



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

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

# INTRODUCTION

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## 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

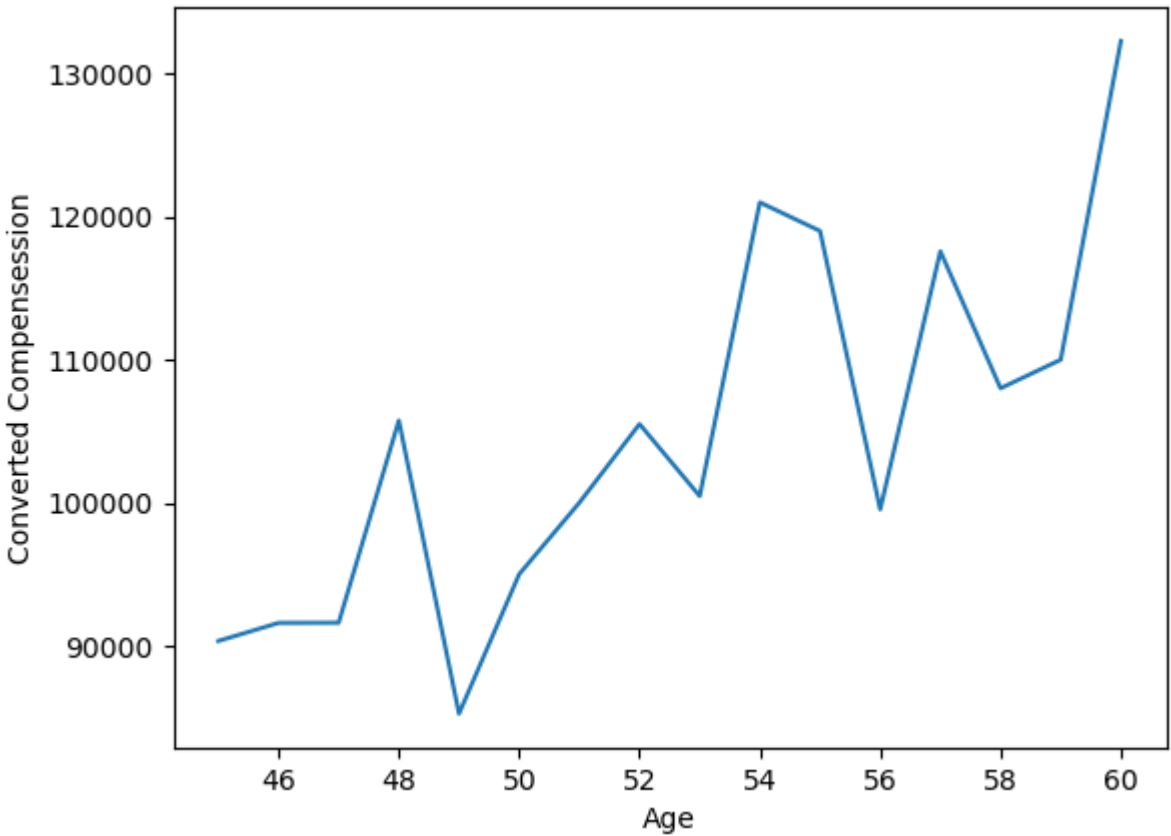
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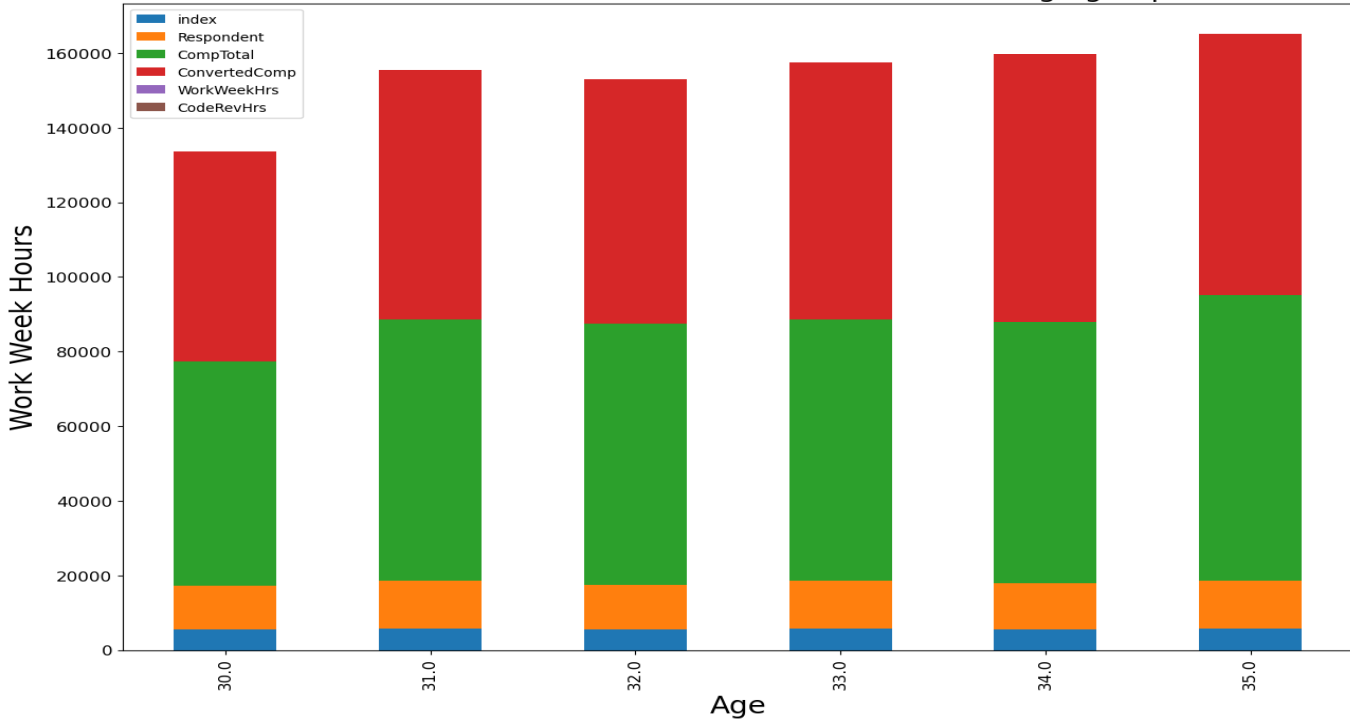
- Data Collection
- Data Wrangling
- Exploratory Data Analysis
- Data Visualization
- Dashboard Creation
- Final Presentation

# Results (Visualization)

Compensation from Age 45 to 60



Median workweek hrs and CodeRevHrs in 30-35 age group



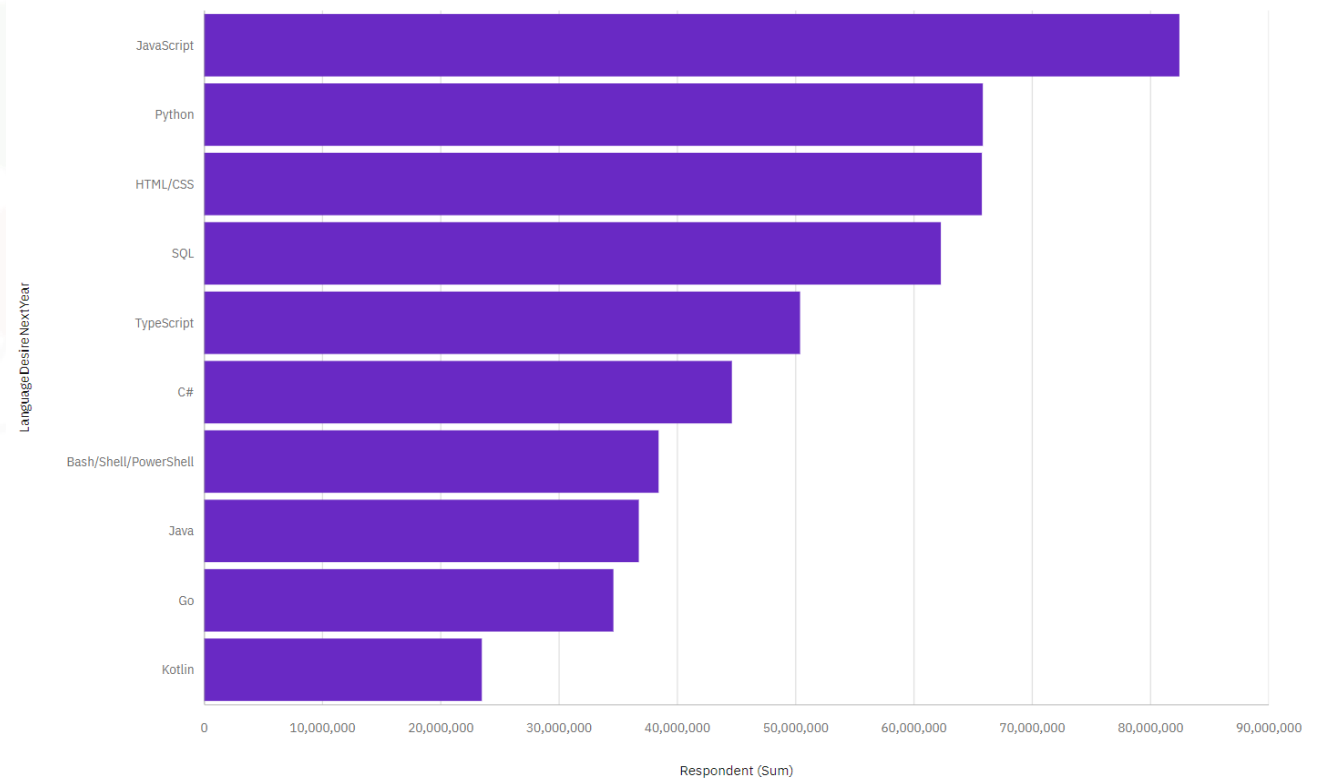
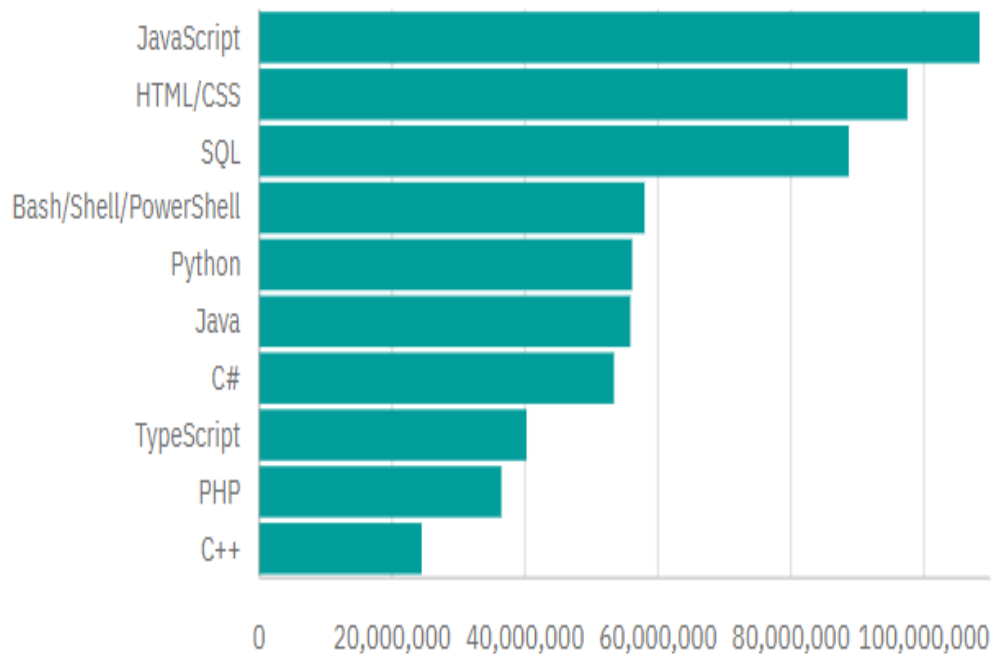
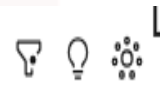
# PROGRAMMING LANGUAGE TRENDS

## Current Year

## Next Year

Top 10 Language Worked with

Top 10 Language desired to Learn next year



# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

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## 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

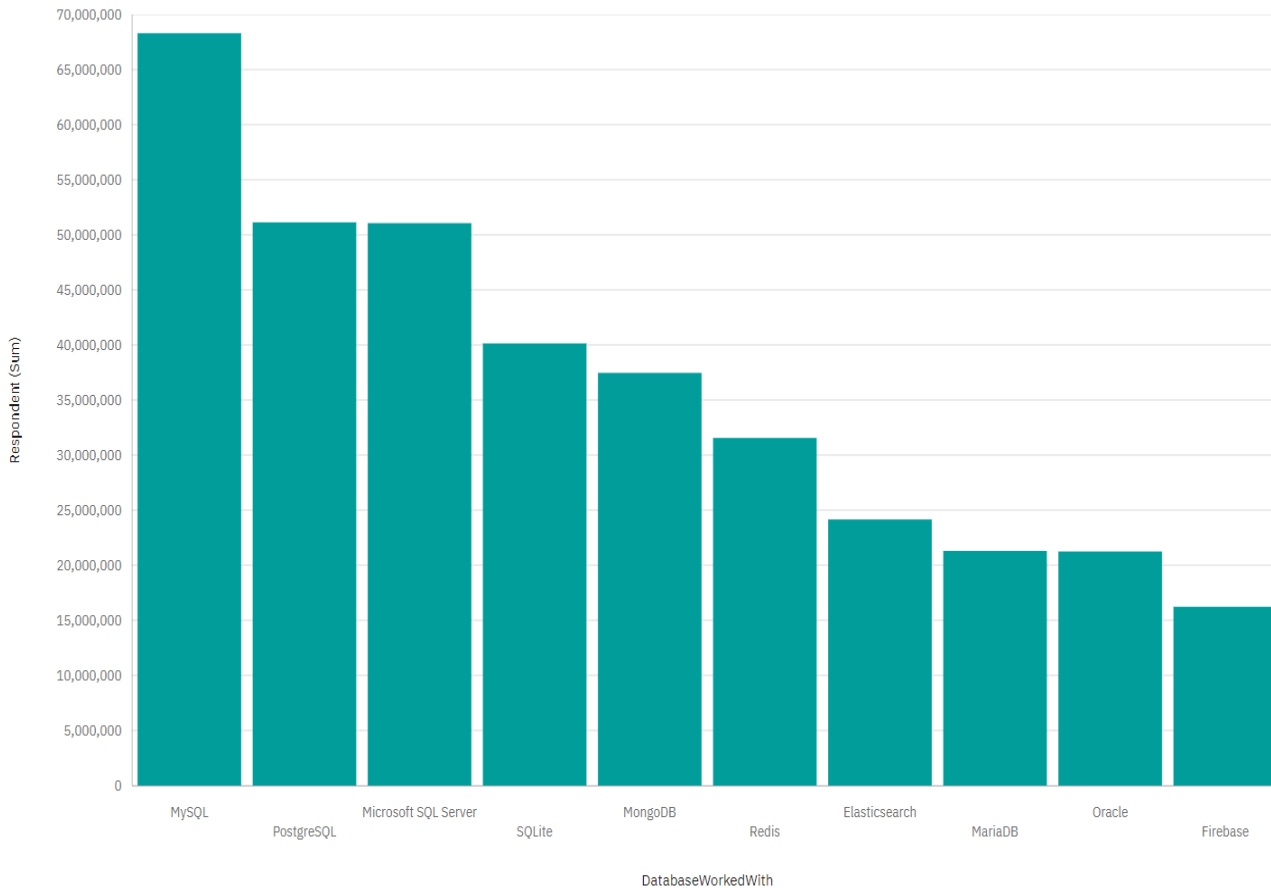
- Web Development is High demand job
- Demand of opensource will continue to rise
- With Demand in AI and Python is increased, PowerShell would be most sorted out.



# DATABASE TRENDS

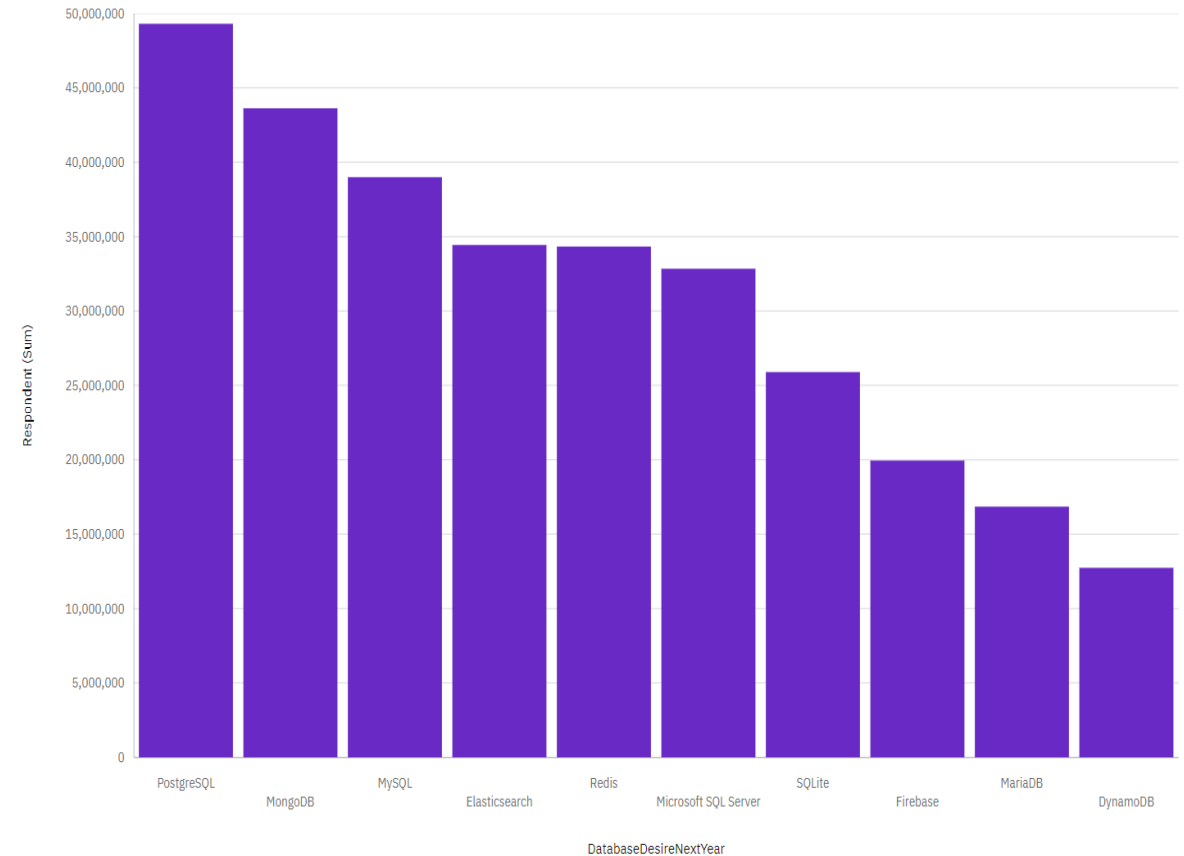
## Current Year

Most Database worked with as per number of responders



## Next Year

Top 10 desired Database to learn next year



# DATABASE TRENDS - FINDINGS & IMPLICATIONS

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## 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 and Elasticsearch are picking up market

## Implications

- It will be in high demand as low maintenance and easy to access
- Oracle and SQL will accelerate market after AI news of Apple and again will be in top demand.
- Apps, ecommerce uses Elasticsearch to pre tune search

# DASHBOARD

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

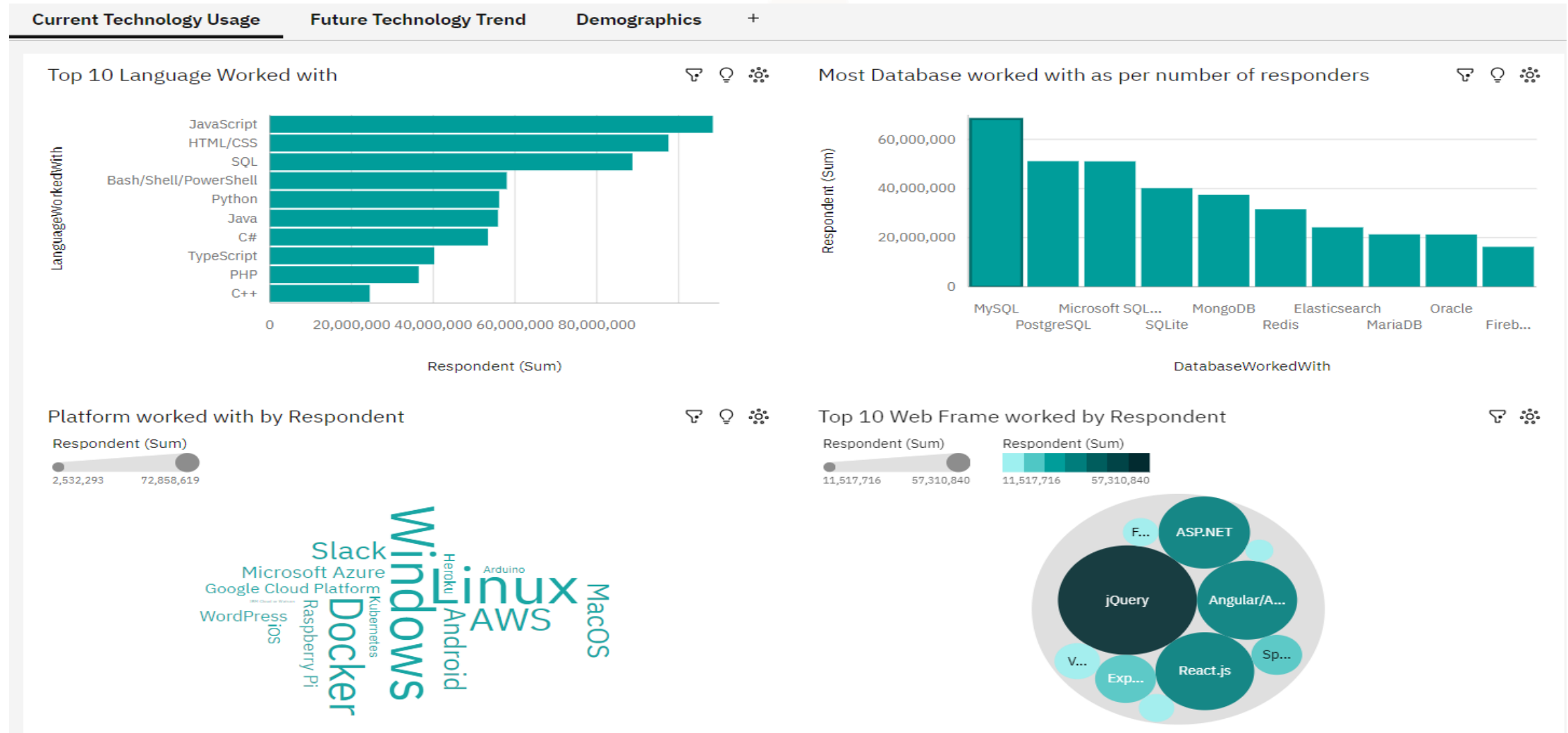
Please look for 3 PDFs

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

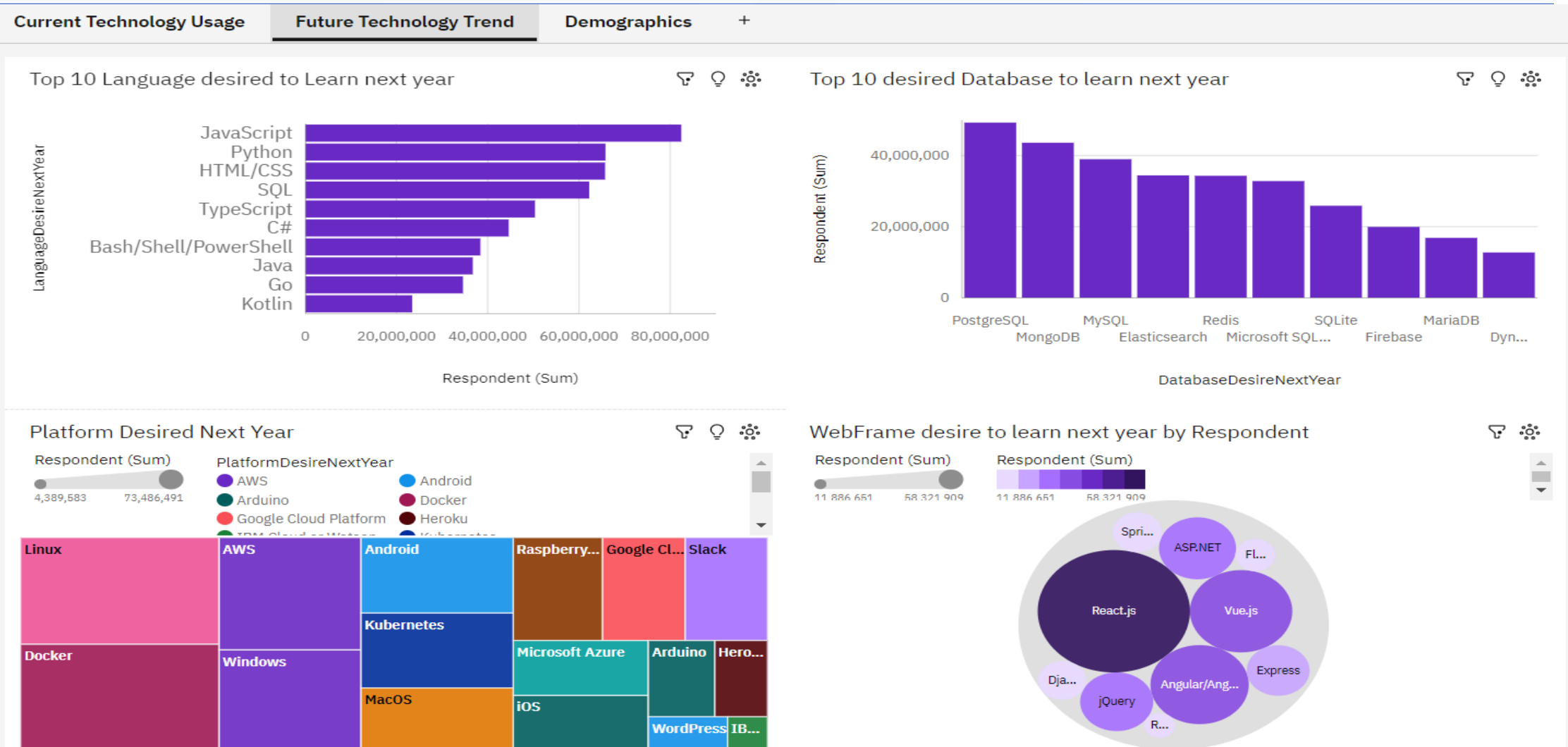
[IBM Cognos Future Tech Dashboard.pdf](#)

[IBM Cognos Demographics Dashboard.pdf](#)

# DASHBOARD TAB 1



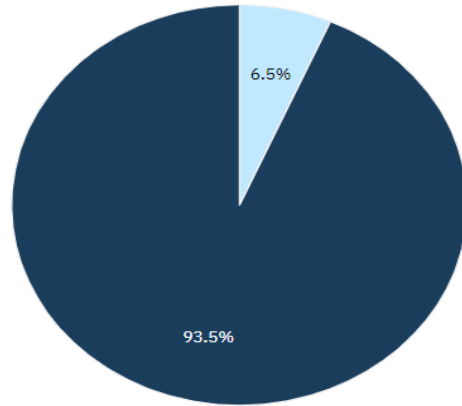
# DASHBOARD TAB 2



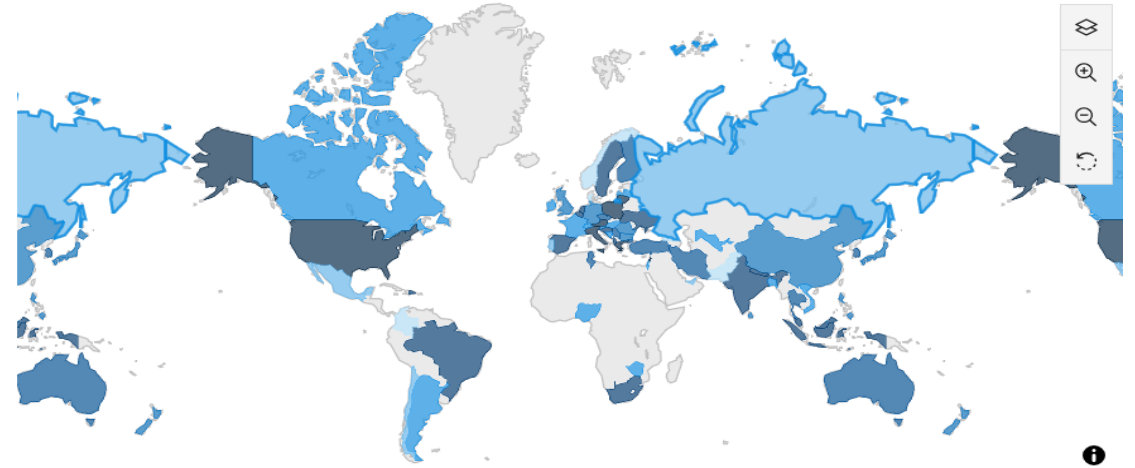
# DASHBOARD TAB 3

Respondent by Gender

Gender  
● Woman 6.5% ● Man 93.5%

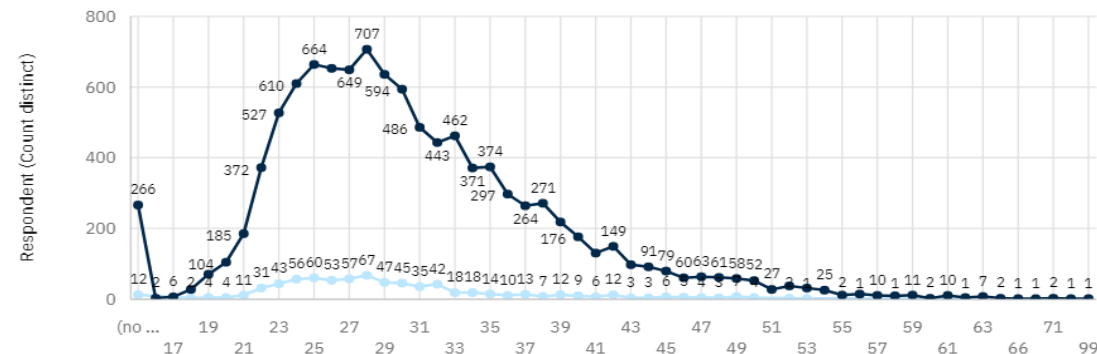


Respondent for Country regions



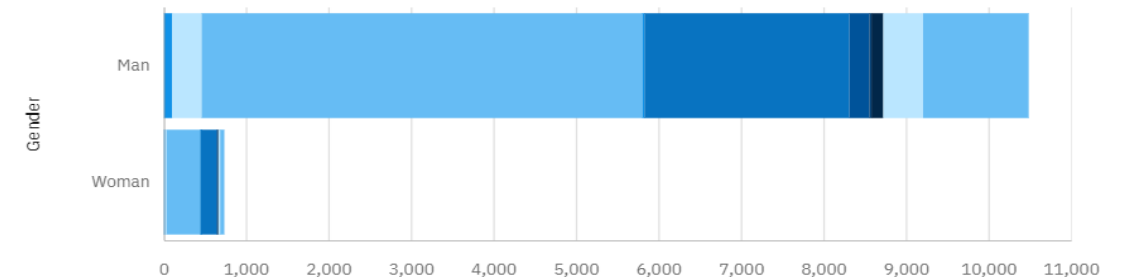
Respondent by Age colored by Gender

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

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- Woman in Technology is 6% 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

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## Findings

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



# CONCLUSION

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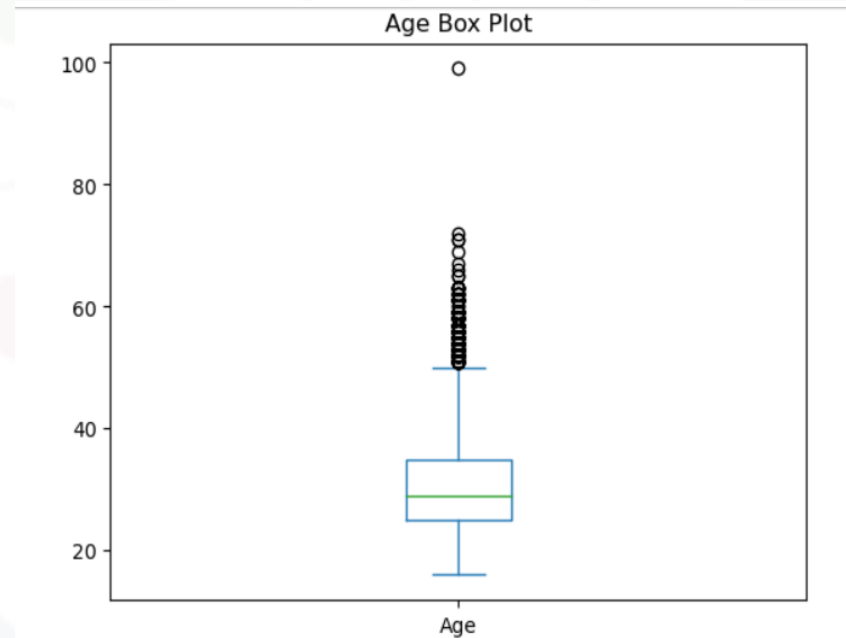
- Machine Learning is capturing more jobs
- Opensource technologies are in high demand
- Future of IT is quickly changing, and demand of learning new technologies is at peak
- Some Policy of Gender Inequality must be addressed.

# APPENDIX

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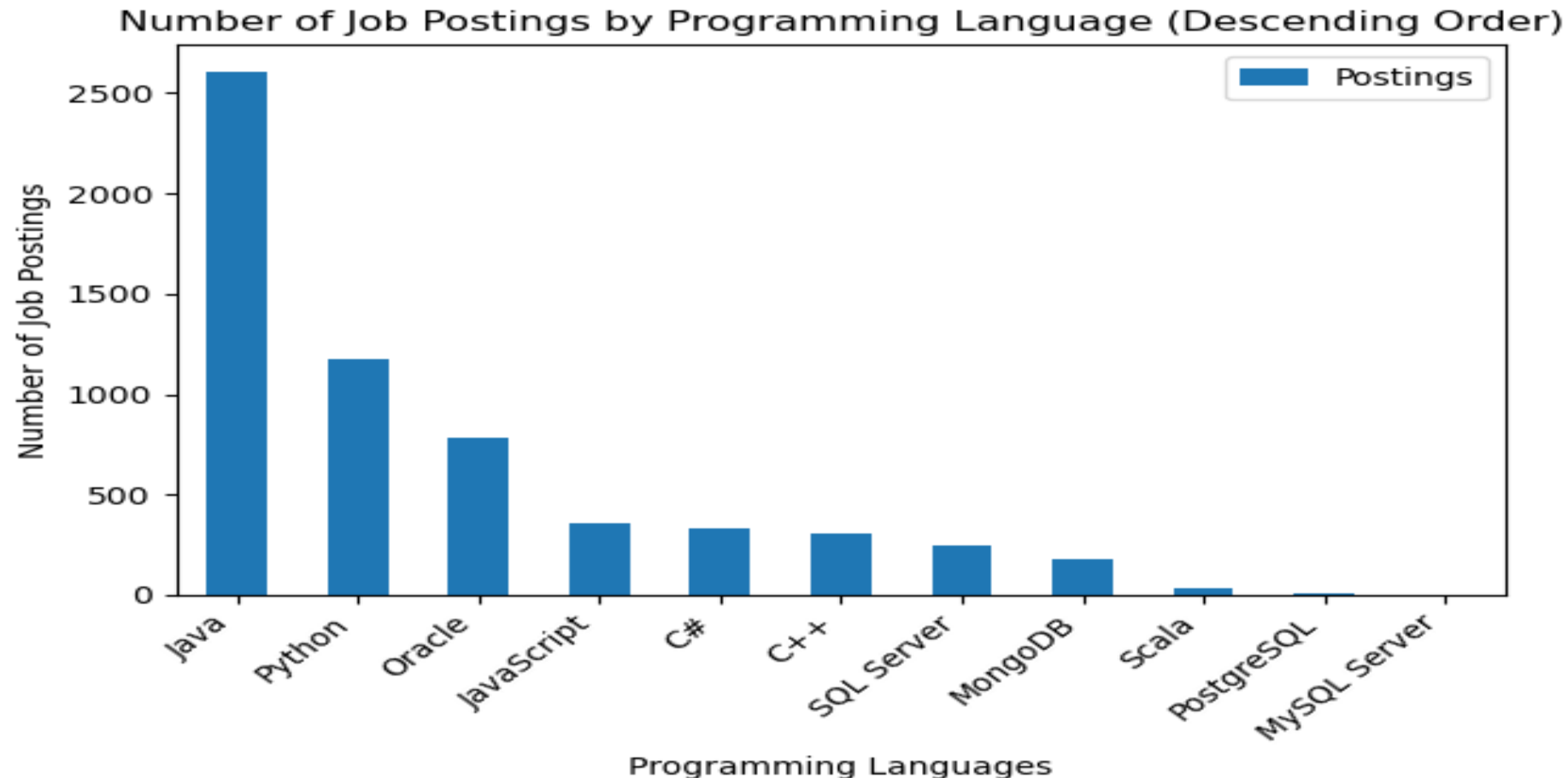


- Finding outliers for Number of people working in IT by 'Age'



# 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.

