



Technology Analysis (Current and Future trend) and demand around the world

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Jun 23, 2024

OUTLINE



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

EXECUTIVE SUMMARY



- Current Top trending Technology in demand
- Future of Technology
- Demographic Observation (gender based)
- Observations

INTRODUCTION



Conclusion:

- Top programming languages in demand
- Top Database skills in demand
- Popular IDEs (Web Frame)
- Future skills needed to upgrade
- Demographic Survey based on gender and demand in technology

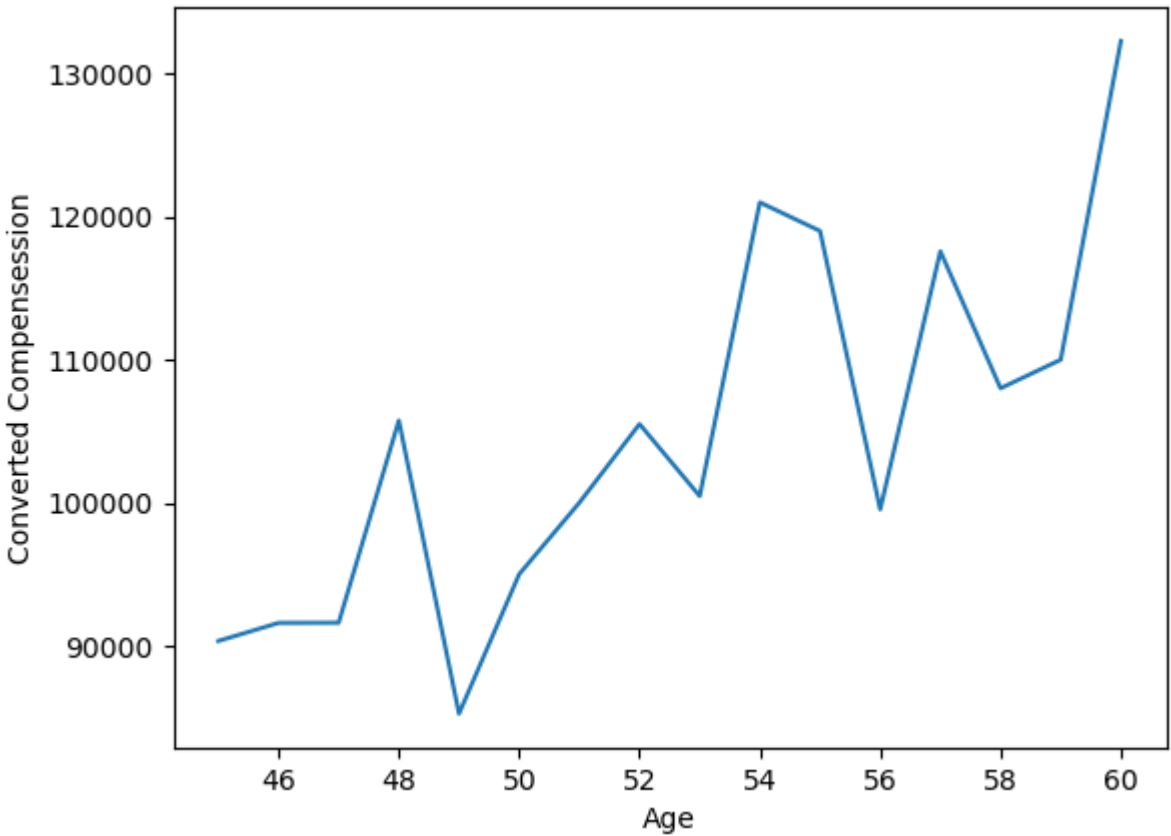
METHODOLOGY



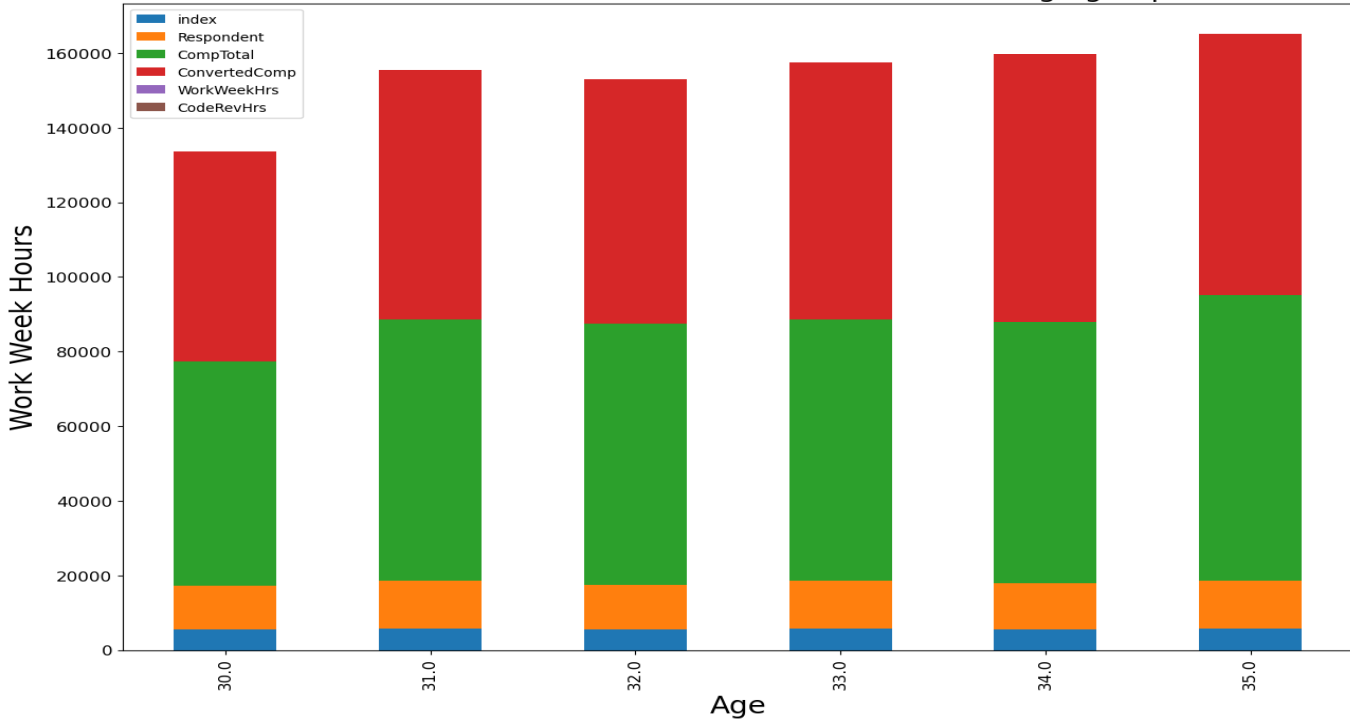
- Data Collection
- Data Wrangling
- Exploratory Data Analysis
- Data Visualization
- Dashboard Creation
- Final Presentation

Results (Visualization)

Compensation from Age 45 to 60



Median workweek hrs and CodeRevHrs in 30-35 age group



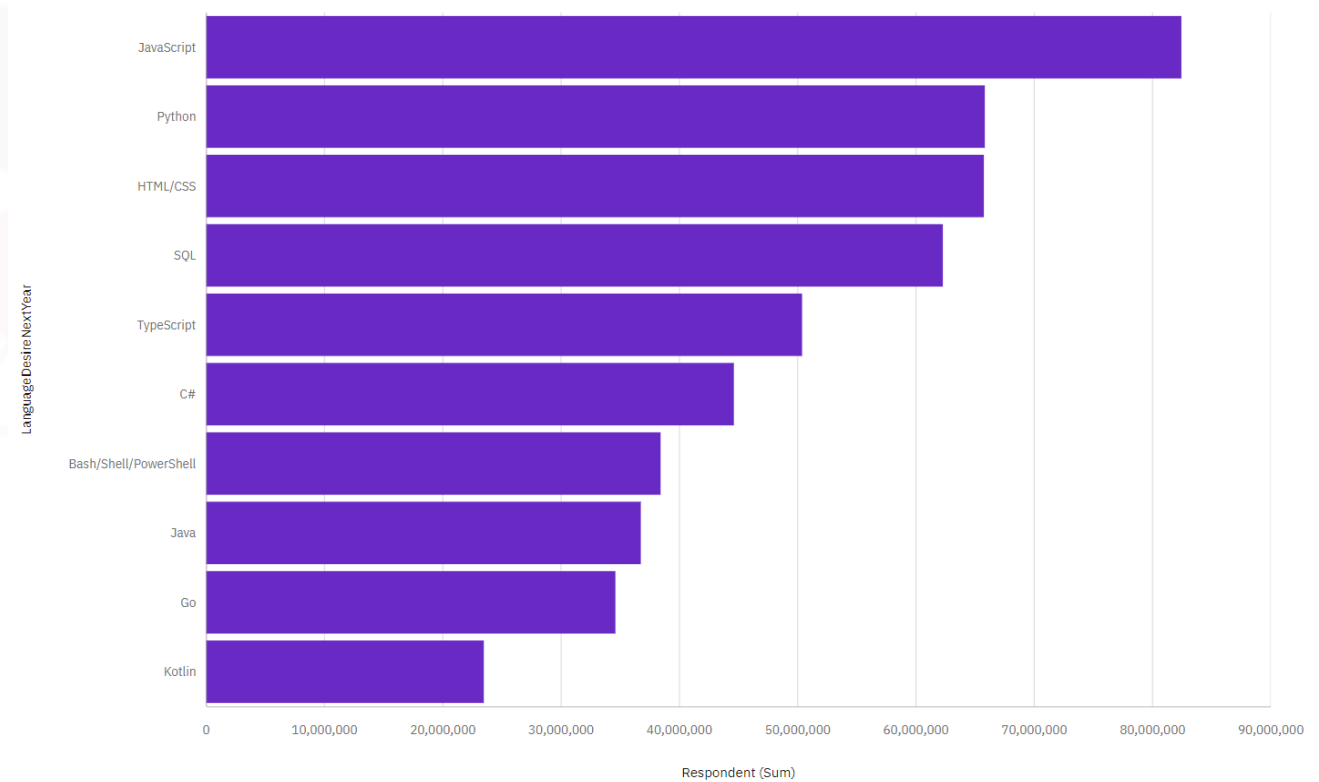
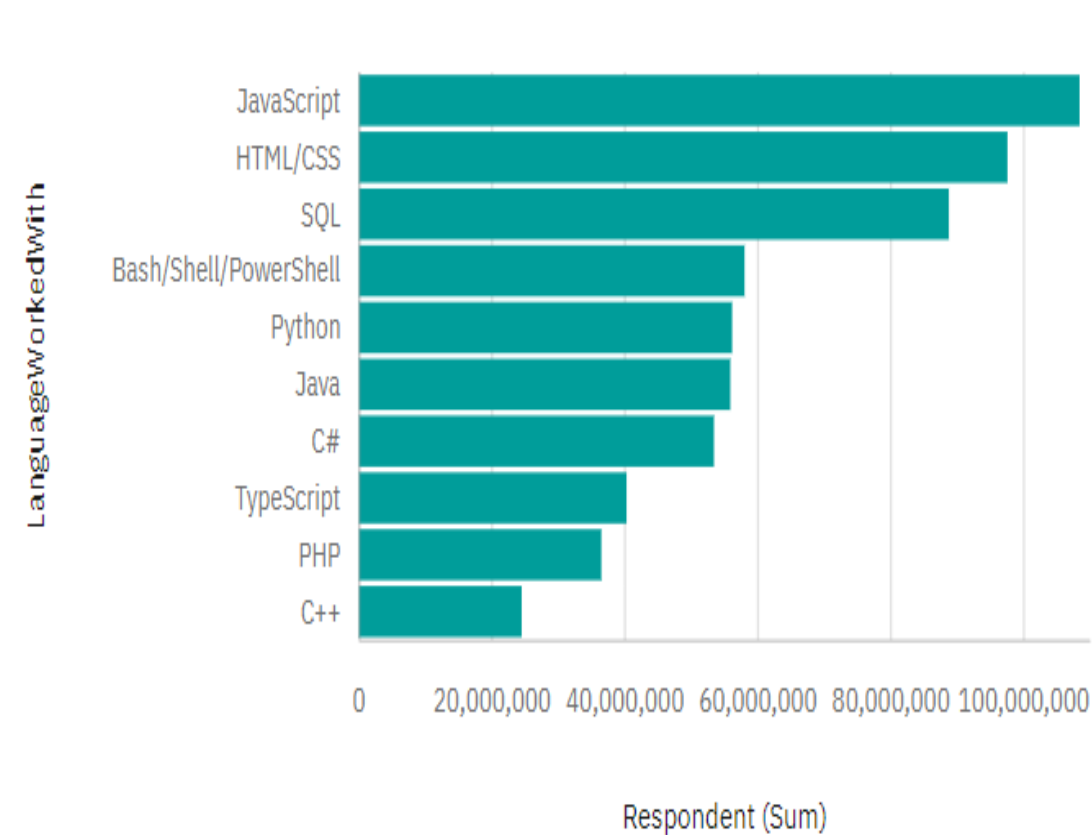
PROGRAMMING LANGUAGE TRENDS

Current Year

Next Year

Top 10 Language Worked with

Top 10 Language desired to Learn next year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- Scripting Languages are in High Demand like JavaScript, HTML/CSS
- Open-source Languages like Python, PHP, Java are popular in Industry
- PowerShell is popular

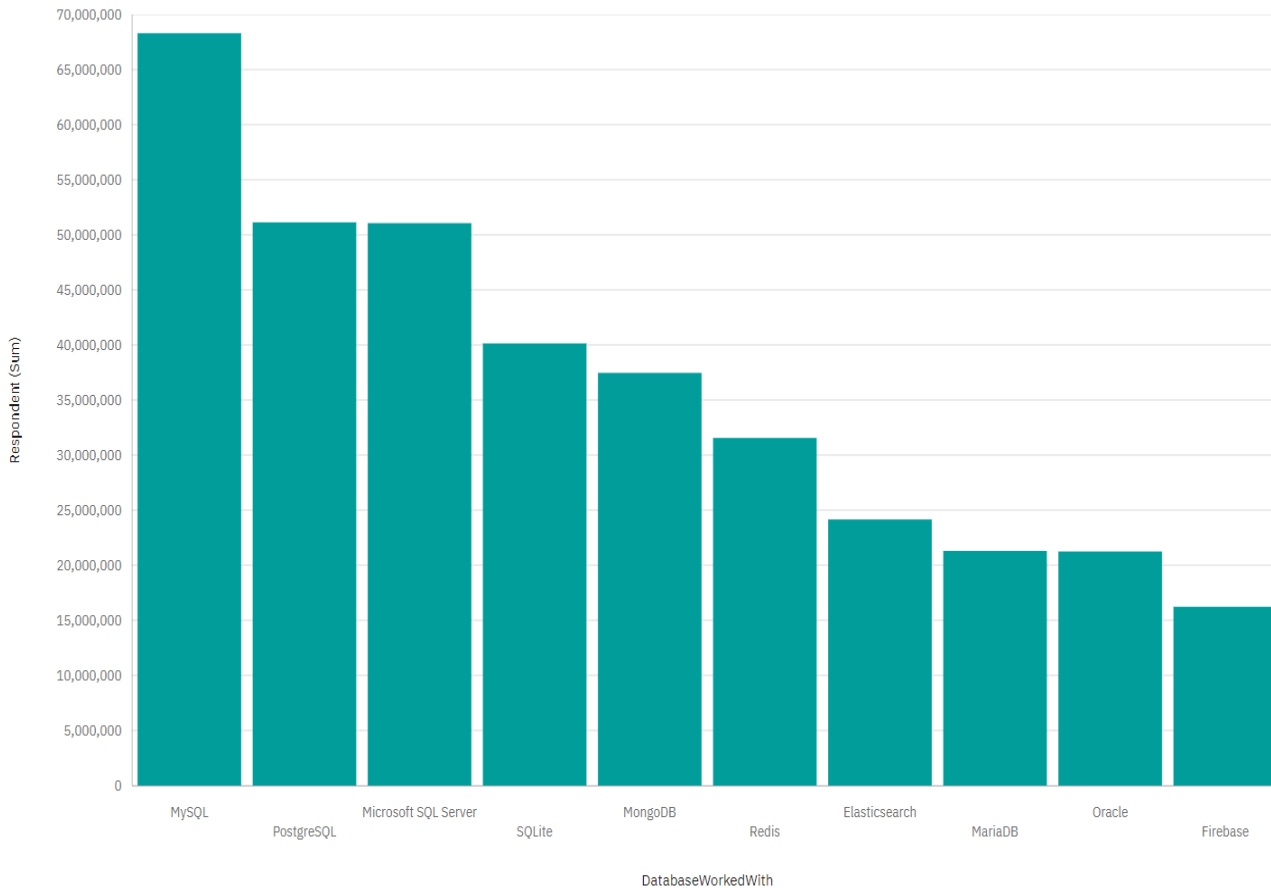
Implications

- Web Development is High demand job
- Demand of opensource will continue to rise
- With Demand in AI and Python is increased, PowerShell would be most sorted out.

DATABASE TRENDS

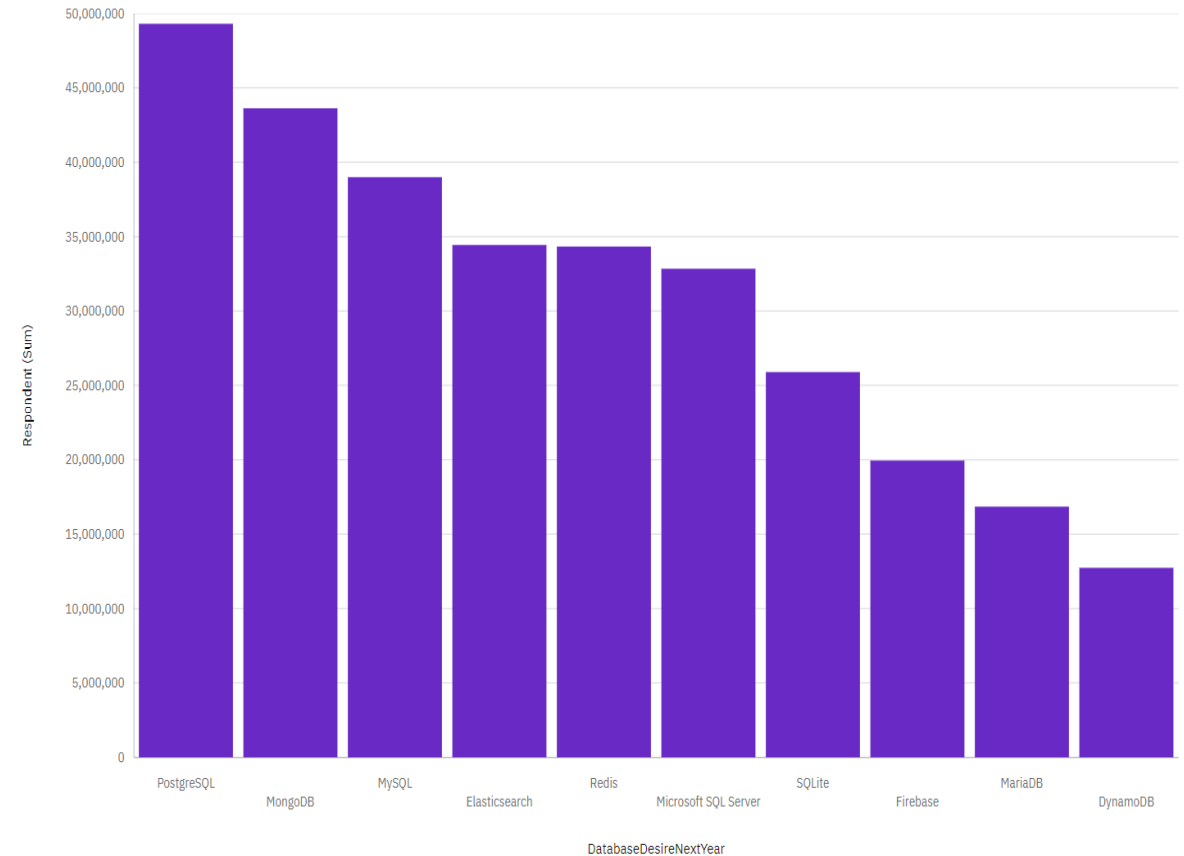
Current Year

Most Database worked with as per number of responders



Next Year

Top 10 desired Database to learn next year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- Opensource Database like MySql, SQLite, MangoDB are gaining popularity.
- Database like Oracle , SQL server will still be used by Larger firms with Big Data and Lots of functionality inbuild
- Few Database like Redis, MariaDB and Elasticsearch are picking up market

Implications

- It will be in high demand as low maintenance and easy to access
- Microsoft SQL Server will accelerate market after recent AI news of Apple
- Apps, ecommerce uses Elasticsearch to pre tune search
- With new Database generating day by day, they in high demand in upcoming trends

DASHBOARD



<https://github.com/anilaacharya/IBM-Capstone/tree/main>

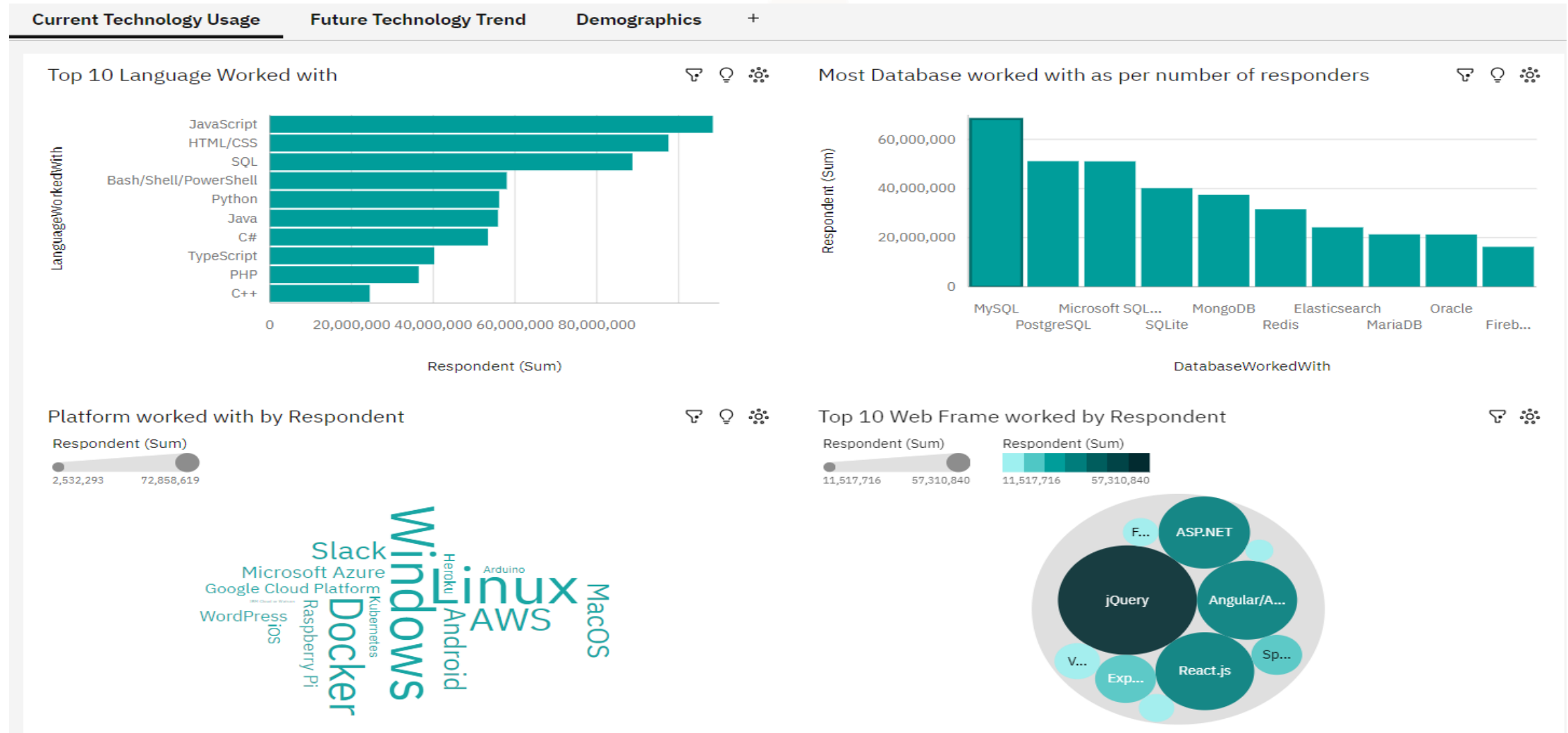
Please look for 3 PDFs

[IBM Cognos Current Tech Dashboard.pdf](#)

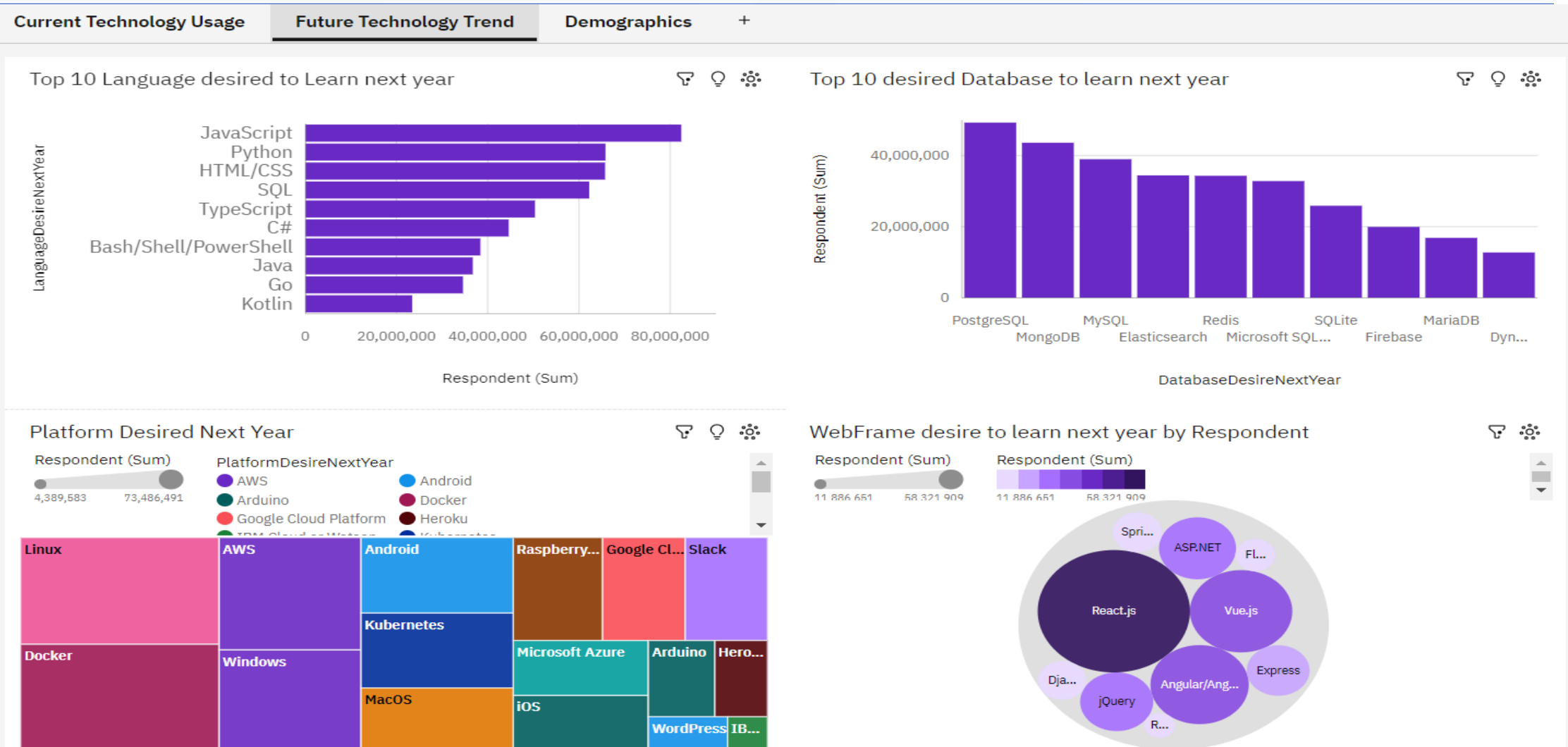
[IBM Cognos Future Tech Dashboard.pdf](#)

[IBM Cognos Demographics Dashboard.pdf](#)

DASHBOARD TAB 1



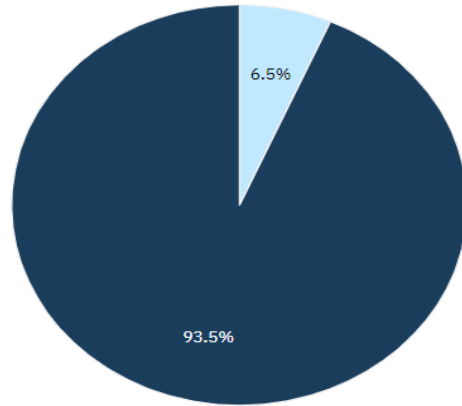
DASHBOARD TAB 2



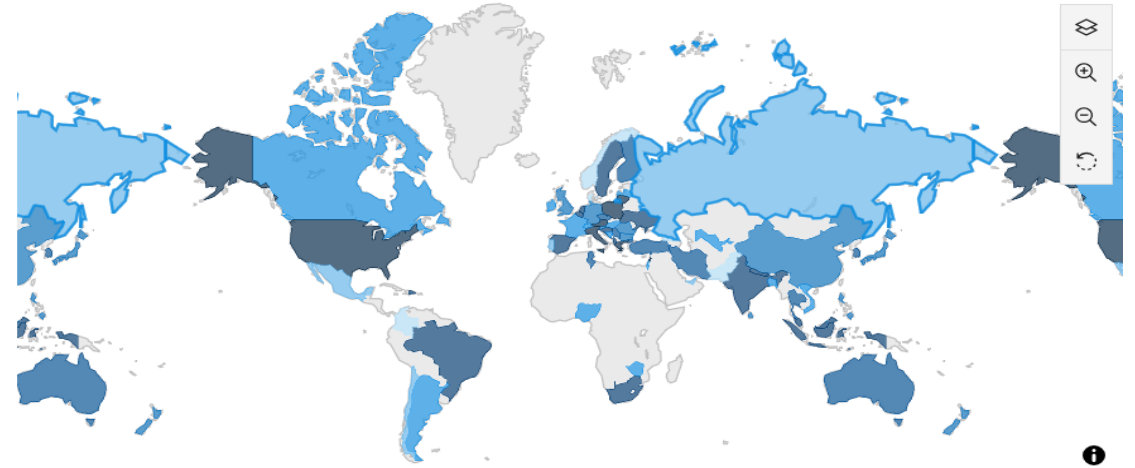
DASHBOARD TAB 3

Respondent by Gender

Gender
● Woman 6.5% ● Man 93.5%

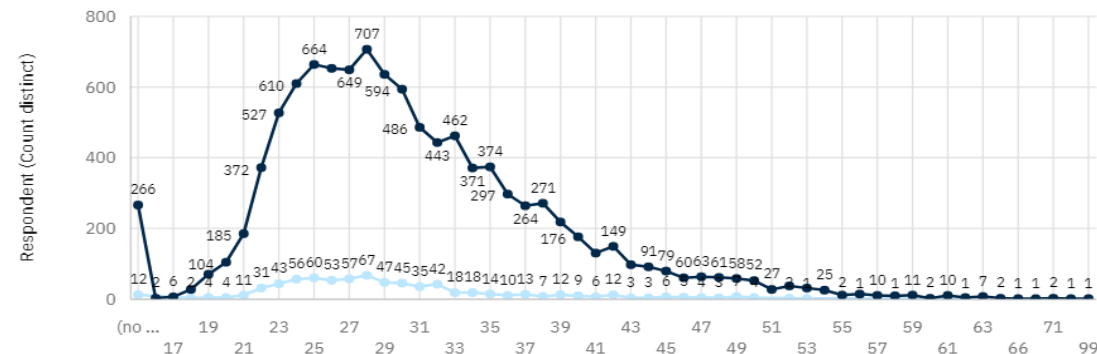


Respondent for Country regions



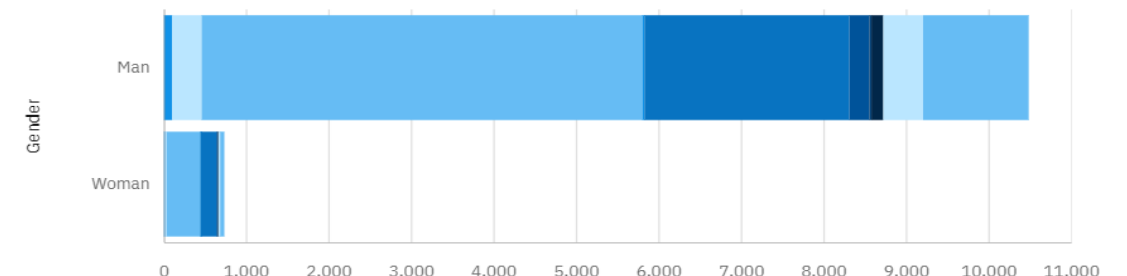
Respondent by Age colored by Gender

Gender
● Man ● Woman



Respondent by Education Level (color by Gender)

EdLevel
● (no value) ● Associate degree ● Bachelor's degree (BA, BS, B.Eng....
● I never completed any formal edu... ● Master's degree (MA, MS, M.Eng.,... ● Other doctoral degree (Ph.D, Ed.D....
● Primary/elementary school ● Professional degree (JD, MD, etc.) ● Secondary school (e.g. American ...
● Some college/university study wit...



DISCUSSION



- Woman in Technology is 6.5% vs 93.5%, gender discrimination should be emphasized.
- Age and Formal Study should not matter.
- AI and opensource technology will have full demand of jobs

OVERALL FINDINGS & IMPLICATIONS

Findings

- Fast changing of technology
- IT jobs are more in India, US
- Woman in are less hired
- Platform like AWS and Docker are gaining momentum

Implications

- More training Platforms has to be introduced
- Necessity to expand horizon in other countries as well
- Gender Bias at job must be addressed soon
- Future is in cloud-based solutions and Docker as they provide more scalability

CONCLUSION

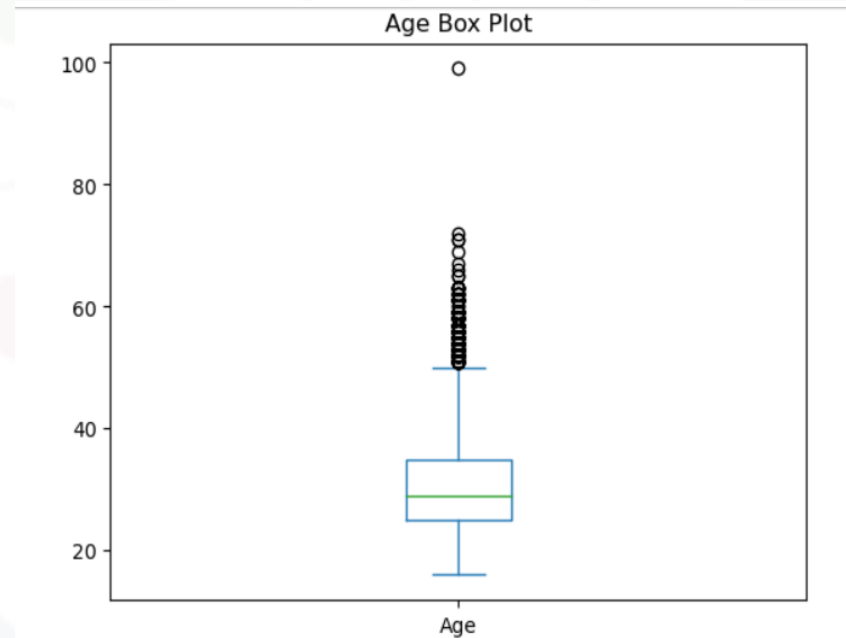


- Machine Learning is capturing more jobs
- Opensource technologies are in high demand
- Future of IT is quickly changing, and demand of learning new technologies is at peak
- Some Policy of Gender Inequality must be addressed.

APPENDIX

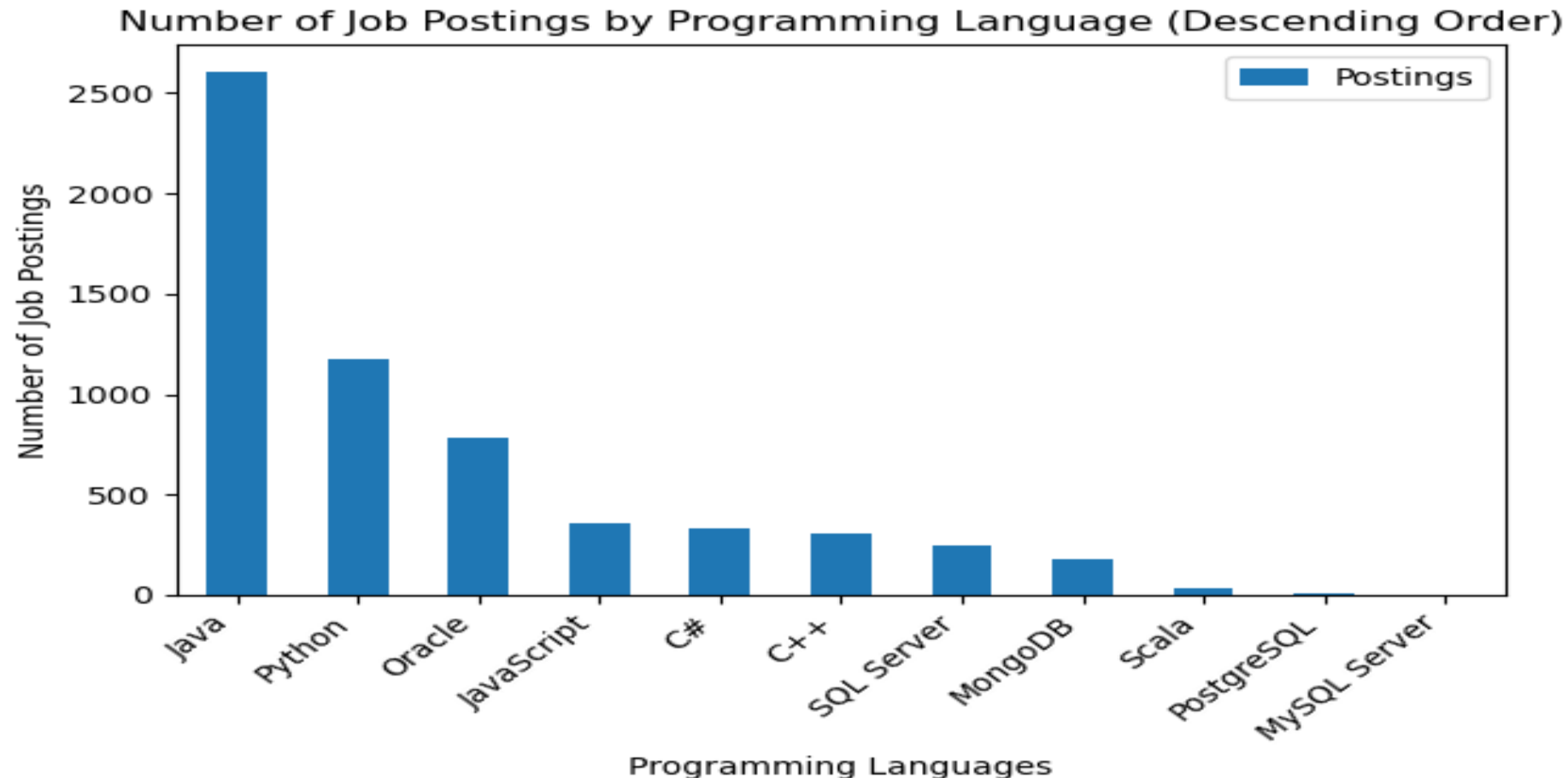


- Finding outliers for Number of people working in IT by 'Age'



JOB POSTINGS

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

