



# TECHNOLOGY USAGE ANAYLSIS

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3/24/22

# OUTLINE

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

# EXECUTIVE SUMMARY

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- Current Technology Usage
  - Which Language, Dataframe, Platform, and Web Frame most utilized currently?
- Future Technology Trends
  - Which Language, Dataframe, Platform, and Web Frame most desired?
- Which hold most desire compared to usage? Could this be due to up-and-coming demand for these technologies?
- Conclusion

# INTRODUCTION

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- What is this report about?
  - This is about Technology Trends both Current and Future with demographic info.
- Who is the report for
  - Those seeking to gain insight into trending languages, Databases, and plkatforms.
  - Possible Job Seekers can benefit.
- What will a reader gain by reading through this report.
  - A deeper understanding of Technology trends.

# METHODOLOGY

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- What data sources were used?
  - Utilized the Survey 5 Data, developed through surveying current technology users on current and future trends
- How was the data collected?
  - This data was provided to us for analysis through the Coursera IBM Data Analyst Certificate program.
- Data was then pulled into IBM Dashboards with Cognos Analytics for visualizing.
- See Dashboards on slides below for more info.
  - Dashboard 1 & 2– Current and Future Trends
  - Dashboard 3 – Demographic Trends.

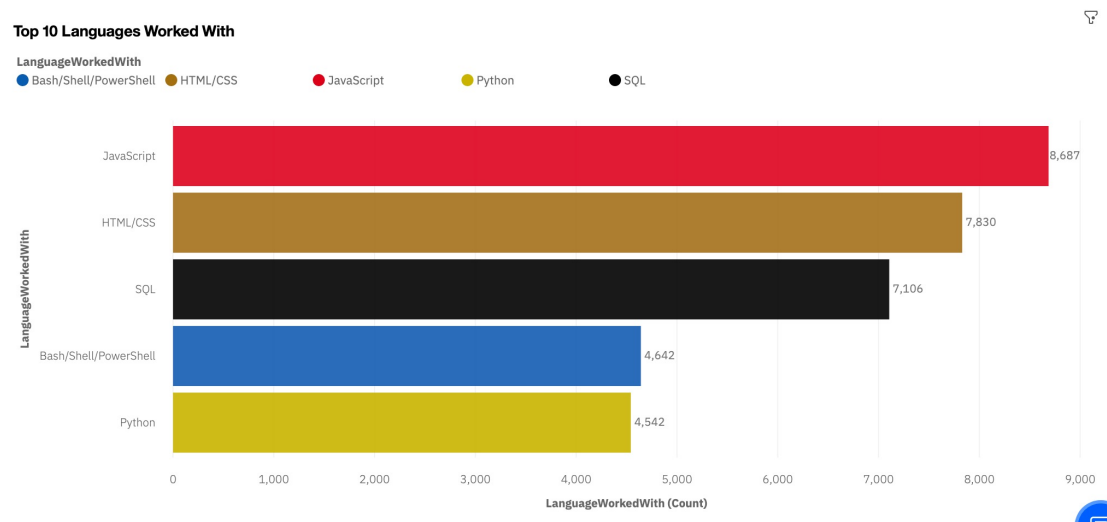
# RESULTS

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- Language: Javascript remains champ
  - Most utilized and continues to be most sought after language
- Language 2: Python
  - Python picking up steam, jumping from 4<sup>th</sup> most used to 3<sup>rd</sup> most desired.
- Database: MySQL is top Database used
  - Postgre SQL made a very large jump in desire however.
- Platform: Windows and Linux top used
  - Docker and AWS gaining steam, Linux continues to be top sought after and used.
  - Windows seems to be moving to the past from 2<sup>nd</sup> most used to 3<sup>rd</sup> most desired.
- Web Frames:
  - JQuery, React, Angular most popular used
  - React, Angular top sought after following by up and comer Vue.
  - Vue making biggest jump from used to desired. Biggest opportunity?

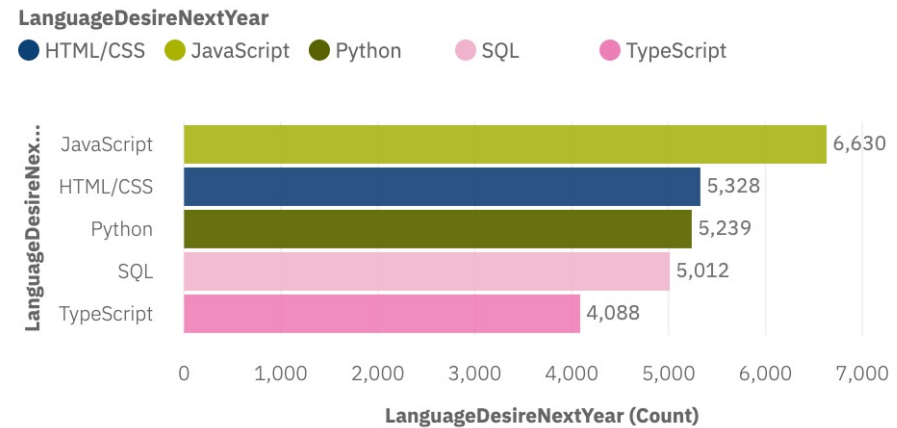
# PROGRAMMING LANGUAGE TRENDS

## Current Year



## Next Year

### Top 10 Languages Desired



# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- 1. Javascript, HTML among top used and sought-after languages.
- 2. Python jumped from 5th most used to 3<sup>rd</sup> most desired
- 3. Bash/Shell/Powershell on decline
  - Dropped from 4th most used to 7<sup>th</sup> most desired.

## Implications

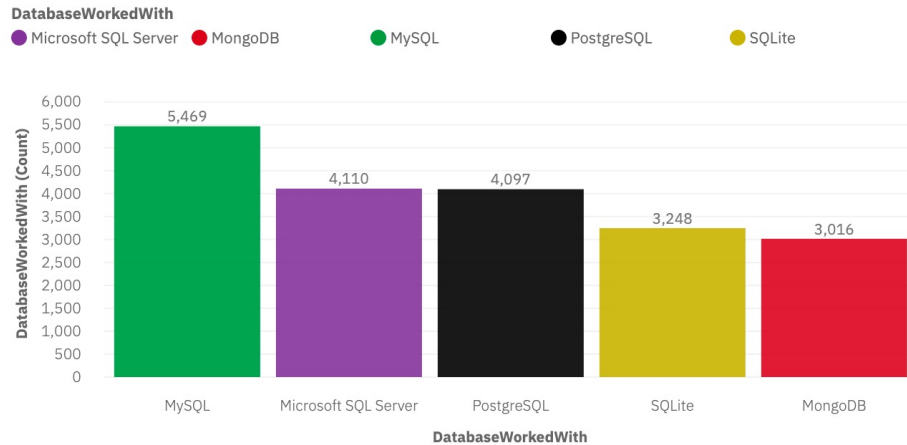
- 1. Given Javascript and HTML are top used and top desired to be learned, shows growth in this field and job opportunities.
- 2. Python job field is growing as shown by increase in desire to learn.
- 3: Not worth learning due to declining field. Can wait to learn for career seekers.



# DATABASE TRENDS

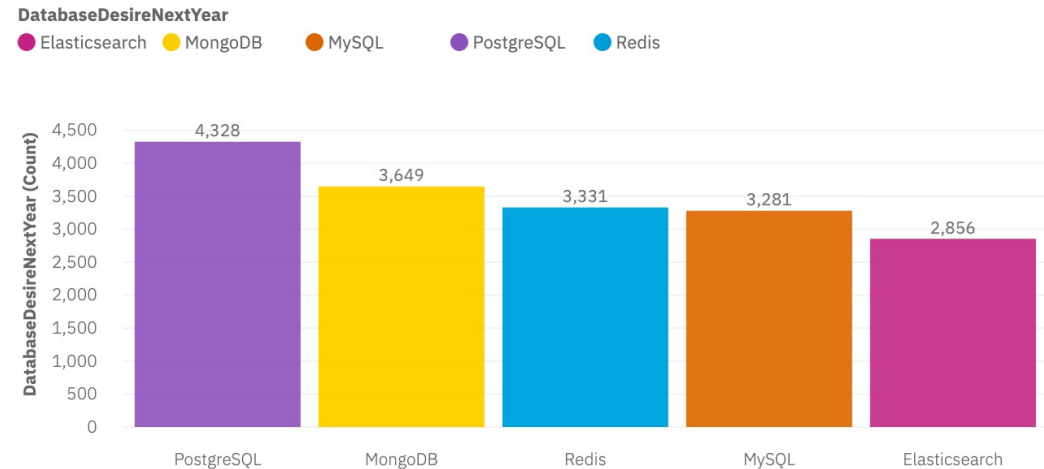
## Current Year

Top 5 Databases Worked With



## Next Year

Top 5 Databases Desired



# DATABASE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

1. PostGre SQL beating out MySQL for most desired
  1. Post Gre from 3<sup>rd</sup> most used to 1<sup>st</sup> most desired.
2. Although Microsoft 2<sup>nd</sup> most used Database, below 5<sup>th</sup> most desired next year.
3. MySQL dropped to 4<sup>th</sup> most desired from 1<sup>st</sup>.

## Implications

1. Most learn PostGre SQL to stay competitive next year.
2. Microsoft SQL losing steam and not as desired going forward.
3. May be worth continuing to learn MySQL even with decline in desire. Could be triggered from already understanding it.

# DASHBOARD

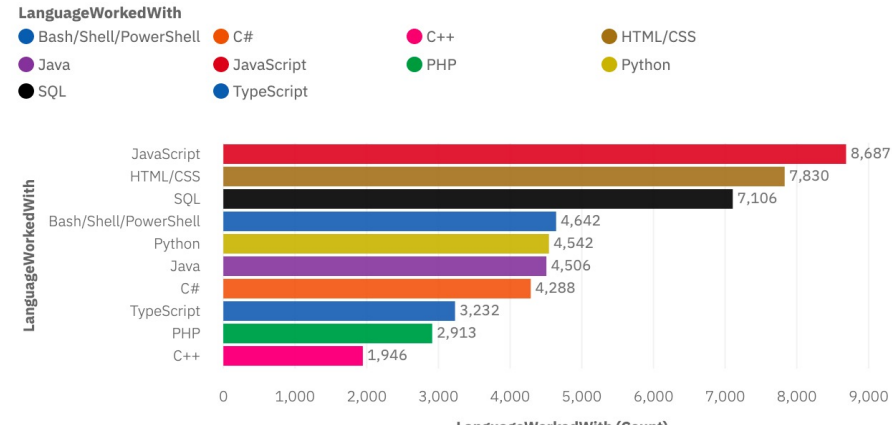
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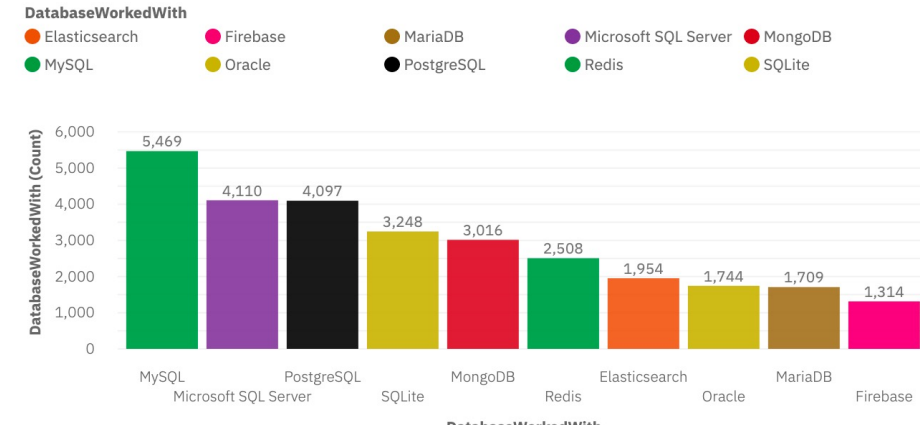
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# DASHBOARD TAB 1

Top 10 Languages Worked With



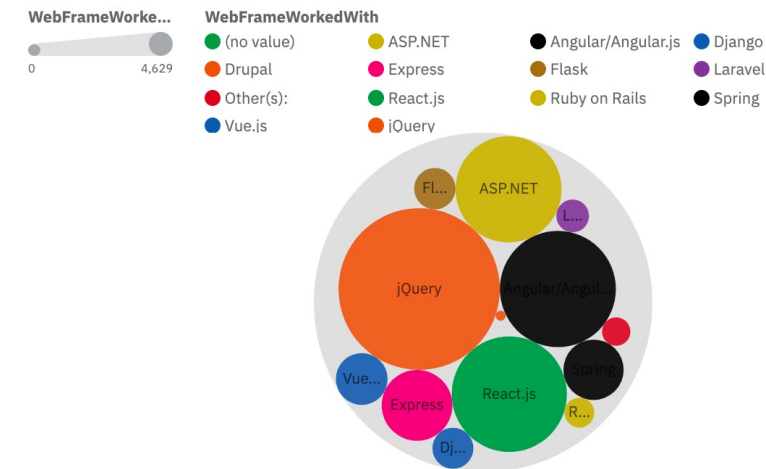
Top 10 Databases Worked With



Platforms

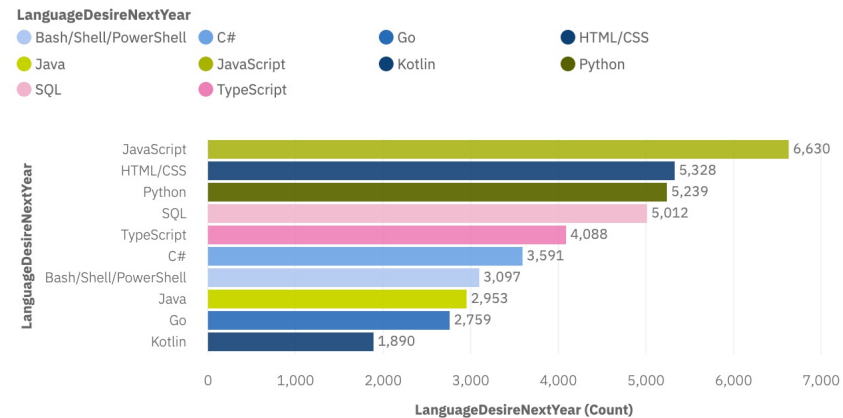


Top 10 Web Frames

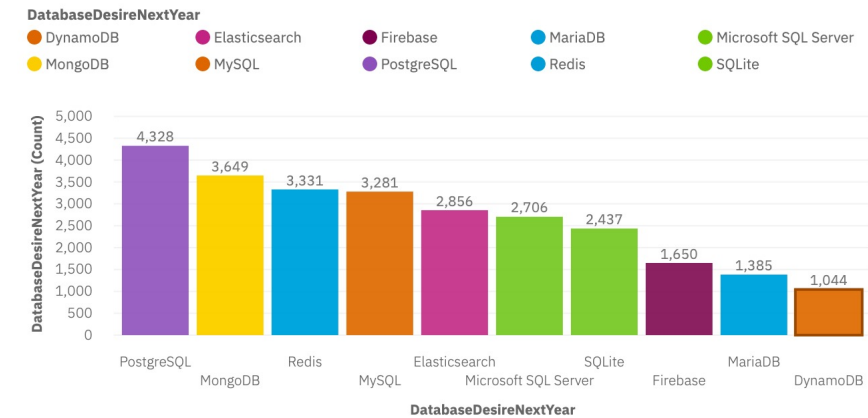


# DASHBOARD TAB 2

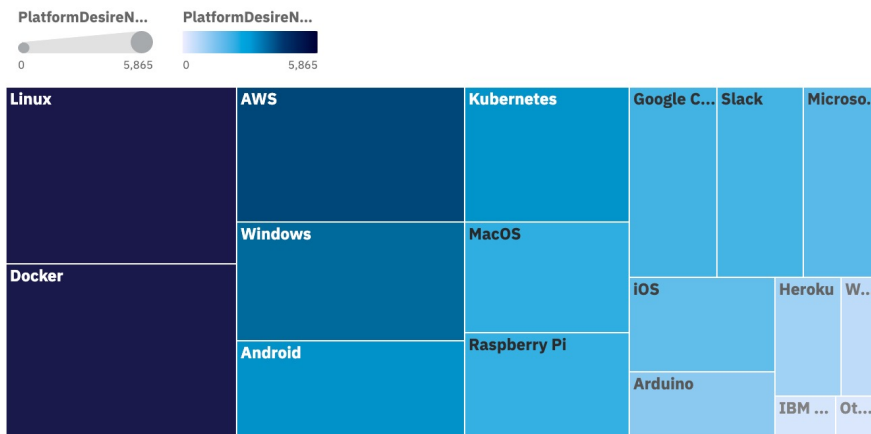
## Top 10 Languages Desired



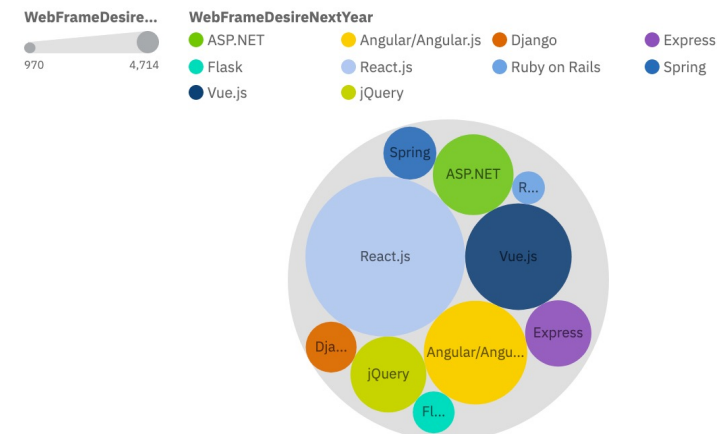
## Top 10 Databases Desired



## Platform Desire Heat Map

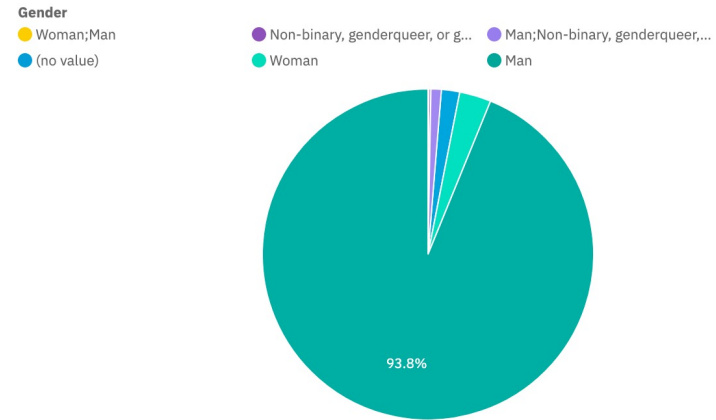


## Top 10 Web Frames Desired

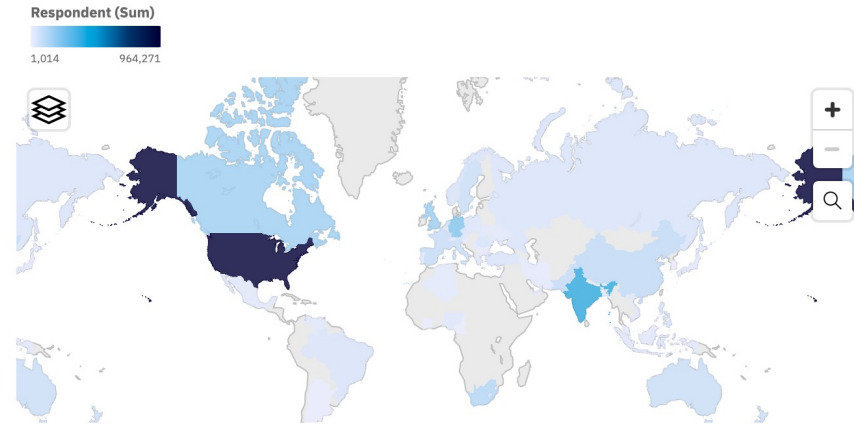


# DASHBOARD TAB 3

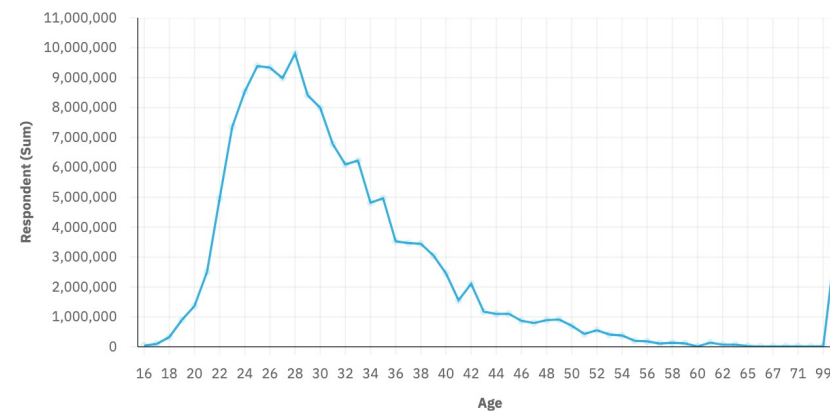
## Respondents based on Gender



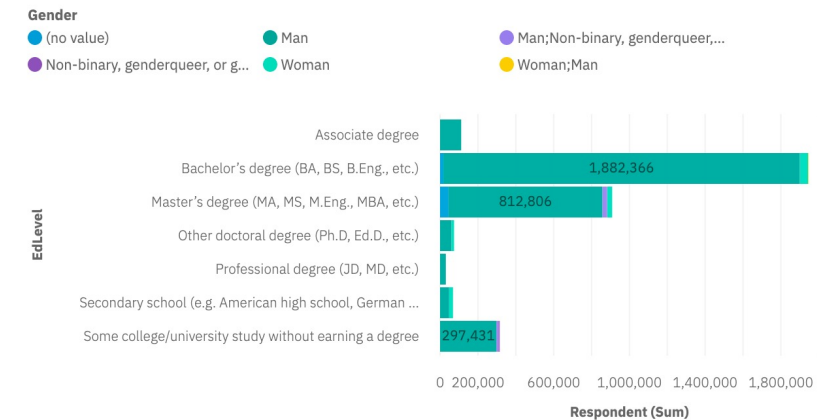
## Respondents Countries



## Respondents Age



## Respondent Education Level by Gender



# DISCUSSION

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- Language:
  - Is Javascript worth learning to stay competitive in today's field?
    - Yes, while Python has a lot of growth, JavaScript and HTML knowledge can help you be well rounded.
- Database:
  - PostgreSQL taking out MySQL for top used database?
- Platform:
  - Linux and Docker taking over helm from Windows.
- Web Frame:
  - Vue.js making biggest jump for desired Web Frame. While React and Angular continue to be most used and desired. J Query on decline.



# OVERALL FINDINGS & IMPLICATIONS

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## Findings

- Python is growing in demand while Javascript stays in high demand.
- Postgre SQL most in demand SQL going forward, with MySQL a close 2<sup>nd</sup>.
- Docker and Linux growing over Windows

## Implications

- Python job opportunity growing.
- Possibly worth learning over MySQL.
- Docker and Linux soon to be more in demand than Windows Web Frame Knowledge.



# CONCLUSION

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- Python growing field with uptick in desire to learn and room for growth.
- Javascript stays in high demand and usage, making it a strong skill to learn.
- Postgre SQL more important in future then MySQL as seen by major uptick in desire.
- Linux and Docker knowledge outweighing Windows Platform.
- JQuery Web Frame losing steam with React taking helm. Vue makes largest jump in desire to learn. Vue worth learning to stay ahead of curve.

# APPENDIX



## Platform Desired

Respondent (Sum)  
3,752,980 73,486,491

### PlatformDesireNextYear

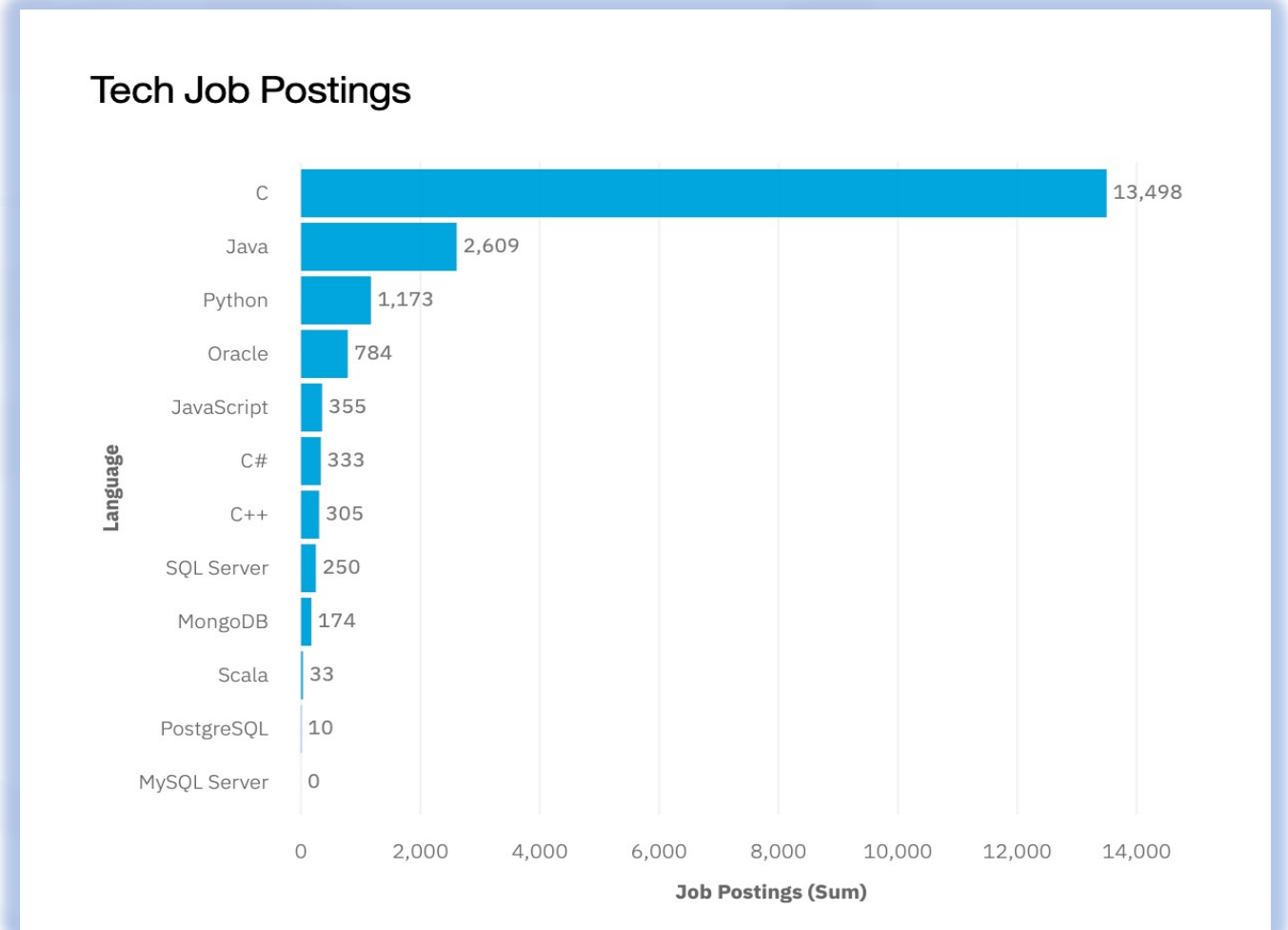
- AWS
- Android
- Arduino
- Docker
- Google Cloud Platform
- Heroku



Additional Word Cloud to compare to Platform Used.

# GITHUB JOB POSTINGS

In Module 1 you have collected the job postings data using GitHub API in a file named “github-job-postings.xlsx”. Present that data using a bar chart here. Order the bar chart in the descending order of number of job postings.



# POPULAR LANGUAGES

In Module 1 you have collected the job postings data using web scraping in a file named “popular-languages.csv”. Present that data using a bar chart here. Order the bar chart in the descending order of salary.

