age



## 10 Respondent Count by Gender, classified by Formal Education Level



# DISCUSSION

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- Tracking future trending tools and being open to using them
- Bridging the gap between gender, developing and developed countries, and education level

# OVERALL FINDINGS & IMPLICATIONS

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## Findings

- JavaScript, HTML/CSS and Python are the most in demand
- PostgreSQL and MongoDB most demanded databases
- Over 90% of developers are male, mainly based in USA

## Implications

- Depending on the sector, HTML/CSS/JavaScript, Python and SQL are pretty much required
- Developers prefer newer up-to-date databases
- Need to bridge the gap between male and female developers, as well as developed and developing countries



# CONCLUSION

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- Developers can predict future trends of languages, tools etc. and can take advantage
- In terms of demographics, there is still work needed to close the gaps in gender and different countries.

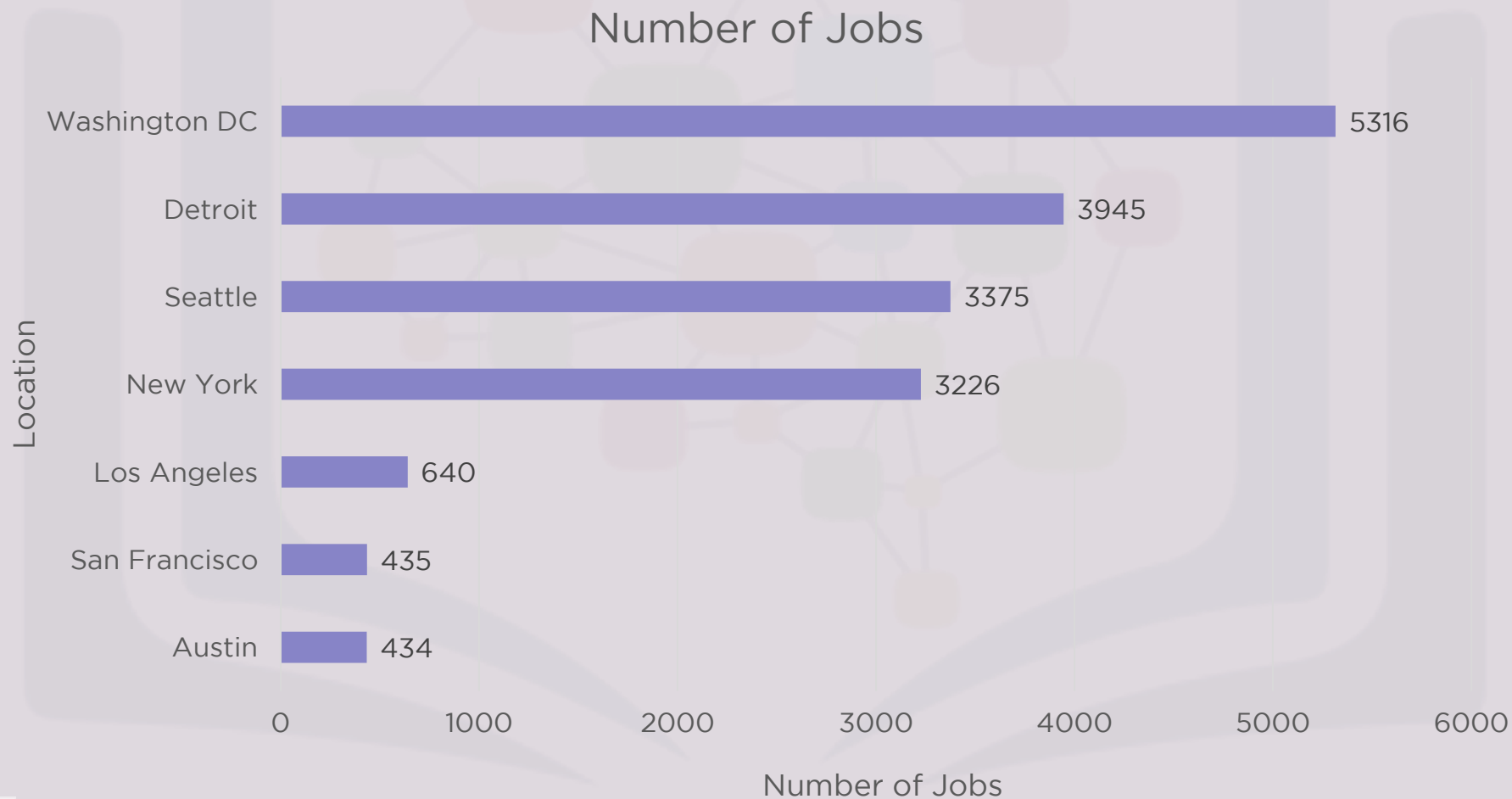
# APPENDIX

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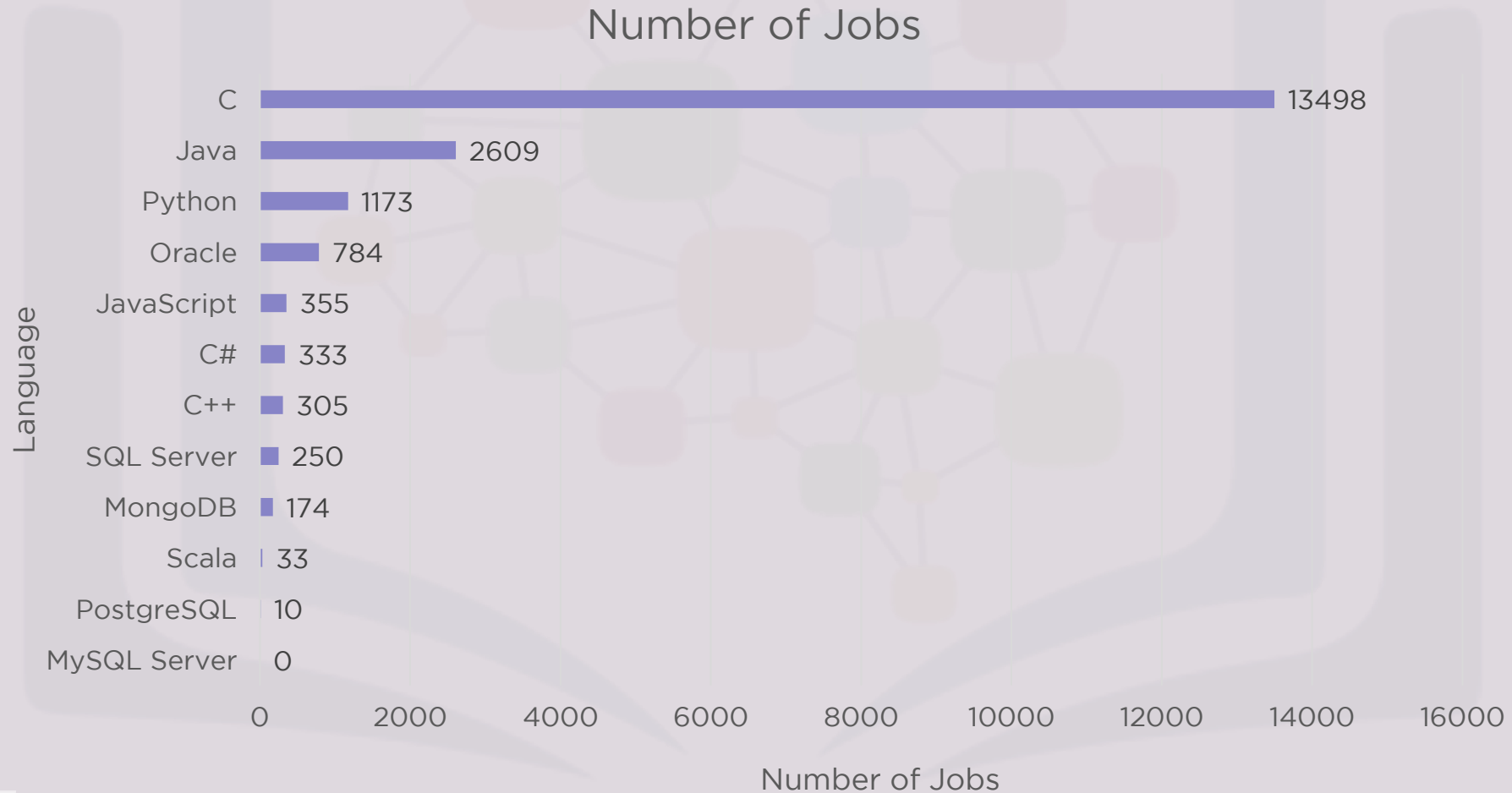


- Include any relevant additional charts, or tables that you may have created during the analysis phase.

# JOB POSTINGS



# JOB POSTINGS



# POPULAR LANGUAGES

