Identifying Future Skill requirements

Tireni

28/07/24

OUTLINE

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

IBM Developer

SKILLS NETWORK

EXECUTIVE SUMMARY

- Data taken from online sources and was then cleaned, analyzed and presented on a dashboard.

- Programming Languages:
  - Java still likely to be the most popular language
  - Html/css likely to still be very relevant in the future
  - Likely future demand for python & type script

- Databases:
  - Mysql , sqlite and other top databases unlikely to keep their current demand/popularity

INTRODUCTION

- In order to keep pace with changing technologies & remain completive, the firm must make sure that it's staff still have the required skills that will be in demand in the future.

- To accomplish this, it's important to analyze trends from:
  - Surveys
  - Job postings
  - Training Portals

- So that we can identify what skills are likely to be in demand for:
  - Languages
  - Databases

METHODOLOGY

- ## Data Collection:
  - ### Collected from a survey, job postings & training portals via web scraping & apis
- ## Data Wrangling
  - ### Finding & removing duplicates
  - ### Inputting missing values
  - ### Normalizing data
- ## Expletory Data Analysis
  - ### Determining data distribution
  - ### Finding & removing outliers
  - ### Finding correlation
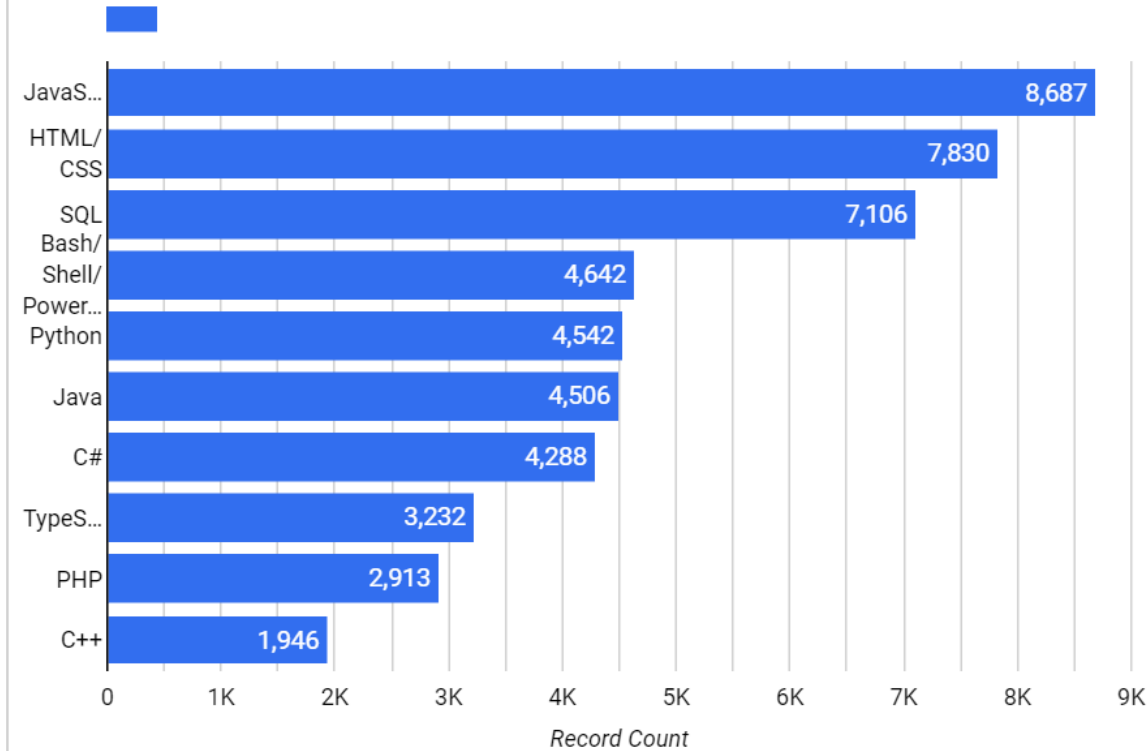- ## Data Visualization
  - ### Google Looker Studio Dashboard

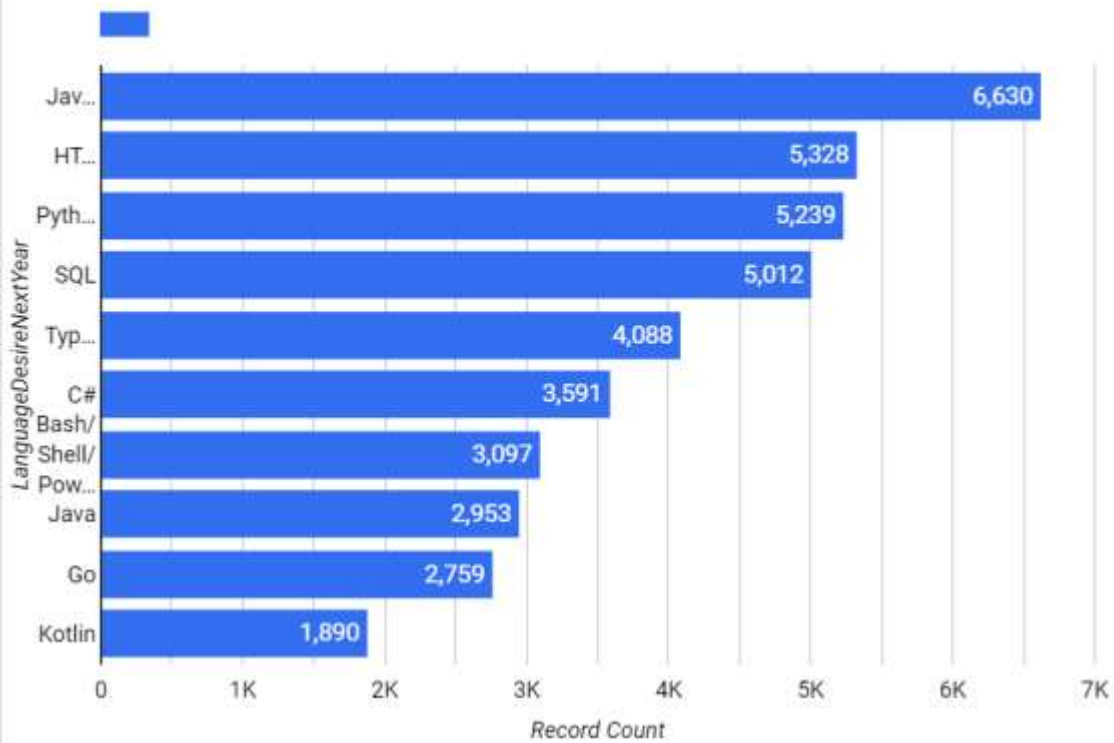# RESULTS

PROGRAMMING LANGUAGE TRENDS

Current

Top 10 LanguageWorkedWith

Language	Record Count
JavaS...	8,687
HTML/CSS	7,830
SQL	7,106
Bash/Shell/Power...	4,642
Python	4,542
Java	4,506
C#	4,288
TypeS...	3,232
PHP	2,913
C++	1,946

Record Count

Next Year

Top 10 LanguageDesireNextYear

Language	Record Count
Jav...	6,630
HT...	5,328
Pyth...	5,239
SQL	5,012
Typ...	4,088
C#	3,591
Bash/Shell/Pow...	3,097
Java	2,953
Go	2,759
Kotlin	1,890

Record Count

IBM Developer

SKILLS NETWORK

PROGRAMMING LANGUAGE TRENDS – FINDINGS & IMPLICATIONS

Findings

- Python jumped from 6th to 3rd nearly overtaking html/CSS
- Type script jumped from 8th to 5th
- Java and html/CSS both retain their positions within the top 2, although java is clearly more dominant
- Bash/Shell/PowerShell dropped down to 7th from 4th

Implications

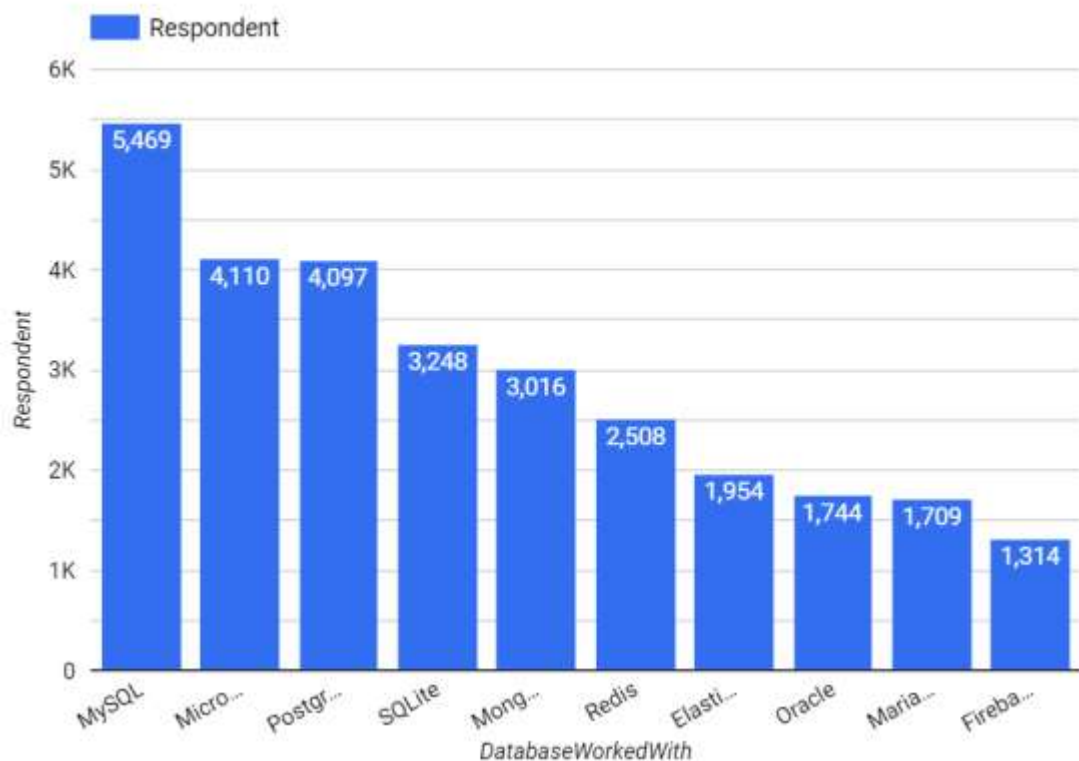- JavaScript is still the most popular language ,however html/css may get overtaken by python
- The demand for user's experienced with python is increasing significantly.
- While not as significant as python the demand for type script is increasing
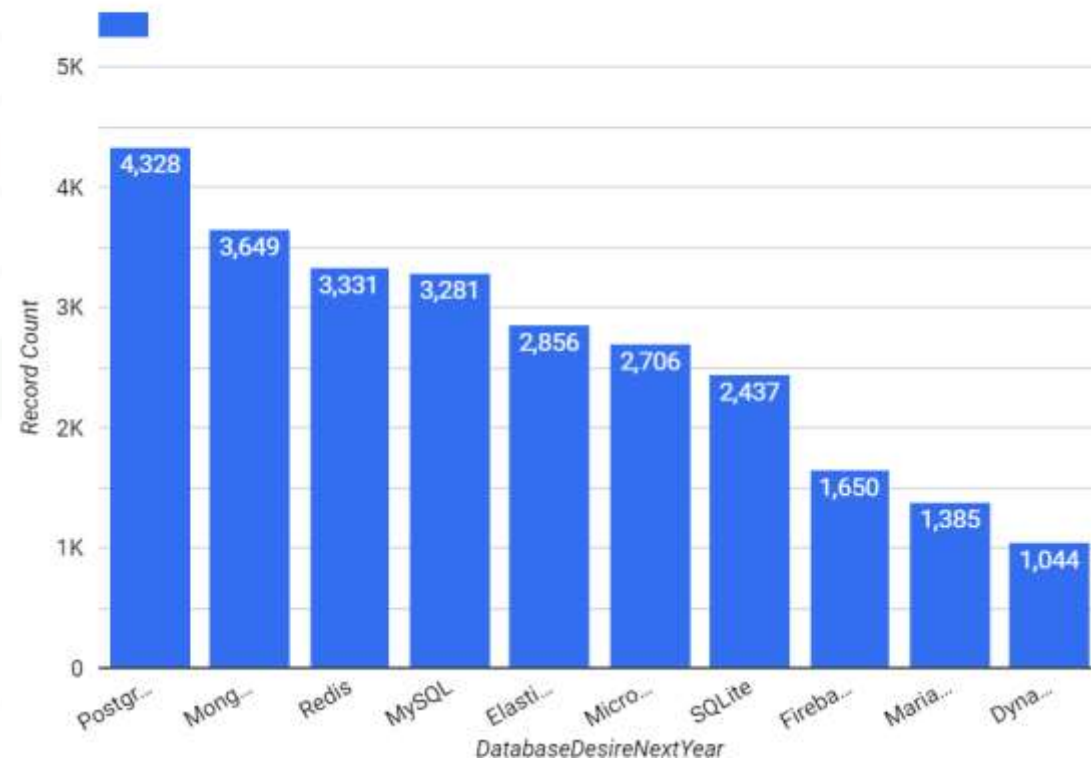- The need to learn bash/shell/PowerShell is

DATABASE TRENDS

Current

Top 10 DatabaseWorkedWith

Next Y

Top 10 DatabaseDesireNextYear.

IBM Developer

SKILLS NETWORK

DATABASE TRENDS – FINDINGS & IMPLICATIONS

Findings

- Significant decrease in demand for mysql & sqlite
- Mysql is currently the most used database
- Significant increase in demand for postgre,mongoDB and redis
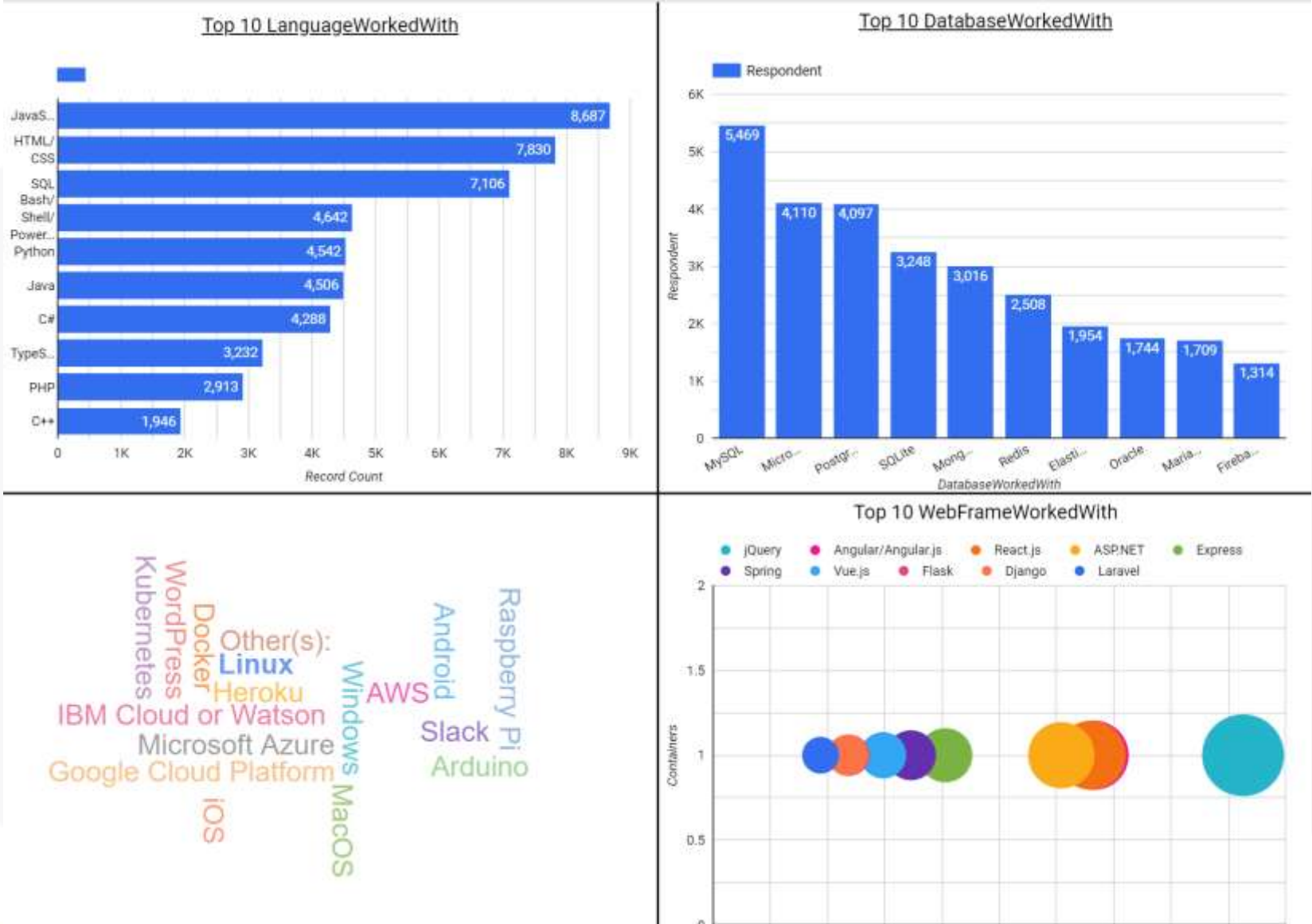
Implications

Overall database trend shows that the current popular databases may lose their standing due to interest going elsewhere
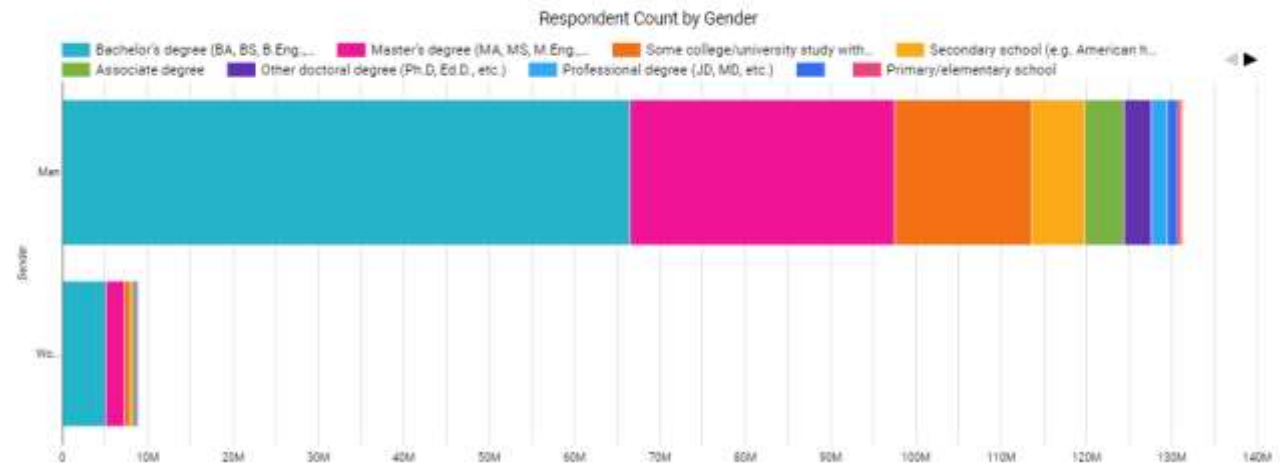
IBM Developer

SKILLS NETWORK

DASHBOARD

https://lookerstudio.google.com/reporting/17c757bd-e58b-47c9-b139-e1f7093b065b

IBM Developer

SKILLS NETWORK

DASHBOARD TAB 1

Top 10 LanguageWorkedWith

Top 10 DatabaseWorkedWith

Top 10 WebFrameWorkedWith

DASHBOARD TAB 3

Respondent classified by Gender

Respondent Count by Age.

Respondent Count for Countries.

Respondent Count by Gender

IBM Developer

DISCUSSION

OVERALL FINDINGS & IMPLICATIONS

Findings

- Top languages seem too keep their relevancy based on interest
- Top databases seem to lose their relevancy & demand based on interest

Implications

- Learning current top languages like java is still viable. However, it should be noted that there's increasing interest in the languages python & typescript
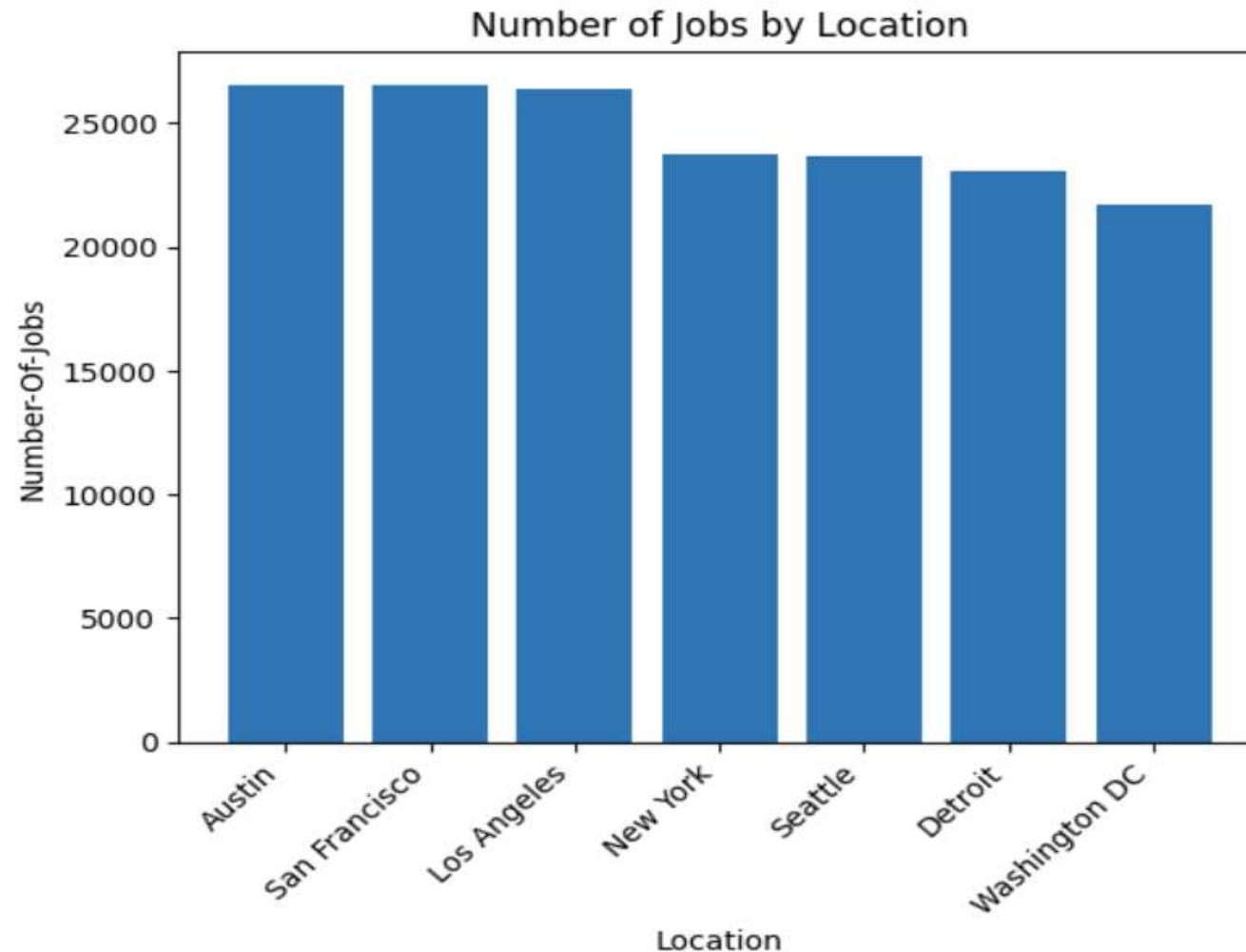- Learning current top databases might not

CONCLUSION

- For languages I'd recommend learning:
  java, html/CSS, python & type script

- For databases I'd recommend knowing multiple as future interests seems to differ from current use

APPENDIX

JOB POSTINGS

Number of Jobs by Location

POPULAR LANGUAGES

Language by Salary