



# Developer Survey Metrics

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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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- Exploratory data analysis result
- Methodology summary
  - Data collection in csv format
  - Exploratory data analysis through Python and SQL
  - Interactive visualizations through IBM Cognos Analytics
- Results in presentation supported through graphs and trends
- Initial objectives found in research

# INTRODUCTION

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- A developer survey of over 9,000 respondents
- Captures information including current and future databases and languages worked with between developers
- These trends are used to predict where the future of developing is going
- Questions:
  - What is the future trend in programming tools?
  - What are the overall demographics of developers that use these tools?

# METHODOLOGY

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- Survey data collected through web-scraping, APIs, and provided in .csv format:
- Exploratory data analysis through Python and SQL
- Charts and graphs provided in IBM Cognos Analytics
- Python packages used
  - Data analysis: Pandas, NumPy
  - Visualization: Matplotlib, Seaborn

# RESULTS

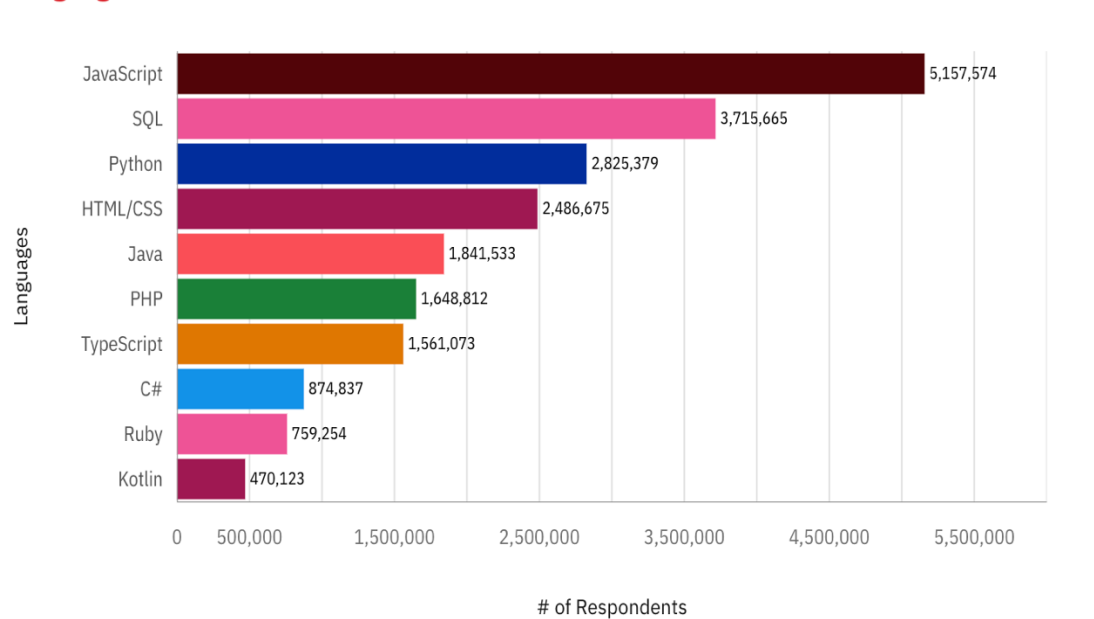
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# PROGRAMMING LANGUAGE TRENDS

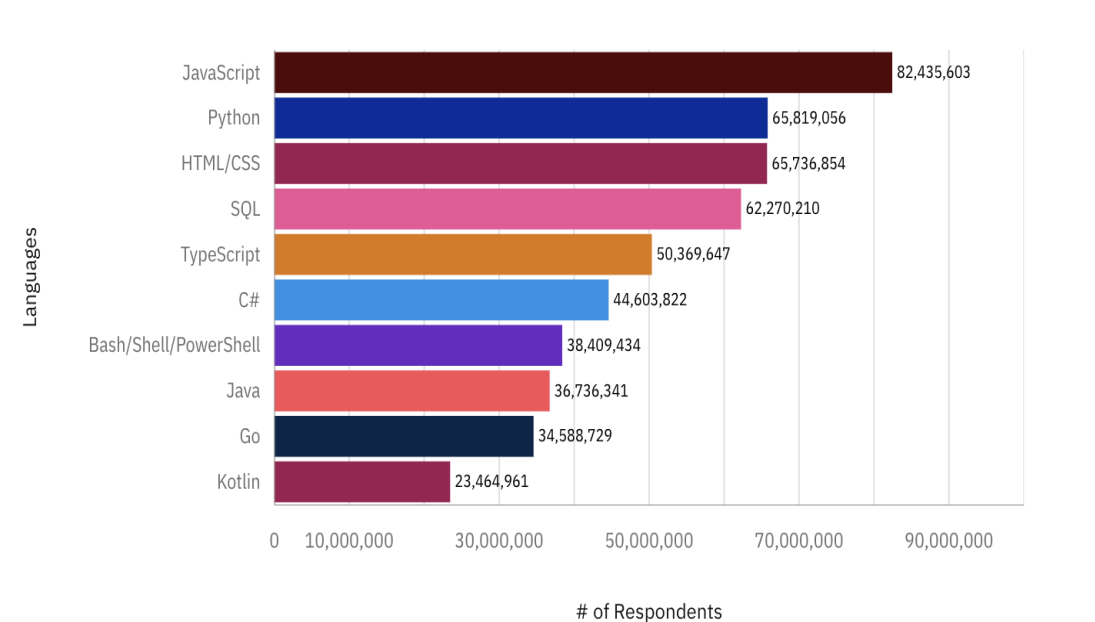
## Current Year

Languages Worked With



## Next Year

Languages Desired Next Year



# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- JavaScript is the leading language in this year and the next year
- SQL language is 2<sup>nd</sup> in languages used this year, but 4<sup>th</sup> in languages desired
- C# and TypeScript both are higher in languages desired than they are in languages used this year

## Implications

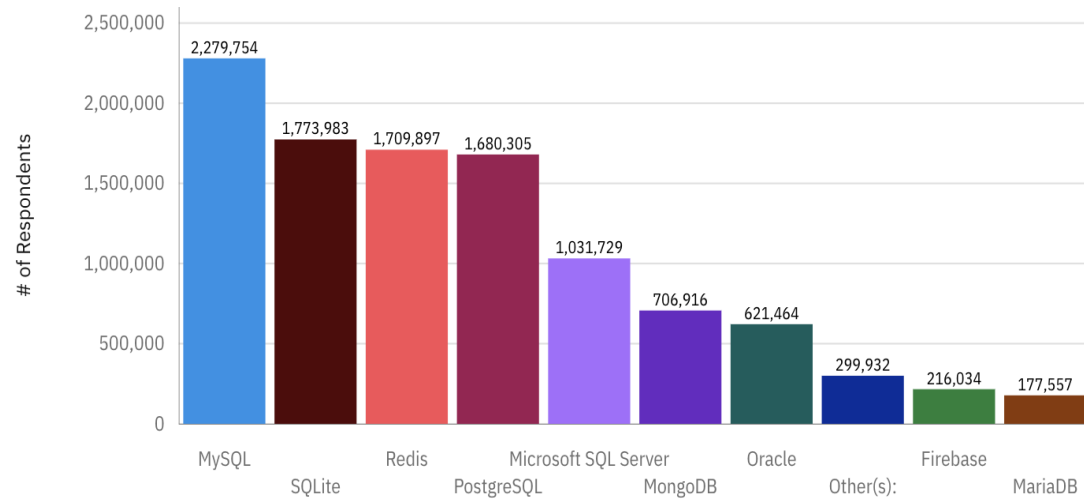
- Developers should focus on using JavaScript
- SQL language is decreasing in popularity. Developers may want to transition away from it
- C# and TypeScript both are increasing in popularity next year. Developers may want to transition to these languages



# DATABASE TRENDS

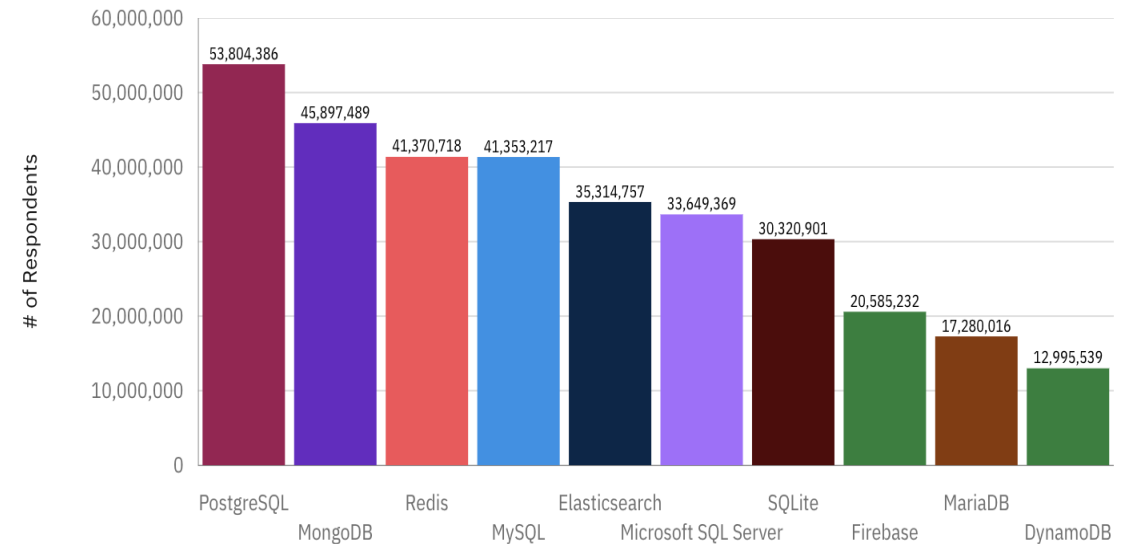
## Current Year

Databases Worked With



## Next Year

Databases Desired Next Year



# DATABASE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- MySQL and SQLite drop in popularity for databases desired
- PostgreSQL is the most desired database next year
- MongoDB is much more desired next year than it is this year

## Implications

- These versions of SQL are starting to fall behind
- PostgreSQL may be the future of SQL
- Developers may want to start using MongoDB due to the heavy increase in popularity next year

# DASHBOARD

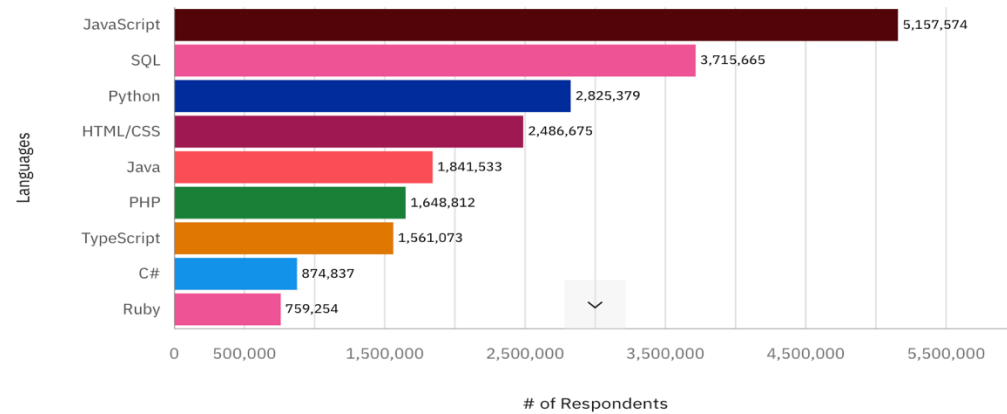
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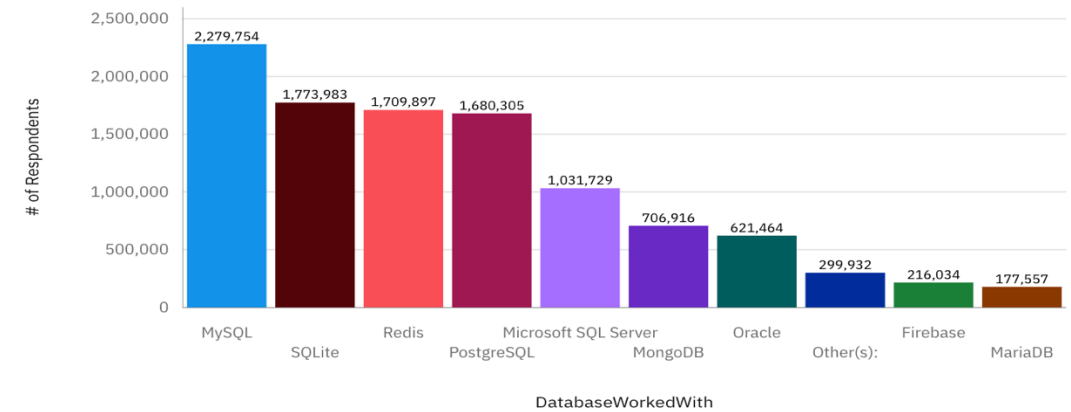
<The GitHub link of the Cognos/Looker Studio dashboard goes here.>

# DASHBOARD TAB 1

Languages Worked With



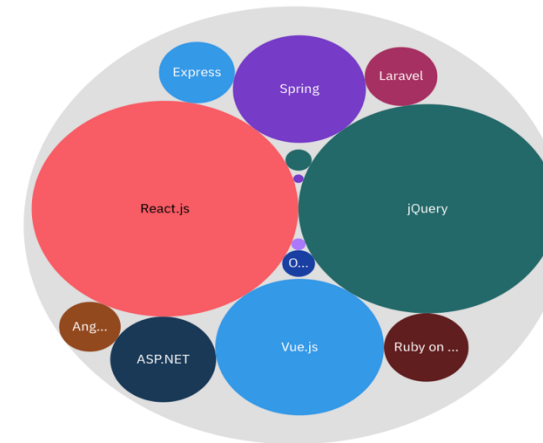
Databases Worked With



Platforms Worked With

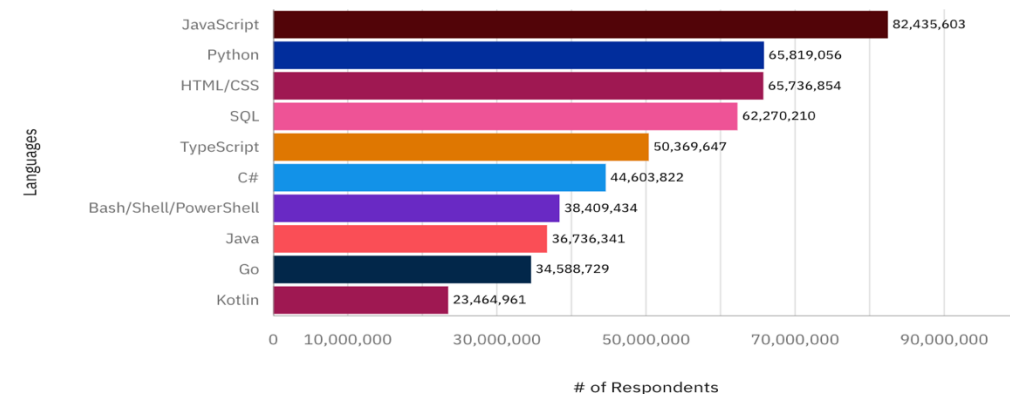


WebFrames Worked With

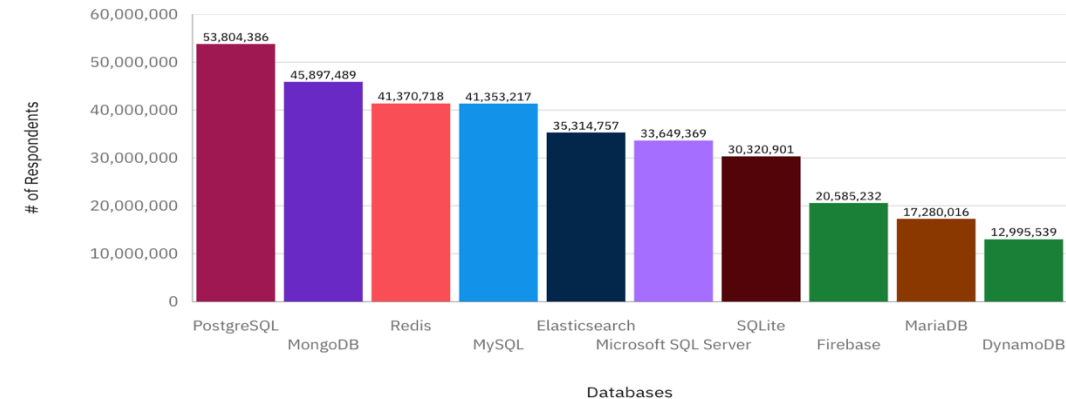


# DASHBOARD TAB 2

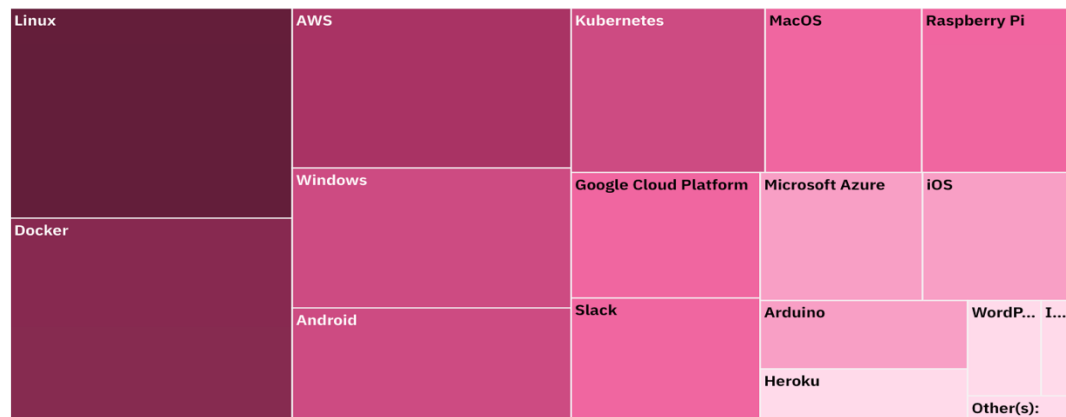
Languages Desired Next Year



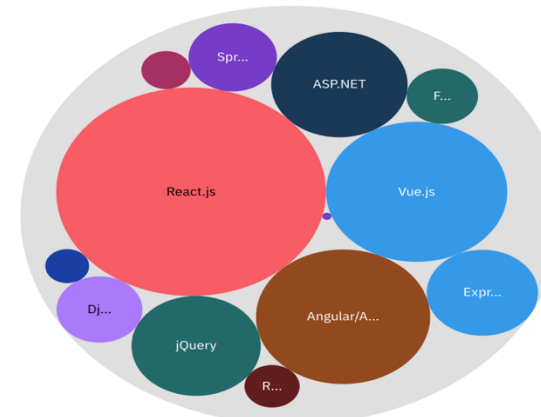
Databases Desired Next Year



Platforms Desired Next Year



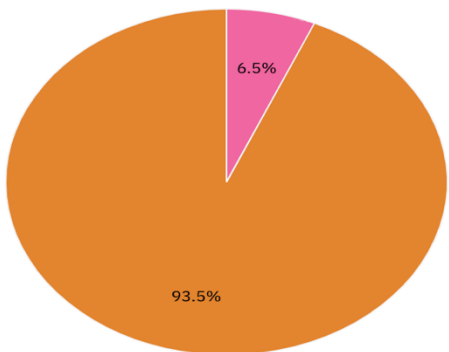
WebFrames Desired Next Year



# DASHBOARD TAB 3

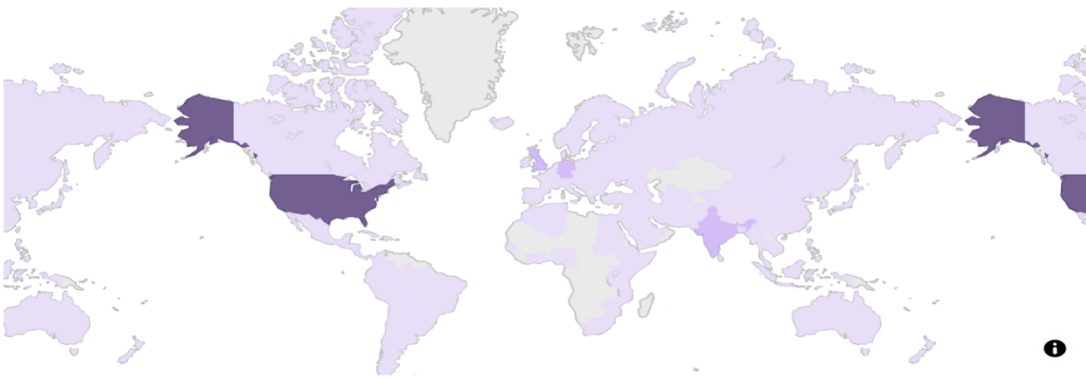
## Respondent by Gender

Gender  
● Woman ● Man

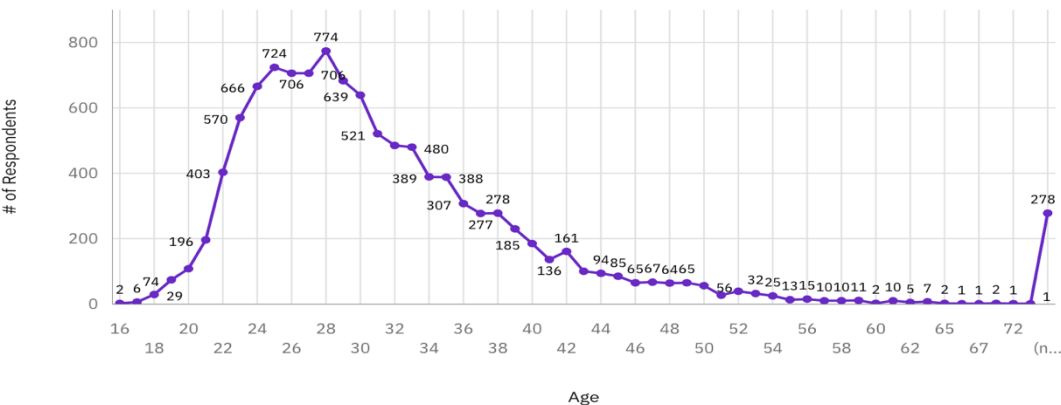


## Respondent by Country

Respondent (Count)  
1 3,058

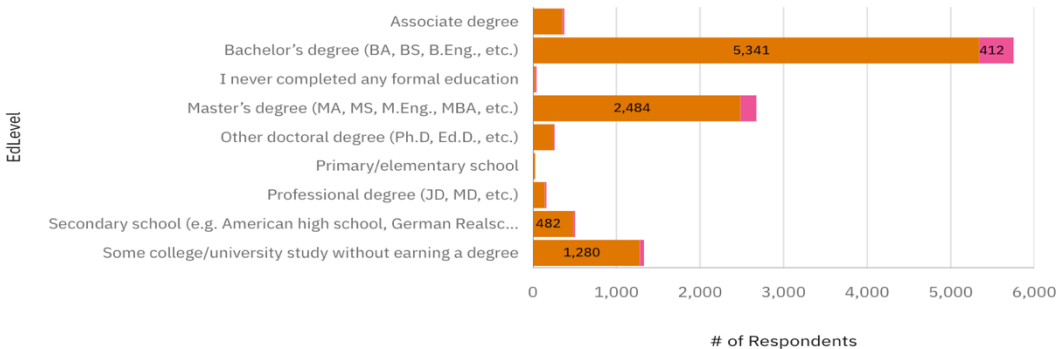


## Respondent by Age



## Respondent by EdLevel and Gender

Gender  
● Man ● Woman



# DISCUSSION

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# OVERALL FINDINGS & IMPLICATIONS

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## Findings

- Linux will be the more desired platform next year, beating Windows
- jQuery is not desired in the following year as much as it is now
- The majority of developers are males aged 22-28

## Implications

- Windows is losing market power
- jQuery is losing market power
- Young males dominate the developer market



# CONCLUSION

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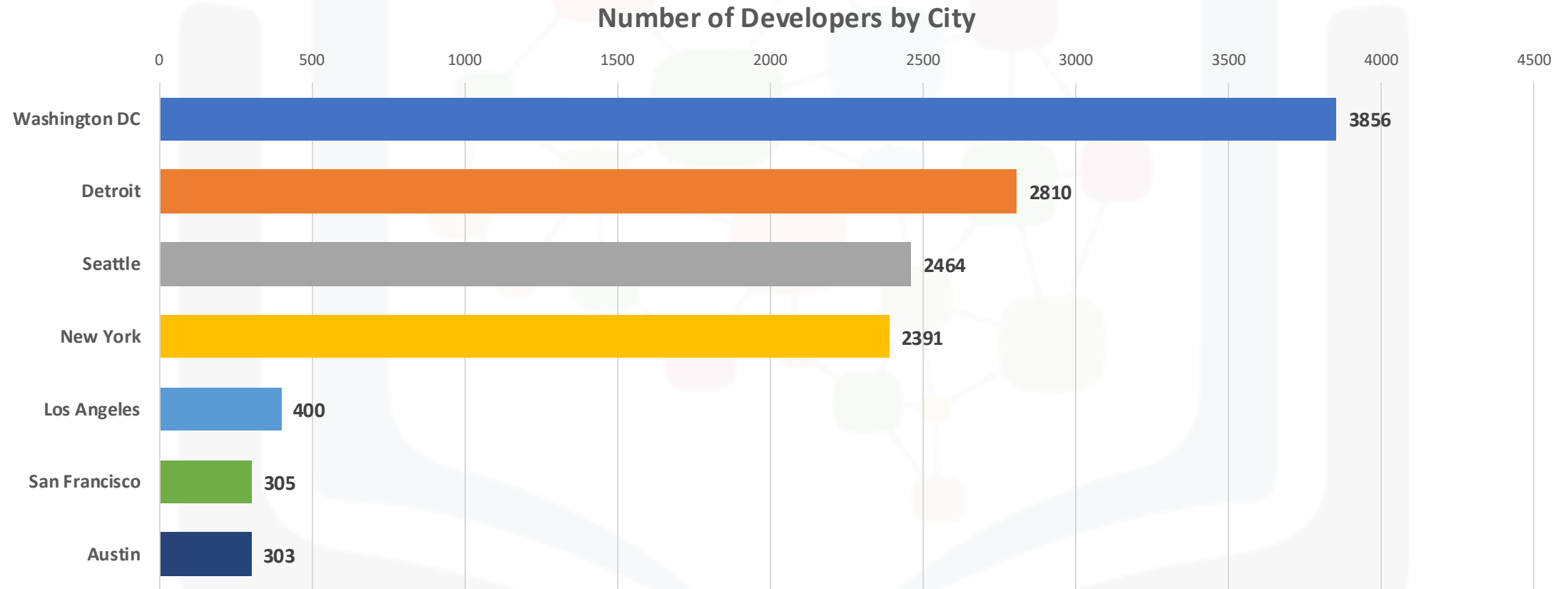
- Young males in the U.S dominate the market and likely control the decision making of tools used
- JavaScript is the most popular language this year and the next. Companies should focus on keeping developers that know this language
- PostgreSQL is gaining more market power rapidly, companies should value developers that are learning this database
- Developers tend to be educated with a Bachelor's Degree or a Master's Degree. College job fairs could be a great way to attract quality talent to a company

# APPENDIX

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# JOB POSTINGS



# POPULAR LANGUAGES

