



# STACK OVERFLOW DATA SURVEY

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# OUTLINE

Executive Summary

Introduction

Methodology

Results

- Visualization – Charts
- Dashboard

Discussion

- Findings & Implications

Conclusion

Appendix



# EXECUTIVE SUMMARY



- Research outline and contextualization.

## Methodology used

- Data collection method
- Data wrangling

- Data results supported by graphs and trends.
- Discussion of the data visualization and breakdown of the overall findings.
- Final conclusion and future research implications.

# INTRODUCTION



- Current research aims to highlight the current trends and predicted trends in the technology sector.
- With this research, we will identify the programming languages that are currently and predicted to be in demand.
- We will also identify the databases that are in the current and predicted trend as well as conduct exploratory analysis on the data collected. The exploratory analysis will mainly include:
  1. Trends on current and predicted platform usage around the world.
  2. A visual exploration of the demography of the data collected

# METHODOLOGY



- A total of around 11300 responses have been collected via a survey distributed amongst individuals across the world.
- The survey consists of 83 items including: "Language Worked With", "Language Desire Next Year", "Database Worked With", "Database Desire Next Year", "Platform Worked With", "Platform Desire Next Year", "Web Frame Worked With", "Web Frame Desire Next Year", "Developing Environment". 75% of respondents found the survey easy to fill.
- The data collected has been exported in csv format which has then been utilized for data analysis and visualization in Watson Library followed by creating dashboards for the data in IBM Cognos dashboard.



# RESULTS

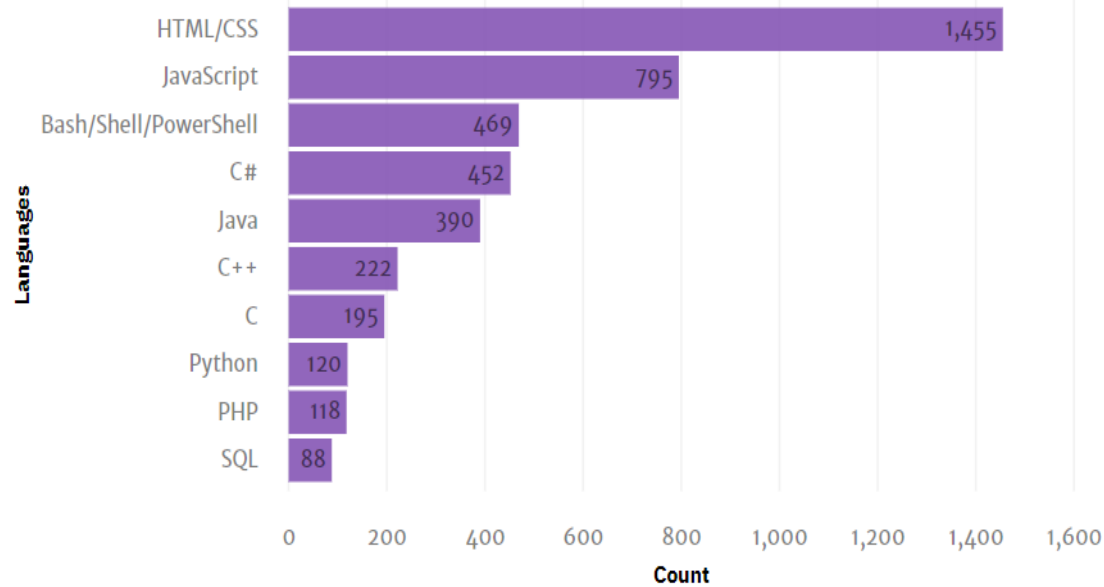


# PROGRAMMING LANGUAGE TRENDS

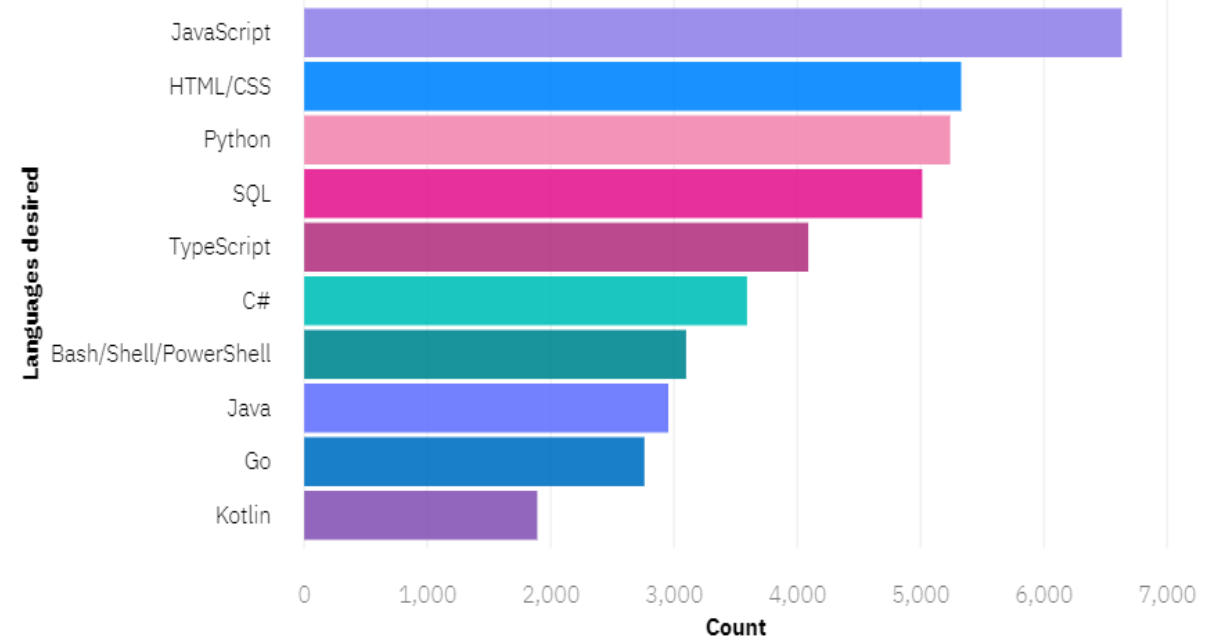
Current Year

Next Year

Top 10 languages worked with



Languages people want to learn



## PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

### Findings:

- ❖ From the bar chart for current year, we found that HTML/CSS (n=1455) we were marginally more in use whereas SQL(n=88) was the least worked with by the respondents.
- ❖ From the bar chart for next year, we found that the majority of 6500 respondents want to learn Javascript language whereas less than 2000 respondents wished to learn Kotlin.

### Implications:

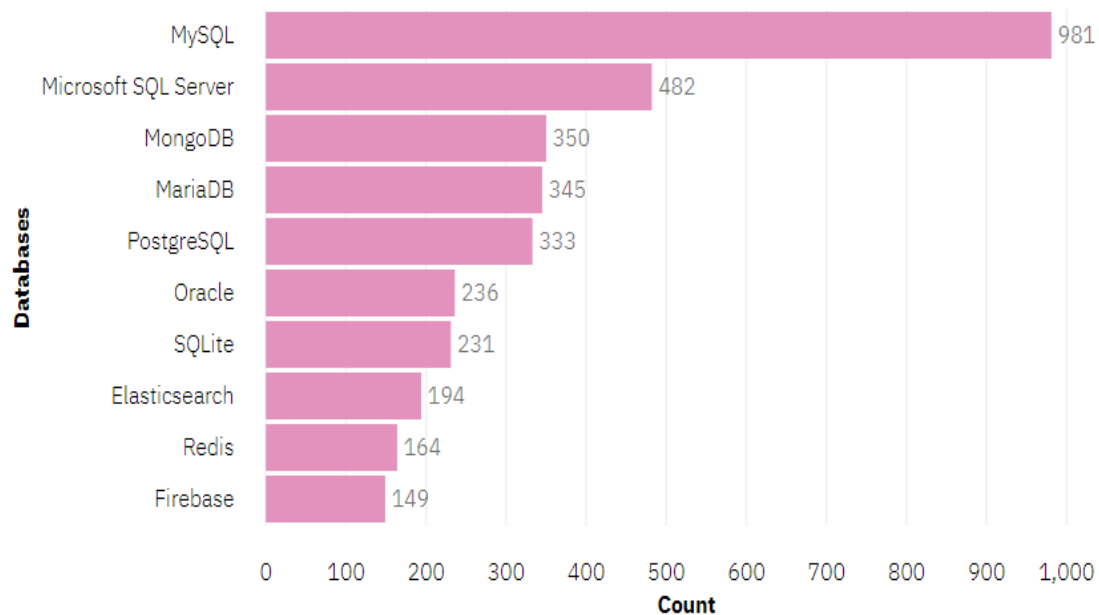
- From our findings of the current year chart, we can conclude that most of the people have experience working with HTML/CSS
- From our findings of the next year chart, we can conclude that more people will move to work with Javascript language



# DATABASE TRENDS

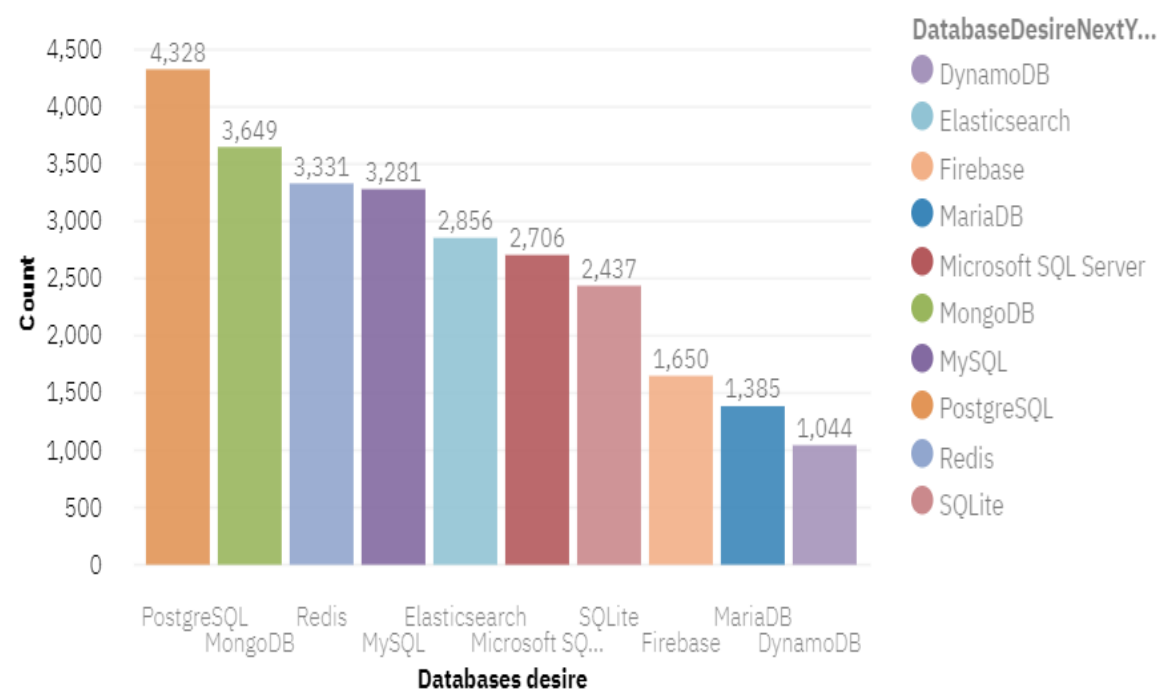
## Current Year

Top 10 databases worked with



## Next Year

Top 10 databases people want to learn



# DATABASE TRENDS - FINDINGS & IMPLICATIONS

## Findings:

- ❖ From the bar chart for current year, we found that MySQL database server was utilized the most by the respondents (n=981) whereas Firebase(n=149) was utilized the least.
- ❖ From the bar chart for next year, we found that over 4000 respondents want to learn PostgreSQL.

## Implications:

- From the findings, we can infer that more respondents will look to moving to PostgreSQL database server.
- MongoDB will also see some rise in demand over the next year.

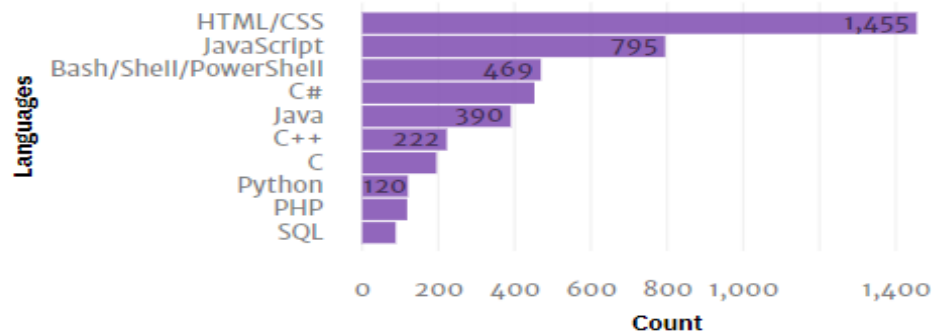
# DASHBOARD



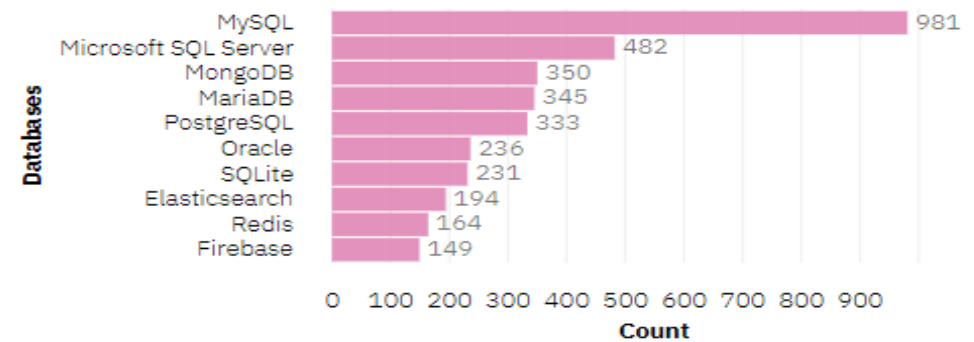
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# DASHBOARD TAB 1

Top 10 languages worked with



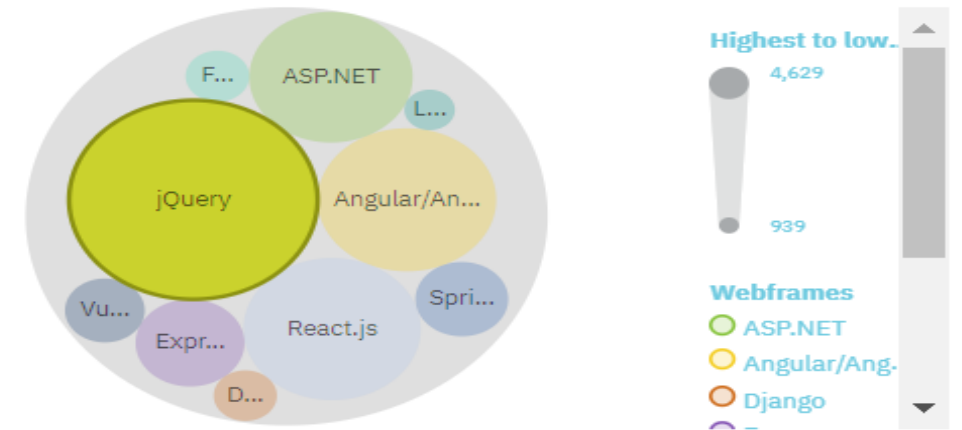
Top 10 databases worked with



Most platforms worked with



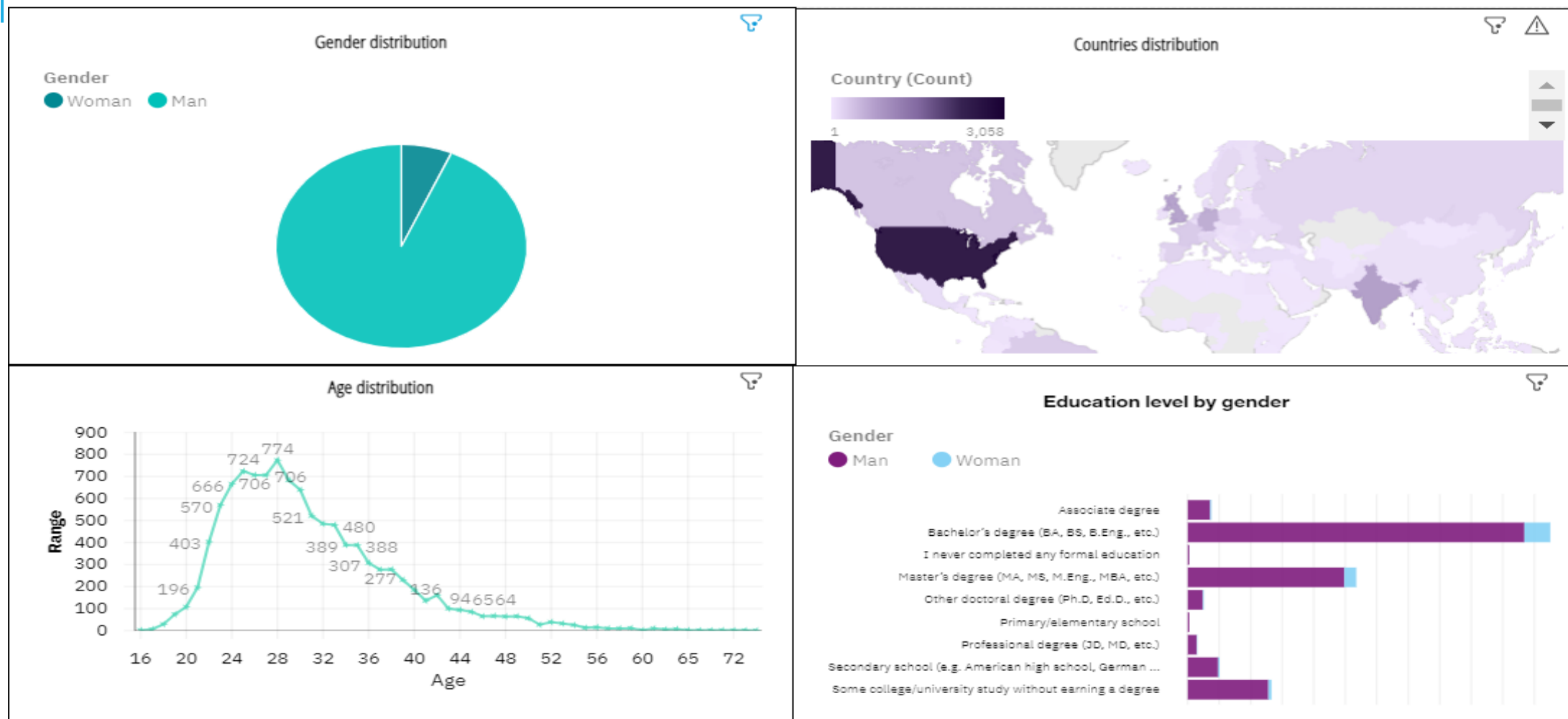
Top 10 platforms worked with



# DASHBOARD TAB 2



# DASHBOARD TAB 3



# DISCUSSION



# OVERALL FINDINGS & IMPLICATIONS

## Findings

- Majority of the respondents were from North America, 93.4% were male developers and a maximum of 774 respondents were of the age 28.
- Majority of the respondents used Linux and Docker as their operating platforms with over 4000 working with jQuery web frame.
- HTML/CSS was the most worked with language and MySQL was the most worked with database for the current year

## Implications:

- Next year Javascript language, PostgreSQL will see more growth in demand while the demand for HTML/CSS language also stays in demand.
- The language Bash/Shell/PowerShell and the database MariaDB will see a decline in demand.
- The data lacked female diversity, implying the tech industry still stays male dominated.



# CONCLUSION



We aimed to highlight the trends in the technology sector through this research.

We successfully identified the trend in programming languages and databases while also finding the current trend for operating platform and web frames.

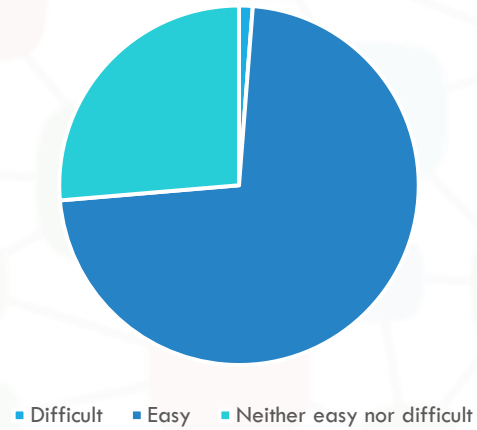
Additionally, we also analyzed the demographic distribution of the tech respondents, namely; their gender, age, country and education level.

Further research on finding out whether the trend aligns with job market may solidify the results gained from the study.

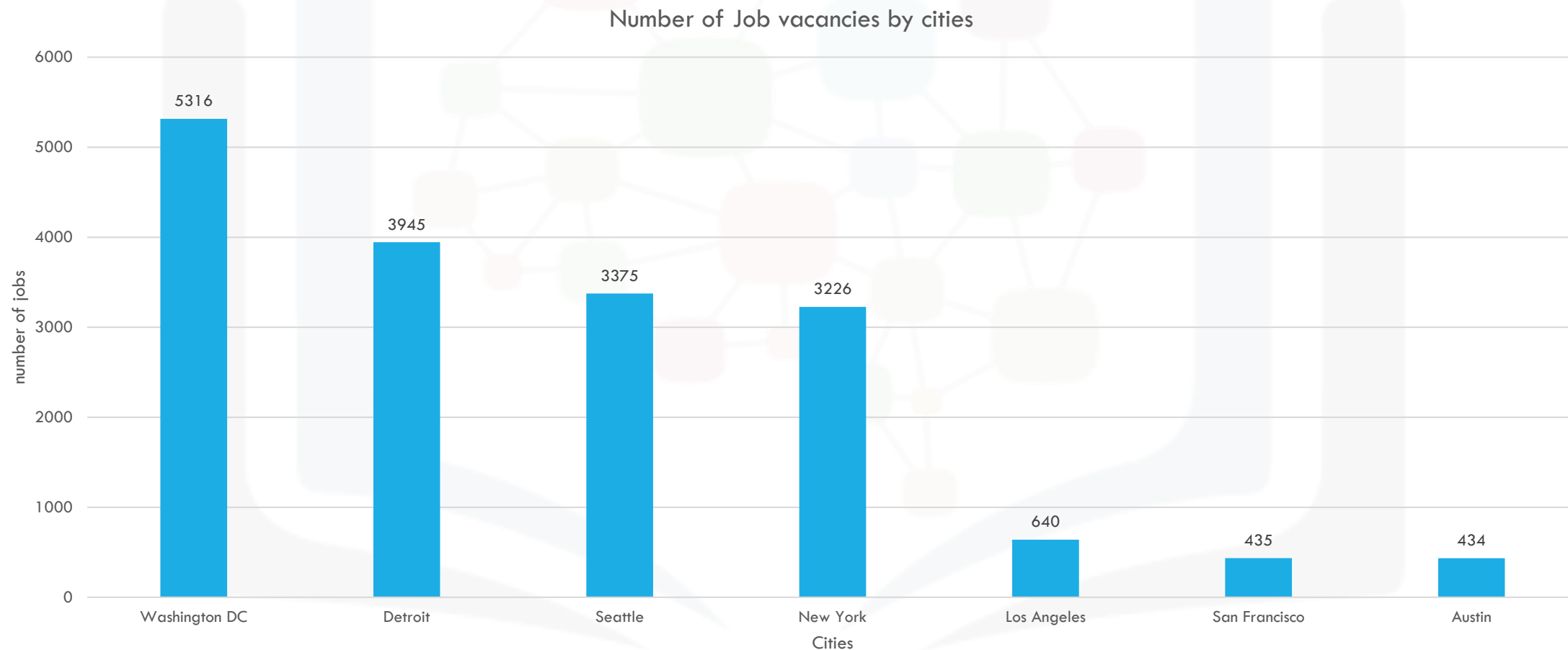
# APPENDIX



Count of Respondent



# JOB POSTINGS



# POPULAR LANGUAGES

