CAPSTONE PROJECT - FINAL PRESENTATION

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IBM Developer

SKILLS NETWORK

OUTLINE

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

EXECUTIVE SUMMARY

- Trends in demands for types of Programming Language skills indicate constant upskilling is advisable.
- Trends in demands for types of Databases indicate a reasonably stable demand in the Top 10 Databases.
- Men vs Women Demographics in Tech.
- Age Demographics in Tech.

INTRODUCTION

- Programming Languages reviewed.
- Database types reviewed.
- Platforms reviewed.
- WebFrames reviewed.

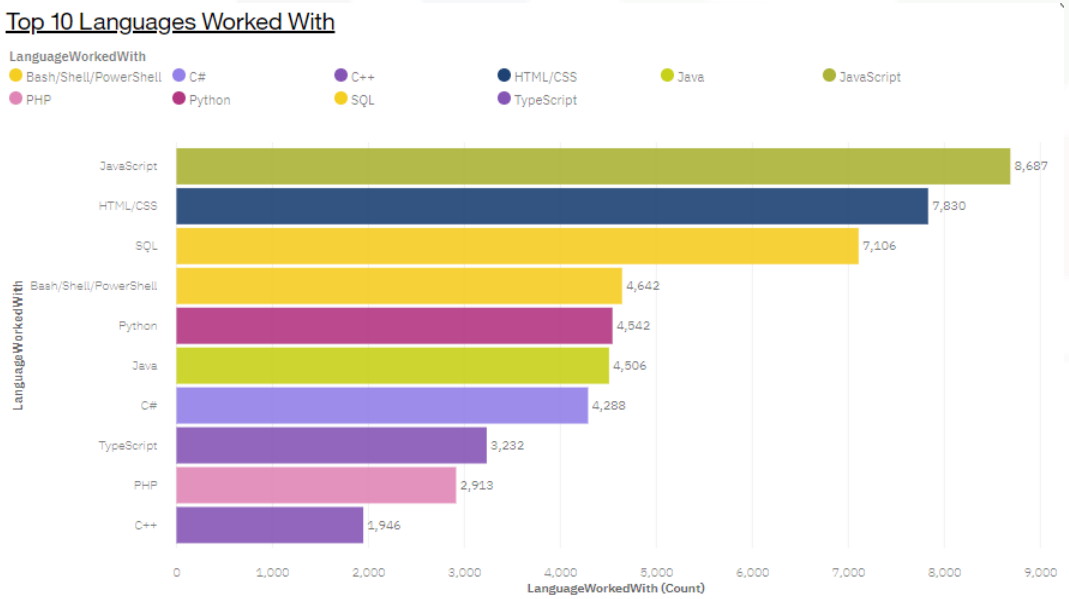
METHODOLOGY

- Data collection via Python API.
- Data collection via Python Web Scraping.
- Data cleaning and wrangling with SQL commands within Python.
- Data analysis with Python panada and numpy libraries.
- Data visualization using Python libraries Matplotlib and Seaborn.
  - Bar Charts
  - Pie Charts
  - Line Charts
  - Map Charts
  - Word Charts

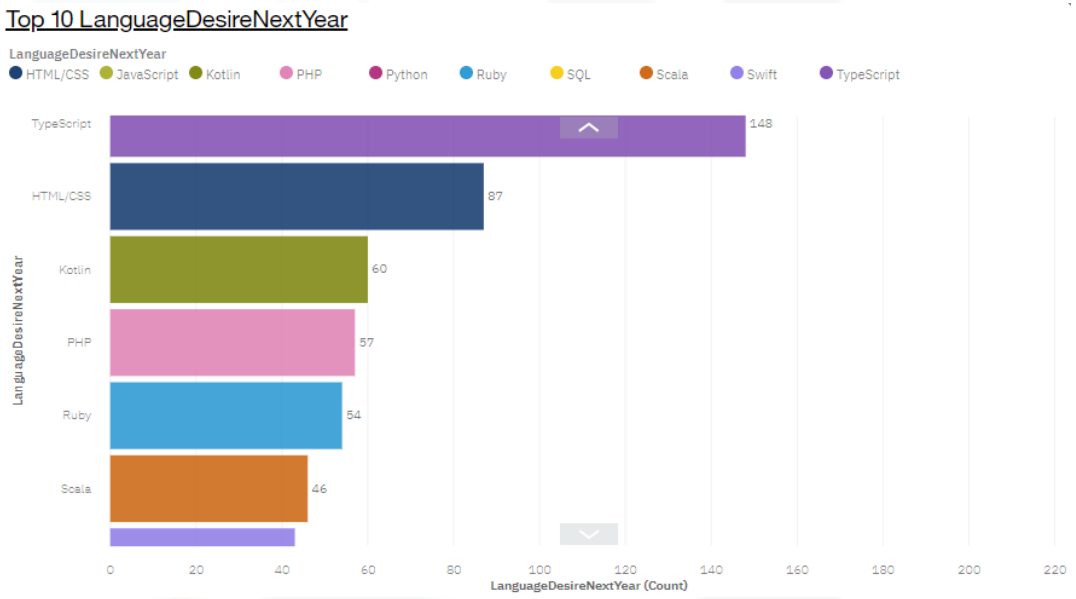
RESULTS

PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

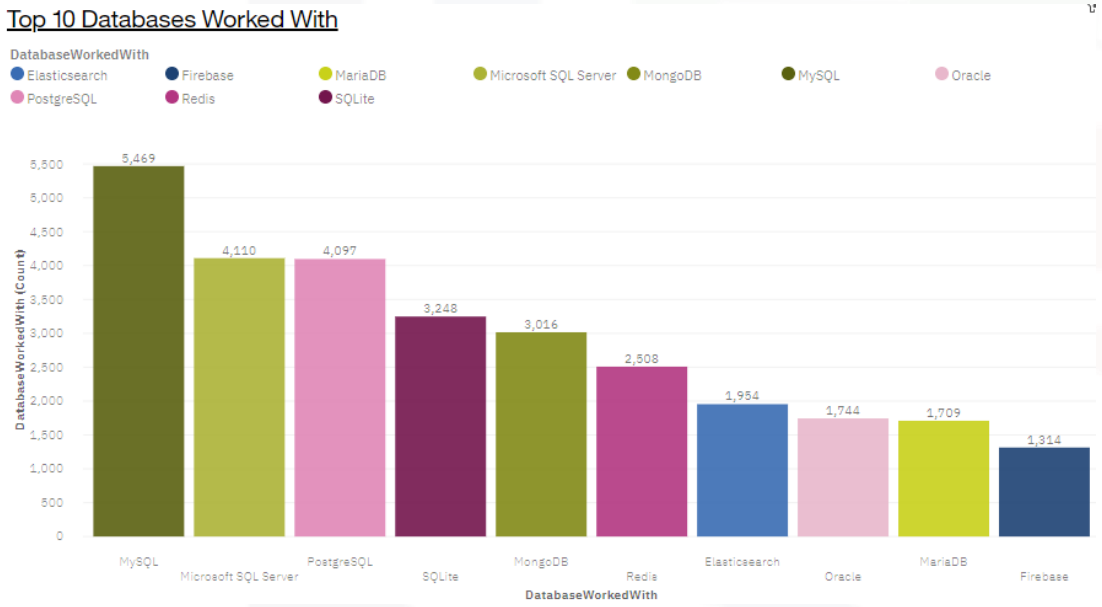
- The Top 10 Languages used in the current year are different to the Top 10 Languages desired to be learnt next year.
- HTML/CSS and PHP are consistently in the Top 10 for current and next “desired” year.
- The number of datapoints in the DesireNextYear data is significantly less than the current year data.

Implications

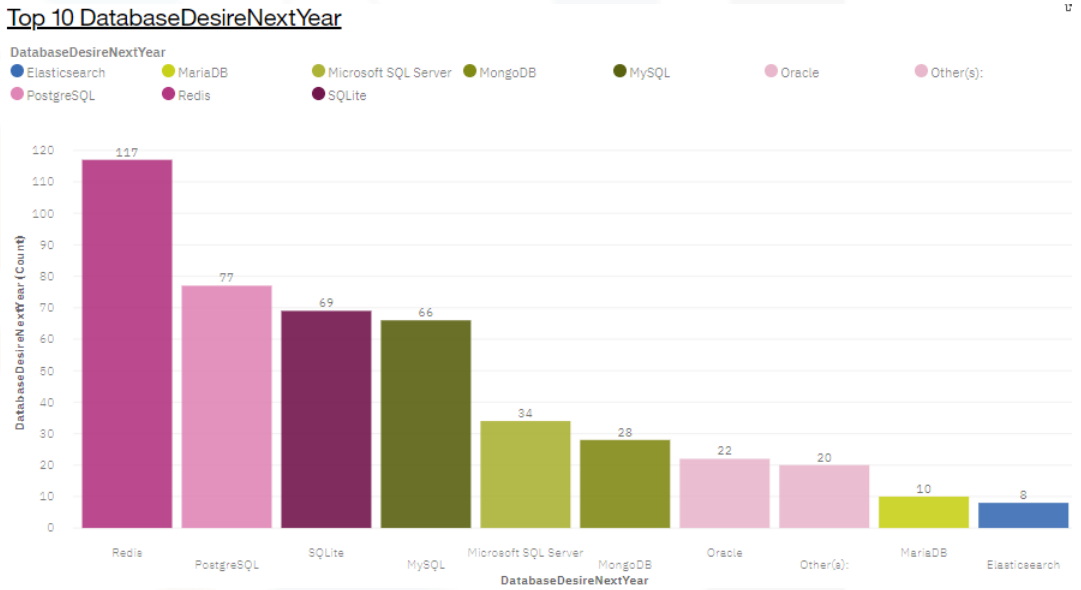
- Programmers without the knowledge of the Top 10 desired languages should make plans for relevant training.
- HTML/CSS and PHP seem to indicate current and future demand trends. Potential growth in demand for these skills.
- The DesireNextYear data may not be sufficient for predicting future skills demand trends.

DATABASE TRENDS

Current Year



Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- 9 of the 10 Databases are on the list for both years.
- The ordering of the Databases on the lists of both years are different.
- The number of datapoints in the DesireNextYear data is significantly less than the current year data.

Implications

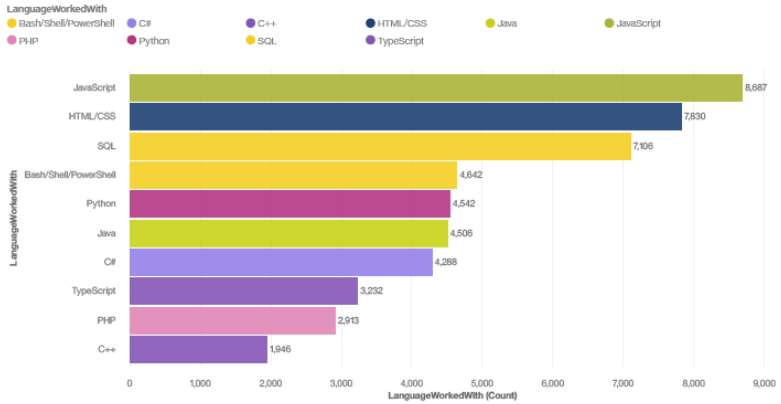
- There seems to be a consistent demand in the Top 10 types of Database.
- It is still worth upskilling to familiarize oneself with the top Databases on next year's demand list.
- The DesireNextYear data may not be sufficient for predicting future skills demand trends.

DASHBOARD

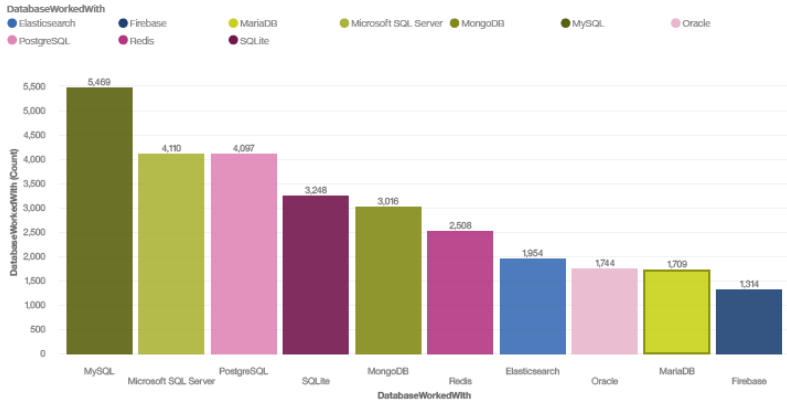
https://eu-gb.dataplatform.cloud.ibm.com/dashboards/c5878157-8d3d-4dd9-a51c-87f51c28eda0/view/053df77866ed39e914fdbde407917f5728657109b3bb850ad2817b4959662097f0691ac2c82b4e0fd8155136f0e9410ac9

DASHBOARD TAB 1

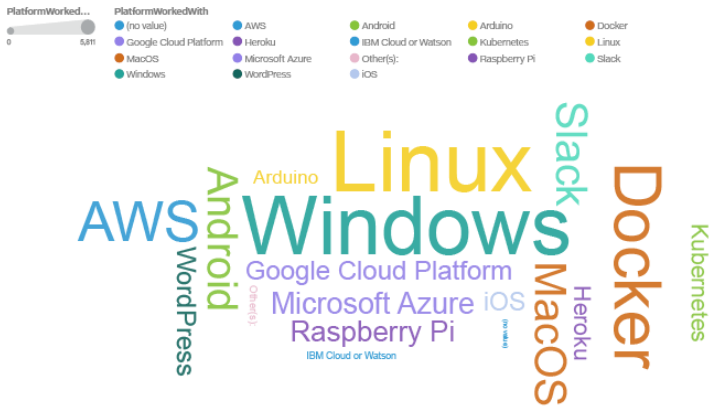
Top 10 Languages Worked With



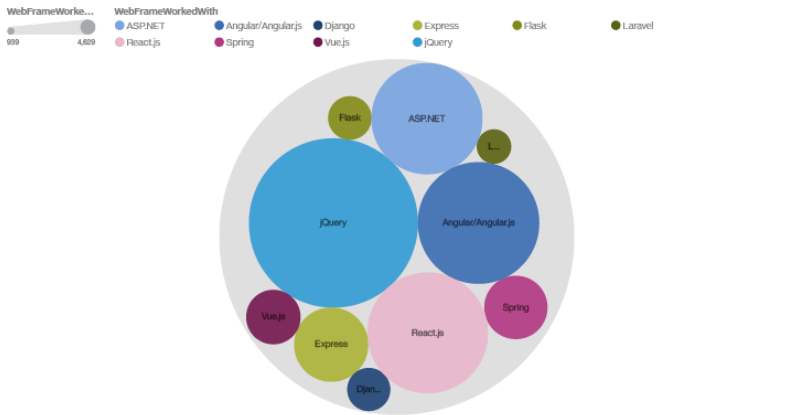
Top 10 Databases Worked With



Platform Worked With

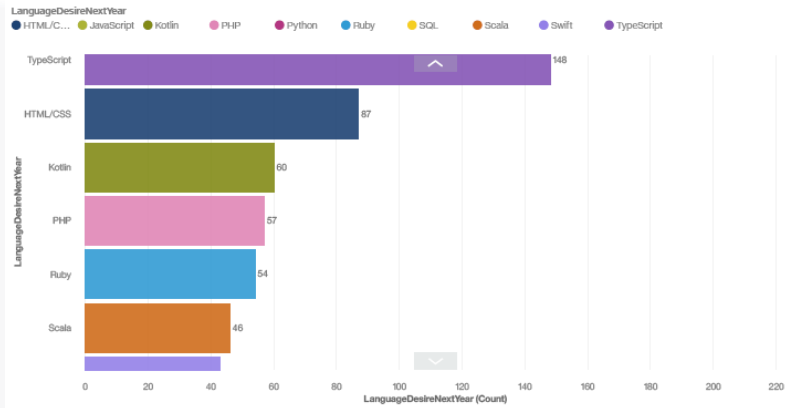


Top 10 WebFrame Worked With

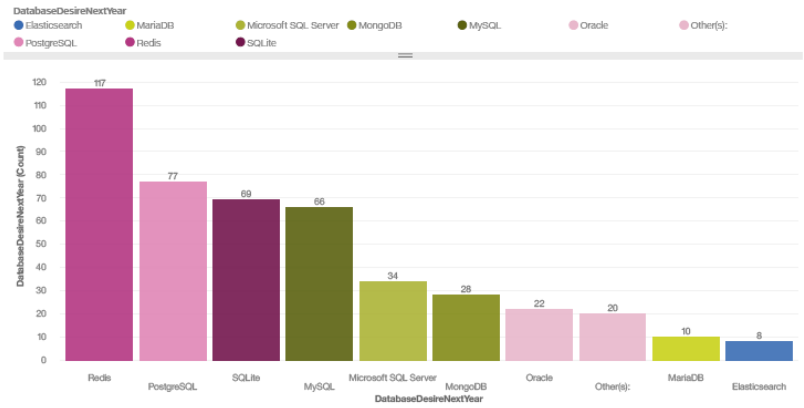


DASHBOARD TAB 2

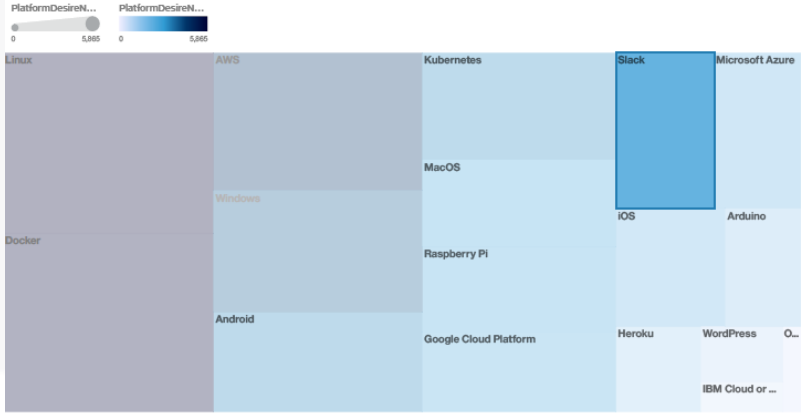
Top 10 LanguageDesireNextYear



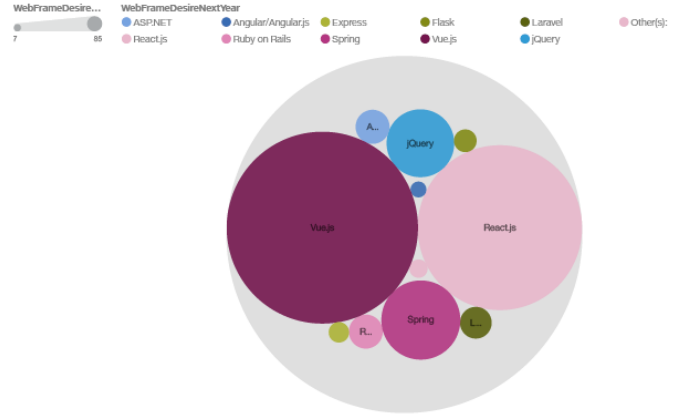
Top 10 DatabaseDesireNextYear



PlatformDesireNextYear

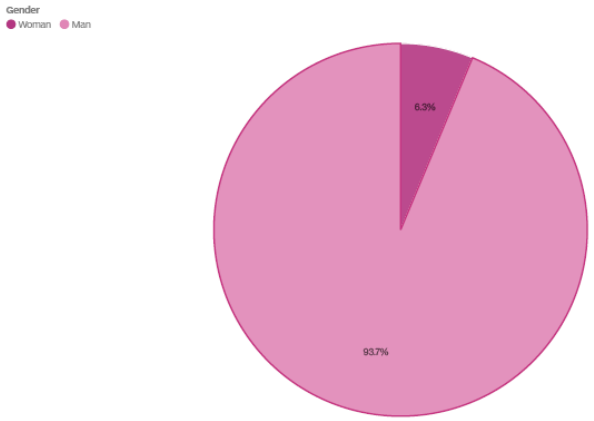


Top 10 WebFrameDesireNextYear

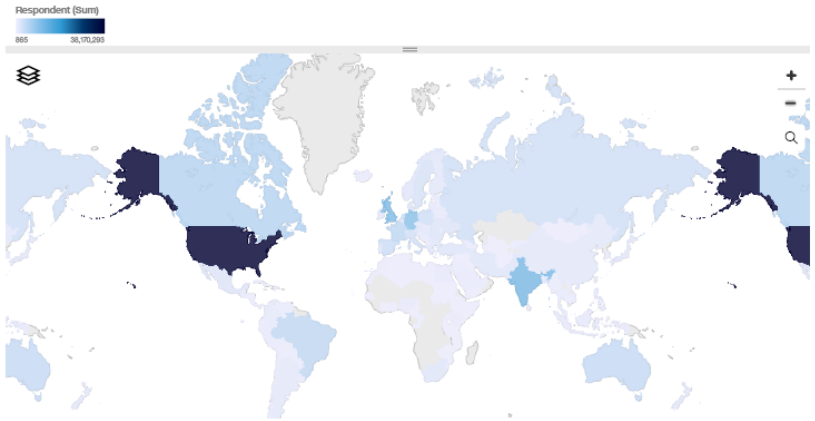


DASHBOARD TAB 3

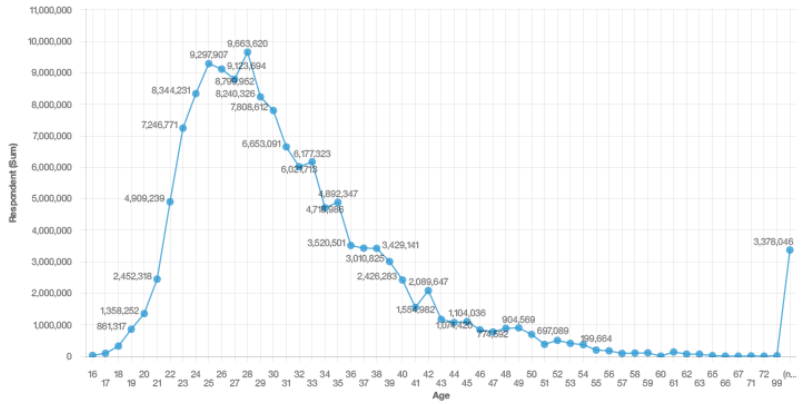
Respondent classified by Gender



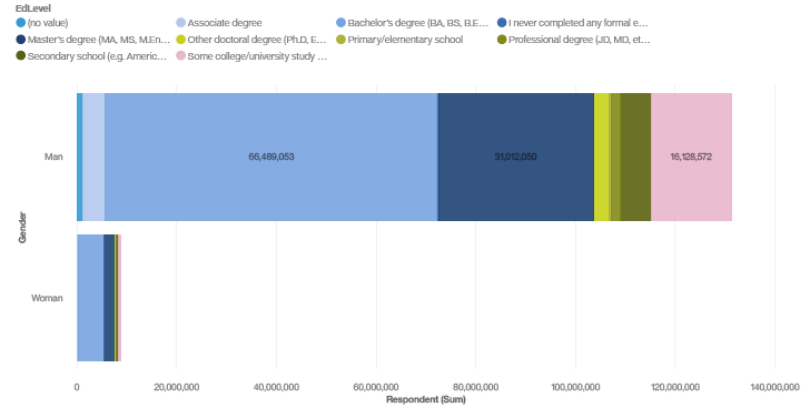
Respondent Count for Countries



Respondent Count by Age



Respondent Count by Gender, classified by Formal Education Level



DISCUSSION

- There does not seem to be a be-all-end-all Programming language to learn. It is advisable to constantly upskill to stay with the demand trends.
- There seem to be a stable Top 10 of in-demand Databases. Familiarity with at least half of these will keep one on the right side of skills demands.
- There seems to be a huge gap between Men and Women in Tech. What could be down to get these ratios more equal?
- There seems to be a skewed distribution of age of Working Population in Tech. What could be done to encourage more interest in ages above 45?

OVERALL FINDINGS & IMPLICATIONS

Findings

- The Top 10 Languages used in the current year are different to the Top 10 Languages desired to be learnt next year.
- HTML/CSS and PHP are consistently in the Top 10 for current and next “desired” year.
- 9 of the 10 Databases are on the list for both years, although in different orders.

Implications

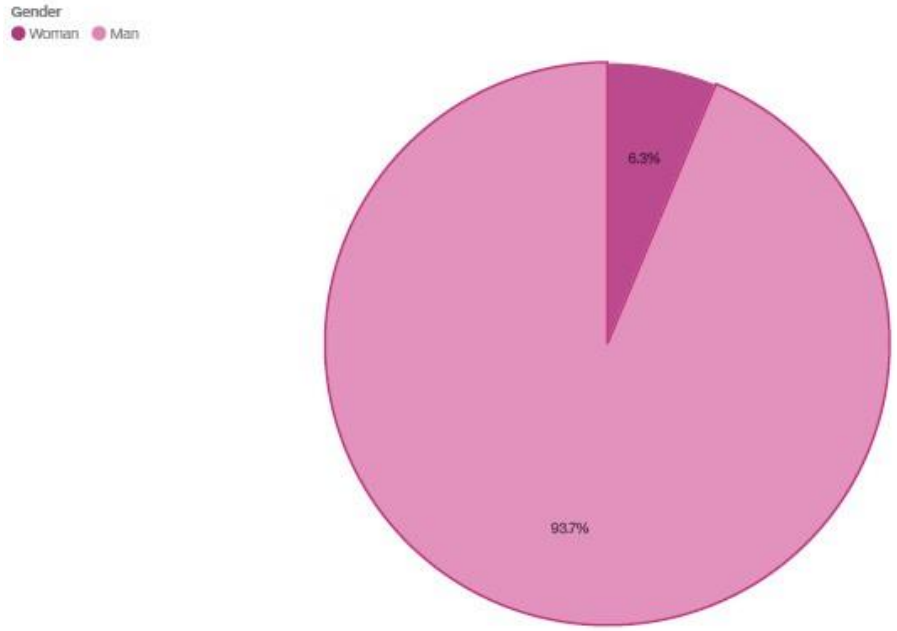
- Programmers need to be willing to constantly upskill to stay with the trend of in-demand languages.
- Plans for upskilling may want to focus on including the HTML/CSS and PHP languages to stay with the top demands.
- Although there seems to be a consistent demand in the Top 10 types of Database, it is still worth upskilling to familiarize oneself with the top Databases on next year’s demand list.

CONCLUSION

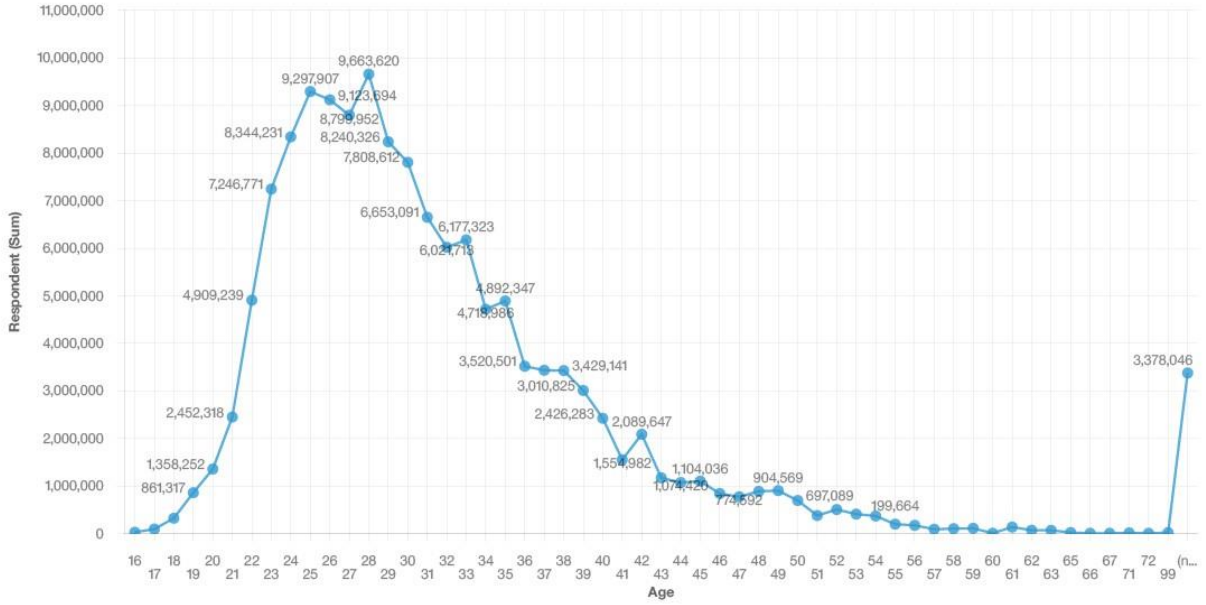
- Demand for top types Programming Languages seem to change year to year.
- Demand for top types of Databases seems to be reasonably consistent year to year.
- Upskilling is necessary both for Programming Language skills and Database skills to stay with the demand trends.
- The dataset seems to indicate that there are currently more Men than Women within the IT sector, with majority of people in the age range of 20 – 40.
- Majority of the respondents were from North America.

APPENDIX

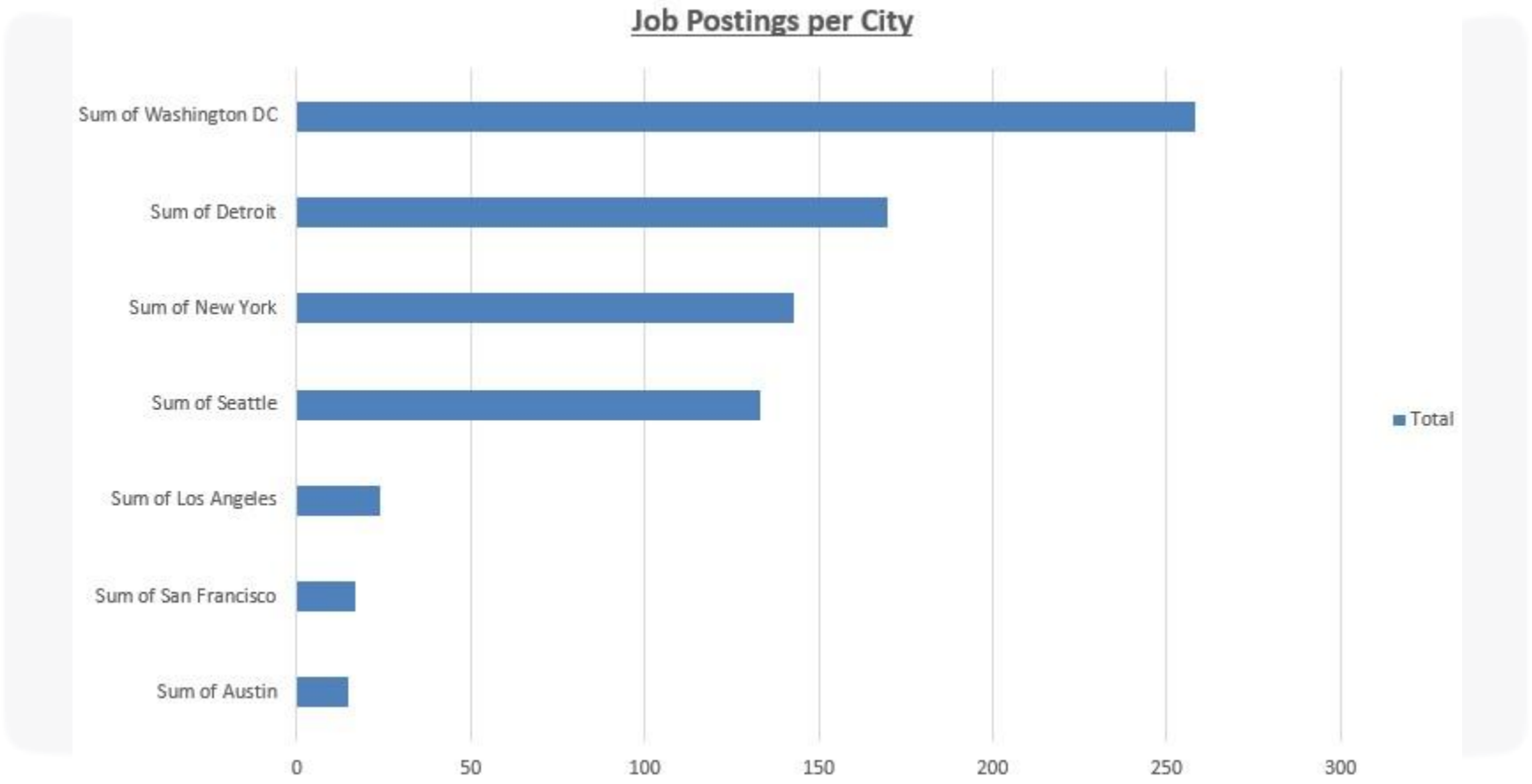
Respondent classified by Gender



Respondent Count by Age



JOB POSTINGS



POPULAR LANGUAGES