Analysis of Tech Skills in Today's Job Market

Kyle Pelling

4/11/22

OUTLINE

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

EXECUTIVE SUMMARY

- JavaScript is the most valuable programming language, and it appears to remain in high demand for the future.
- MySQL and PostgreSQL are two of the most demanded databases.
- Linux is the most widely used platform and it should remain in high demand.
- jQuery and React.js are two of the most demanded web frames.
- The 20 – 40 age group is clearly predominant in the tech world.
- Washington DC has the most job opportunities in the tech world.
- Python is the most common skill in job postings.
- What salaries do people earn based on their technical skills?

INTRODUCTION

- In order to remain competitive and retain top talent, we must answer the following questions to make business decisions.
- What skills are used and what skills do people want to learn?
  - Programming Languages
  - Databases
  - Platforms
  - Web Frames
- What is the age distribution of people with tech jobs?
- Which cities have the most tech jobs? What are the most sought-after skills in job postings?
- What salaries do people earn based on their technical skills?

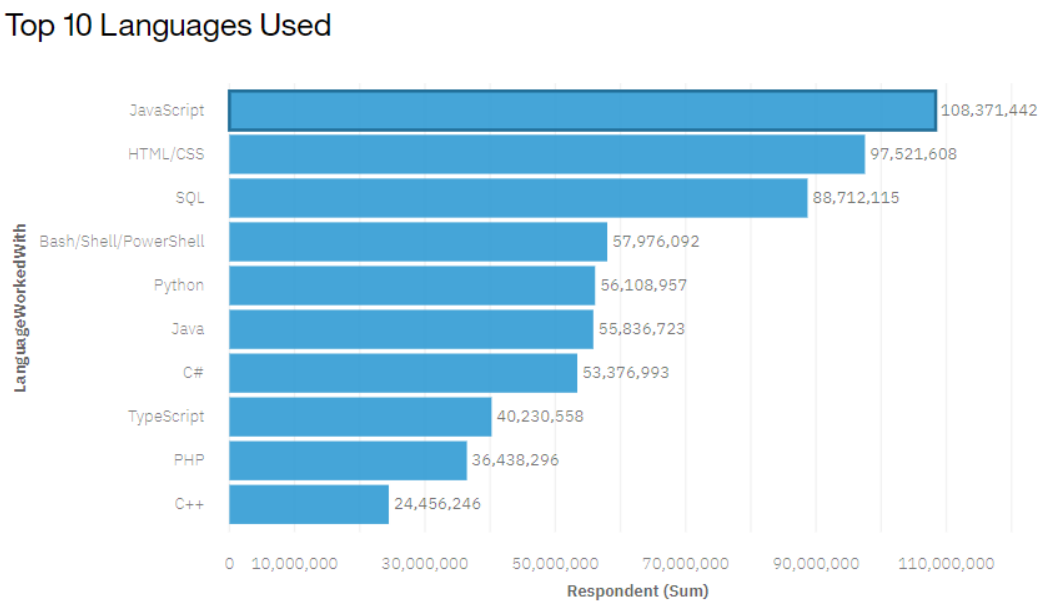
METHODOLOGY

- To answer these questions, I used the following methods:
  - Web scraping a list of thousands of job postings.
  - Wrangling and analyzing survey data of thousands of people with tech jobs.
  - Visualizing relevant findings in charts and graphs.

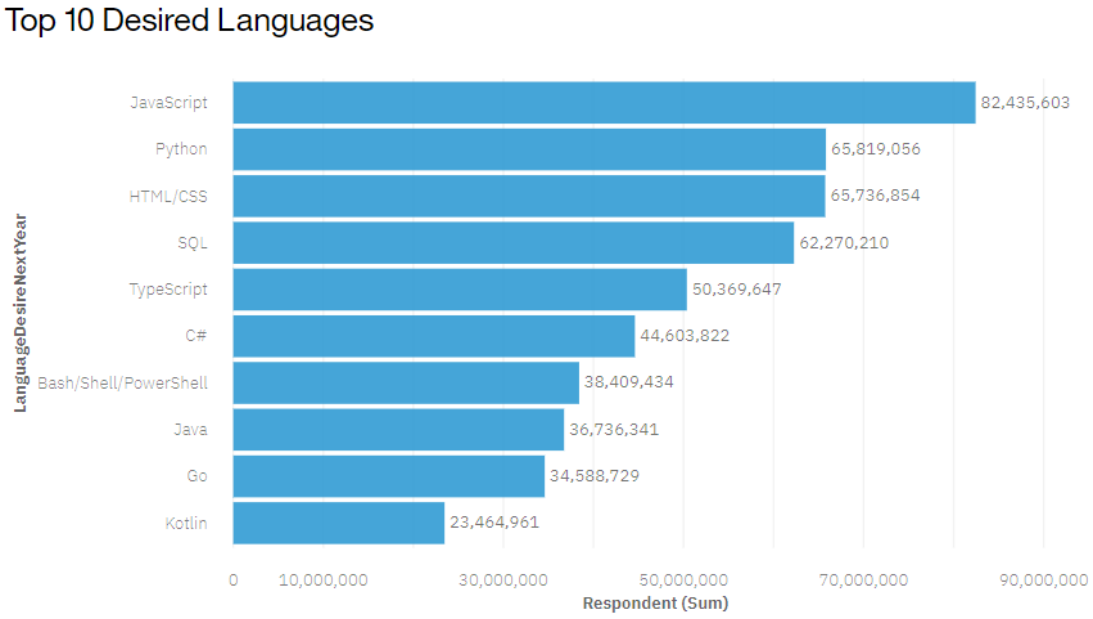
RESULTS

PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

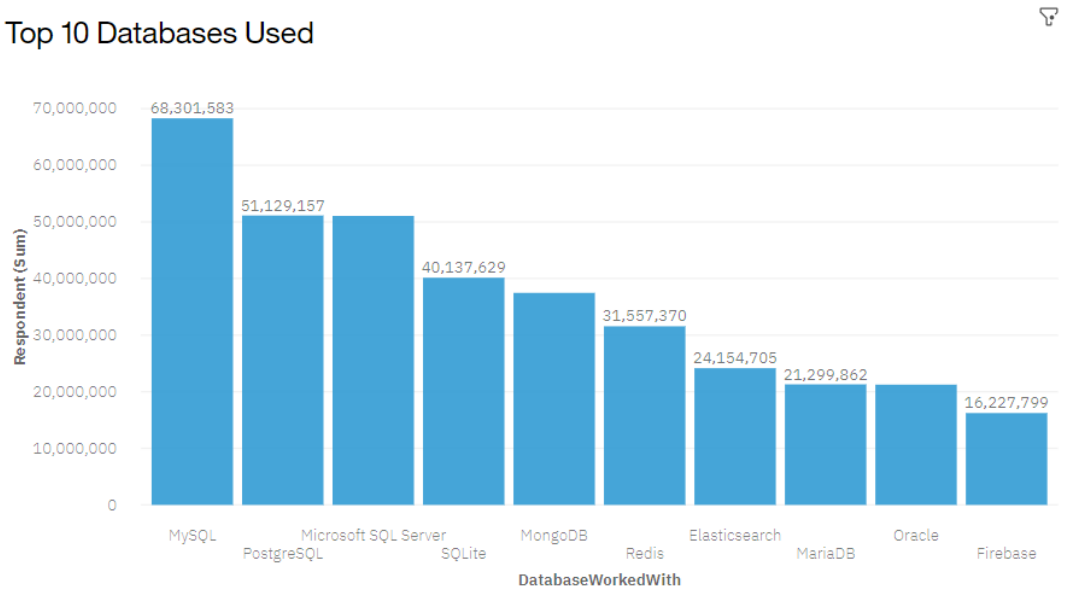
- JavaScript is the most used language currently.
- It is also the language that most people want to learn.

Implications

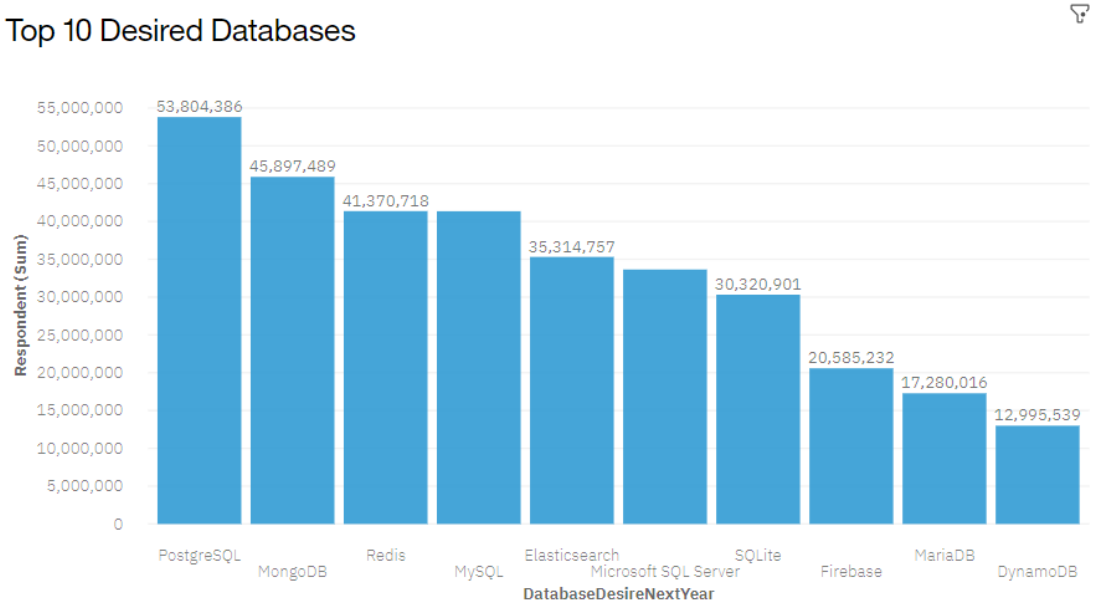
- JavaScript is a language that we should use in our own daily business practices.
- We must hire top talent with this skill.

DATABASE TRENDS

Current Year



Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL is currently the most used database.
- PostgreSQL is the database that most people want to learn.

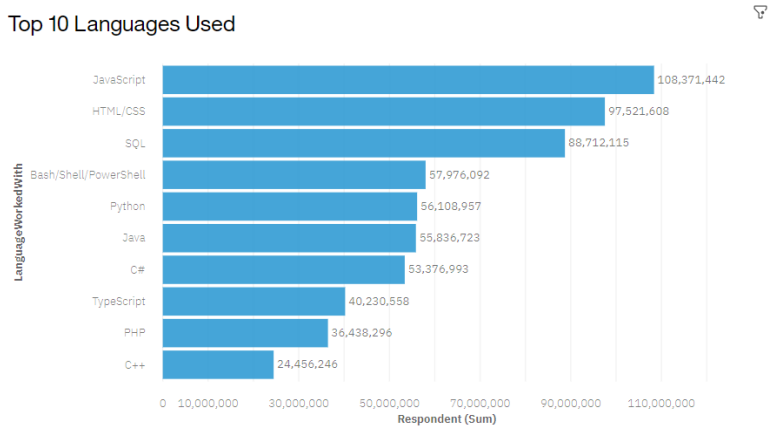
Implications

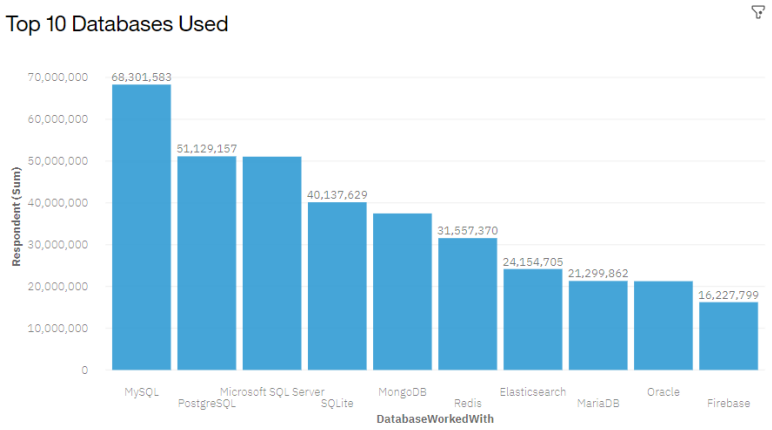
- We should continue to use MySQL and introduce PostgreSQL to all current staff.
- We should seek talent with both skills, as well as other variations of SQL.

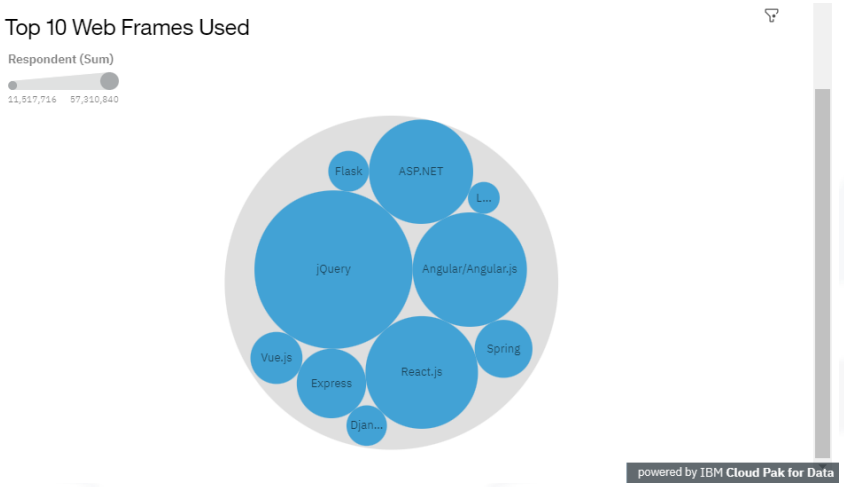
DASHBOARD

https://dataplatform.cloud.ibm.com/dashboards/d8ab249d-81d7-46da-b9fe-dcea2380919a/view/553bb8220ebc02d753d4cce40791290579617759b1bbd701d3817b4908687397f36816c5c8794e0c8b470c62f7b91351cf

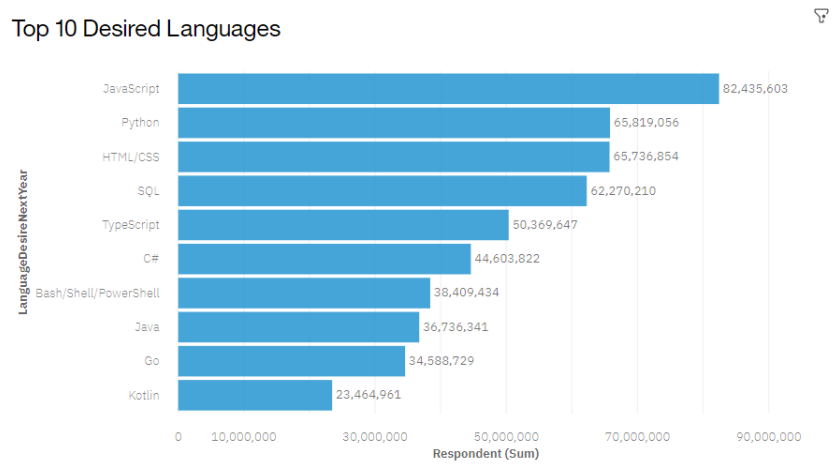
DASHBOARD TAB 1

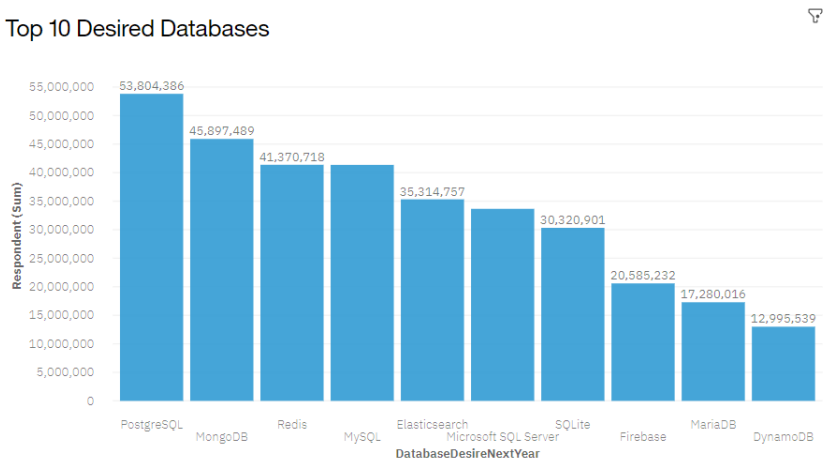


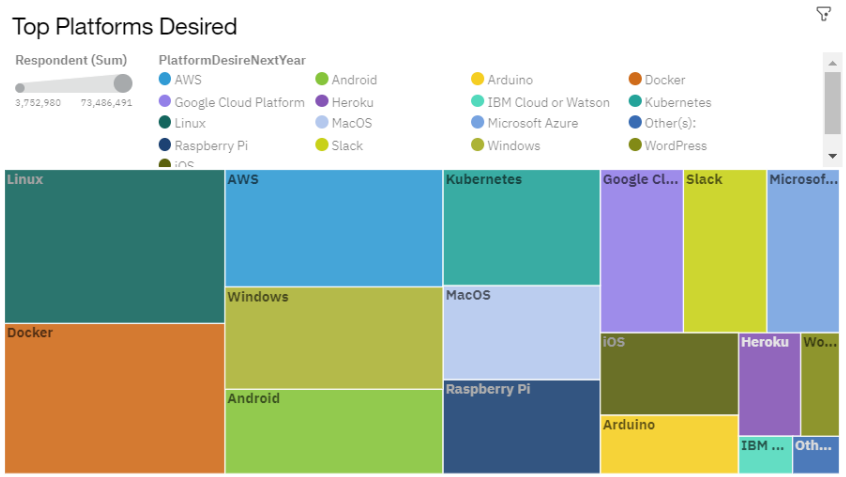


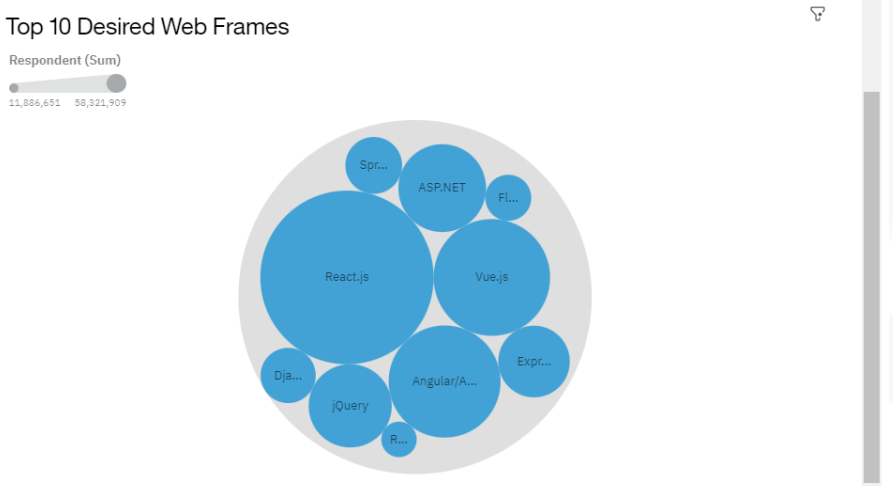


DASHBOARD TAB 2

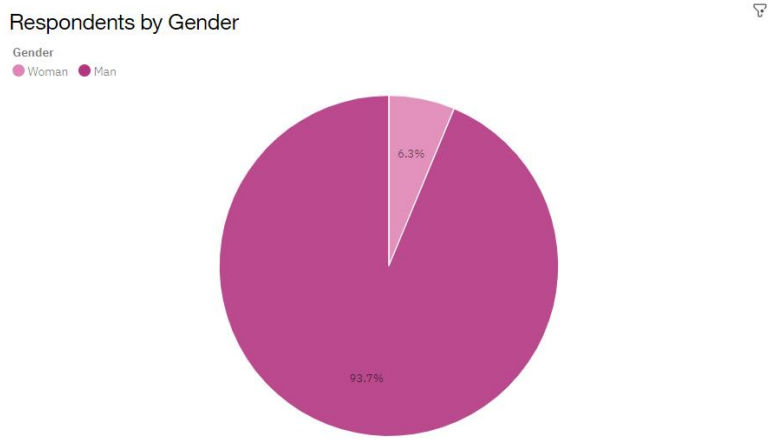


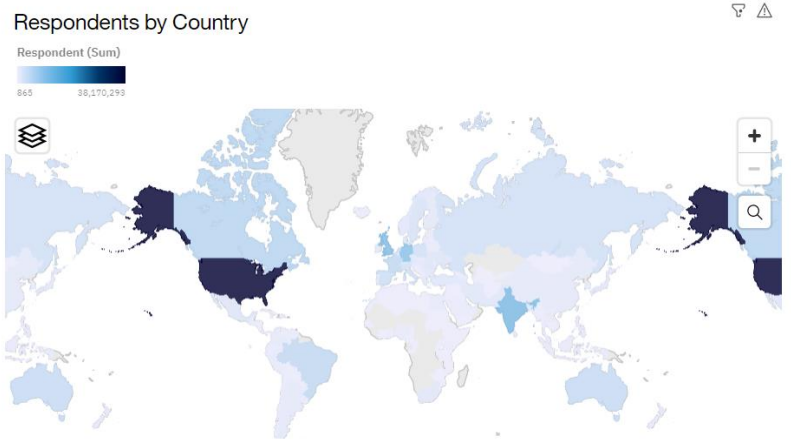


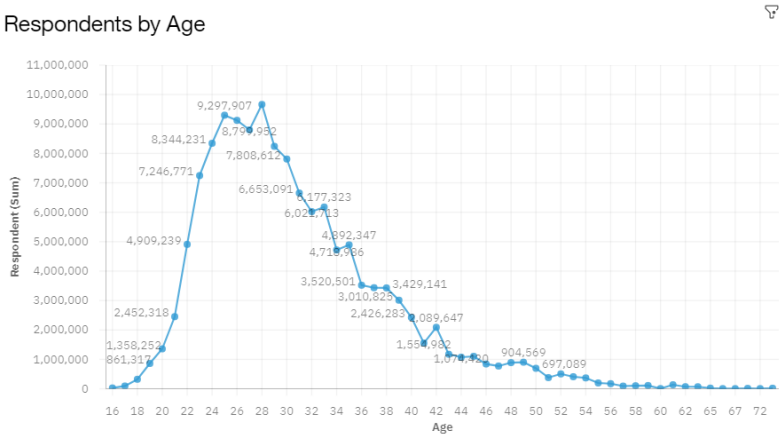


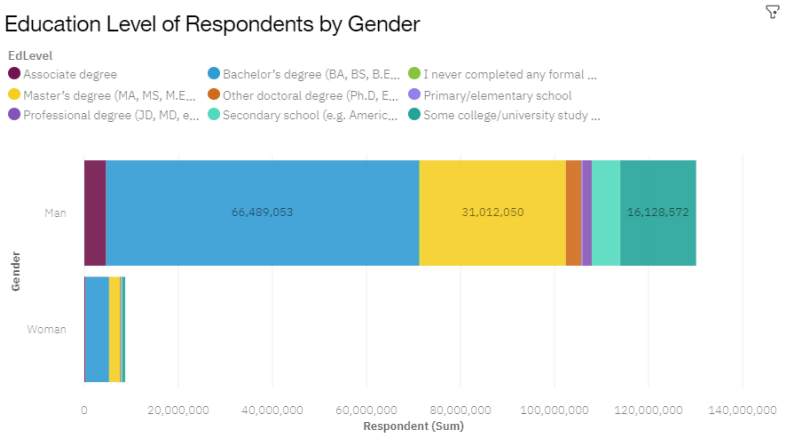


DASHBOARD TAB 3









DISCUSSION

OVERALL FINDINGS & IMPLICATIONS

Findings

- Some of the top skills include Python, JavaScript, and various forms of SQL databases.
- Most jobs are held by young people.
- Tech jobs often pay well over $100,000.
- Washington DC is an emerging tech hub.

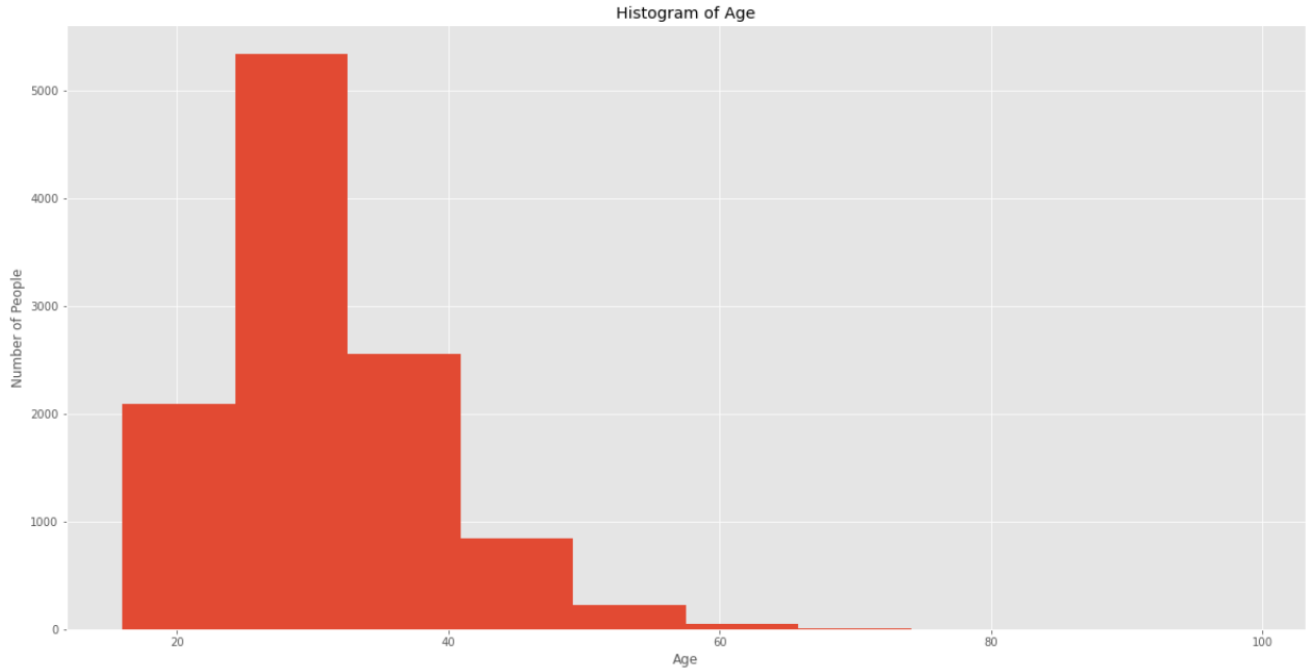
Implications

- The company is advised to seek top talent with desired skills.
- New graduates should be hired and trained with all the most relevant skills.
- Salaries must be competitive to entice the best workers.
- The company may consider establishing business in and sourcing talent from the Washington DC area.

CONCLUSION

- Tech jobs continue to grow, and salaries grow with them.
- Retaining top talent is a must to survive in this competitive business environment.
- Regular analysis should be done on the job market in order to keep the company informed on next steps to take.

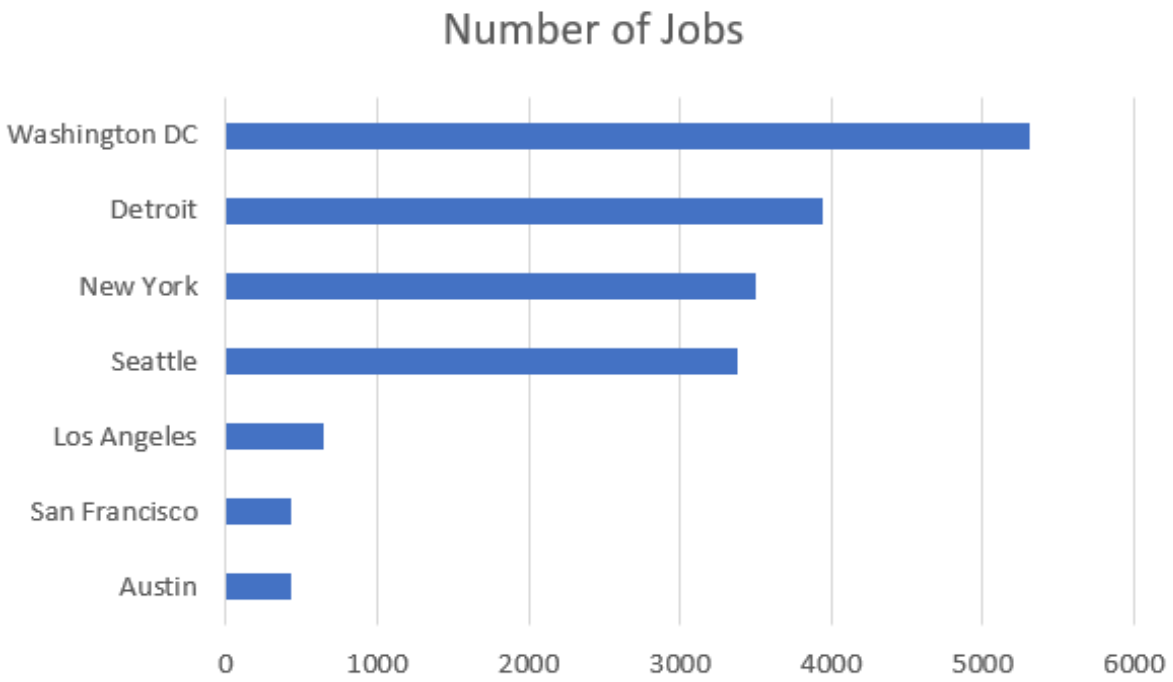
APPENDIX

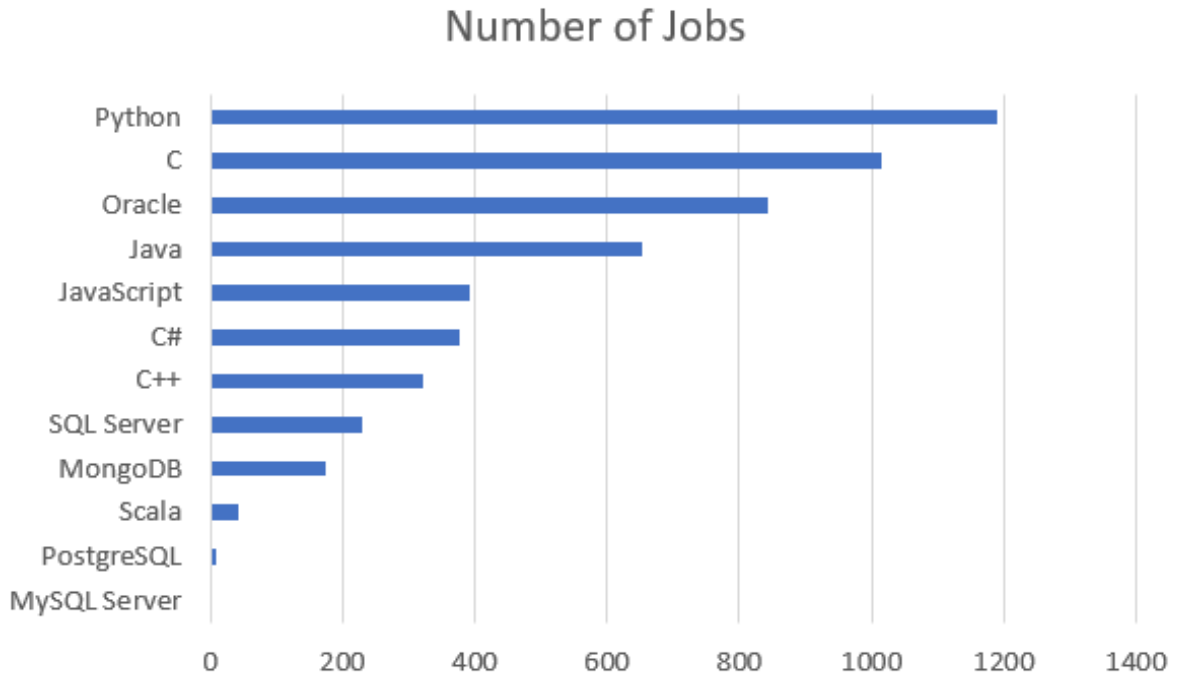


Also noteworthy…

By far, the 20 – 40 age group dominates the industry. It would be wise to hire new graduates and train them early on to retain talented staff.

GITHUB JOB POSTINGS





POPULAR LANGUAGES