# Technologies and Emerging skills Survey 2023

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IBM Developer

SKILLS NETWORK

# OUTLINE

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

# EXECUTIVE SUMMARY

- Data contextualization and analysis goal.
- Methodology description.
  - Data gathering.
  - Data analysis.
  - Data visualizations.
- Results presentation supported with graphs and trends.
- Discussion of overall findings and implications regarding the results previously exposed.
- Final conclusions of the carried out research.

# INTRODUCTION

- Technologies and Emerging Skills Survey is the largest and most comprehensive survey of people who code around the world.
- Results don’t represent everyone in the developer community evenly.
- Nearly 90,000 developers.
- Trends to predict where the developers are going.
- Characterization of developers around the globe.

# METHODOLOGY

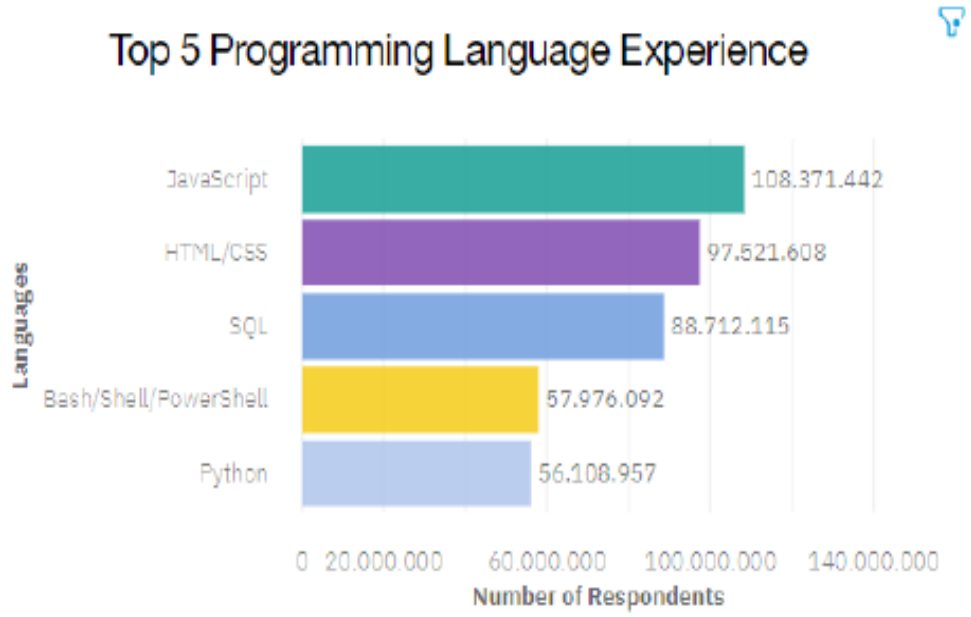
- Collect survey data & explore its content
  - Web Scraping.
  - APIs.
  - Request library.
- Data Wrangling
- Exploratory data analysis
  - Analyzing data distribution.
  - Handling outliers.
  - Correlations.
- Data Visualization
  - Highlight distribution of data, relationships, the composition and comparison of data.
- Dashboards

# RESULTS

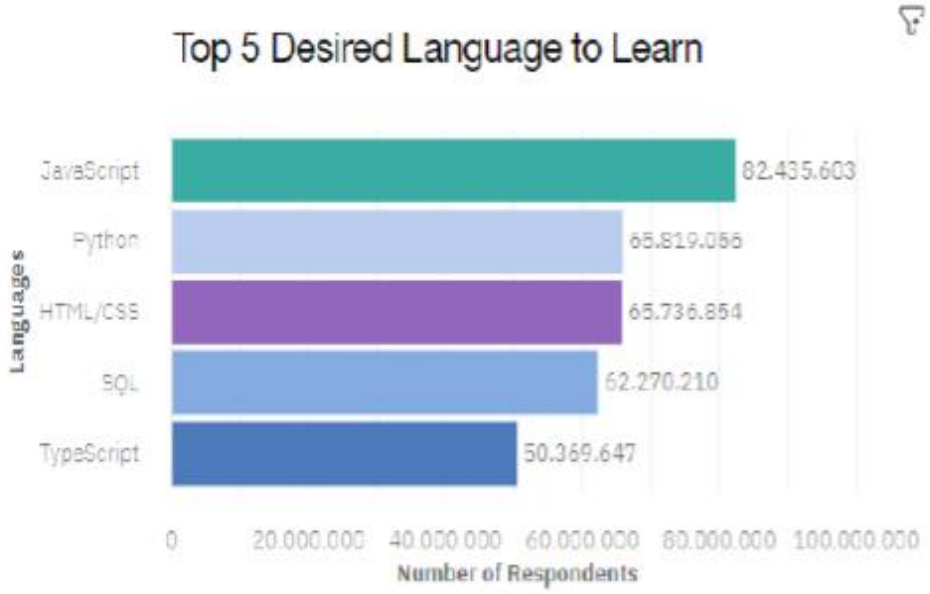
- Programming language, Technologies trends and comparison.
- Database scope and trends.
- Job posting distribution on Age.
- Future scope of programming skills.

# PROGRAMMING LANGUAGE TRENDS

## Current Year




## Next Year



# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

## Findings

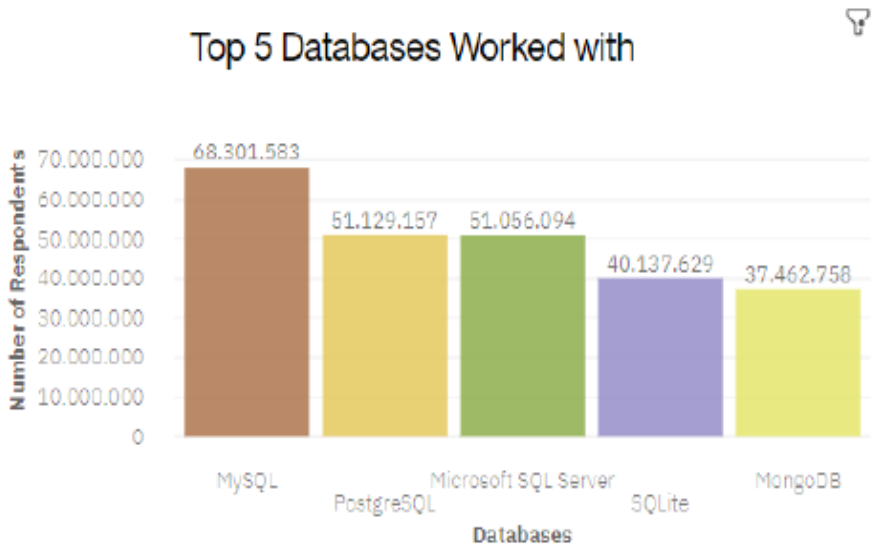
- JavaScript seems to keep as leading language.
- Python fastest-growing.
- Great interest in TypeScript

## Implications

- Possible developers migration from JavaScript to TypeScript.
- Possible of demand creation in JavaScript in Near future.

# DATABASE TRENDS

## Current Year

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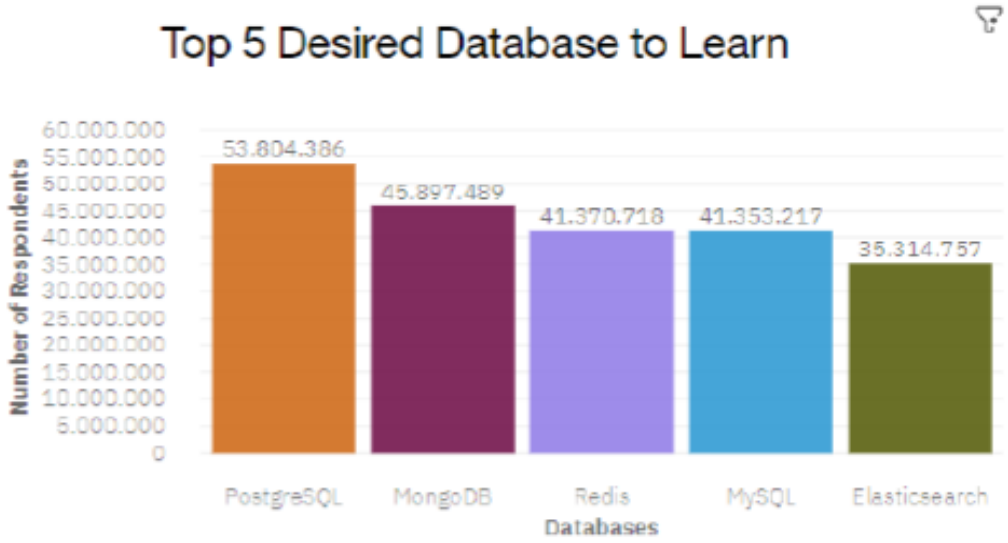


# DATABASE TRENDS - FINDINGS & IMPLICATIONS

## Findings

- MySQL as most used database.
- Lack of interest in Microsoft SQL Server and SQLite.
- Increasing interest in PostgreSQL and MongoDB.
- New technology database are emerging.

## Implications

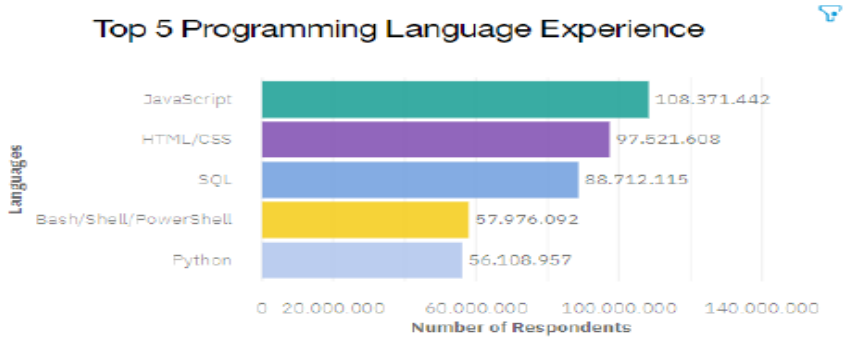
- Microsoft SQL Server and SQLite losing ground in the market.
- PostgreSQL and MongoDB establishment in the market.
- Increase in demand for MongoDB.

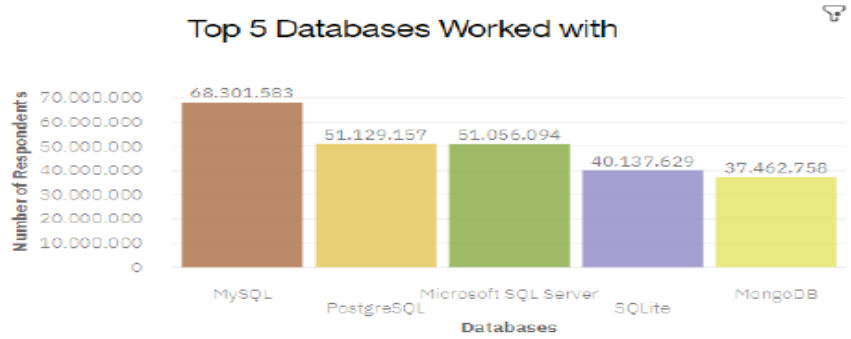
# DASHBOARD

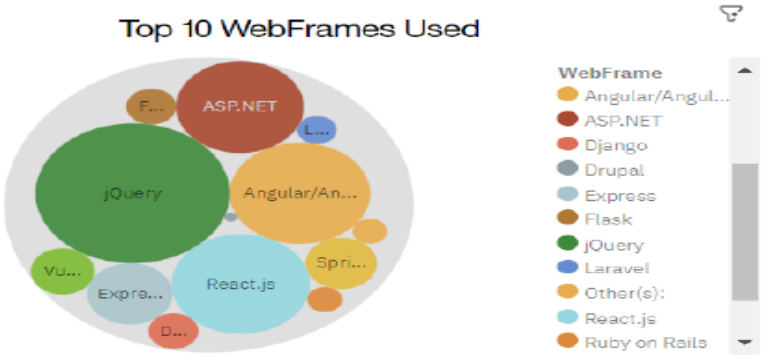
dashboard/6-Dashboard-with-Cognos.pdf at 30a3a32d386e805310f5775f4037fae9291ae210 · Thamiz08/dashboard (github.com)

# CURRENT TECHNOLOGY TRENDS

## CURRENT TECHNOLOGY USAGE

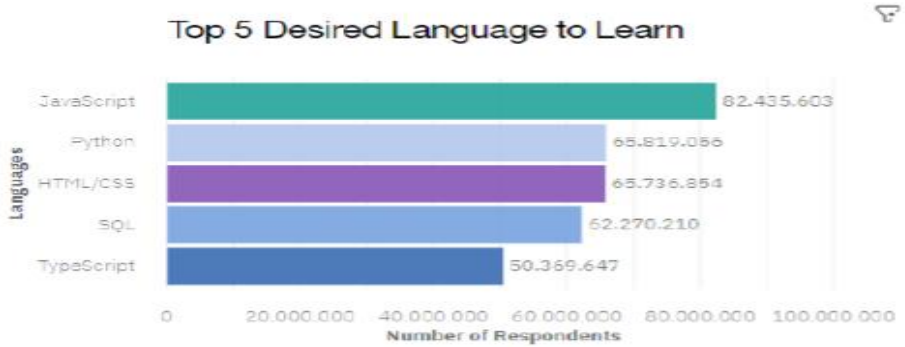


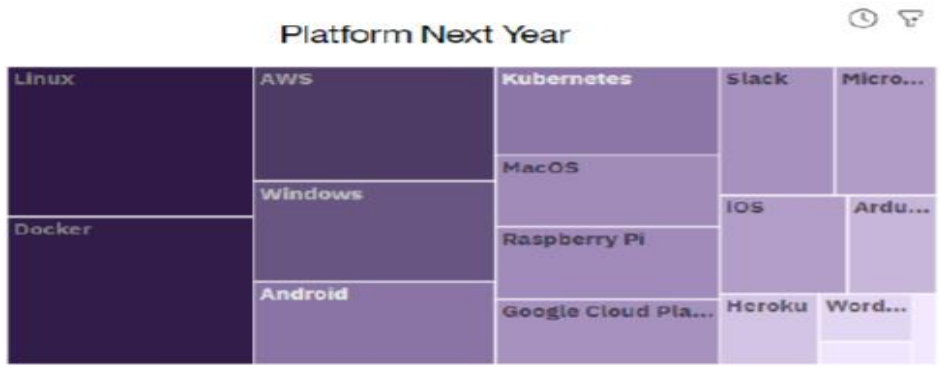



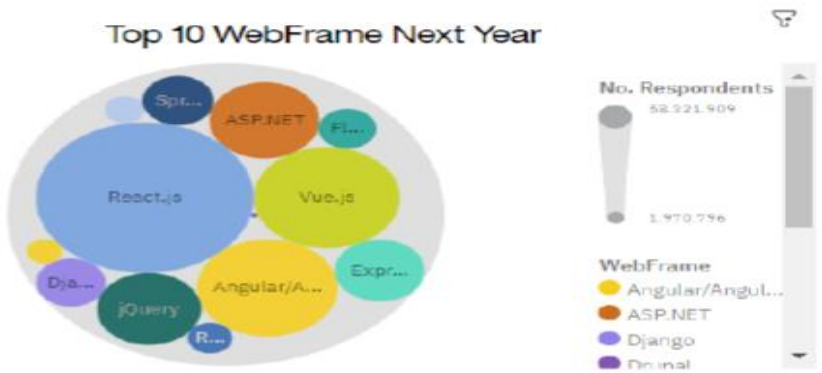


# FUTURE TECHNOLOGY TRENDS

## FUTURE TECHNOLOGY TREND

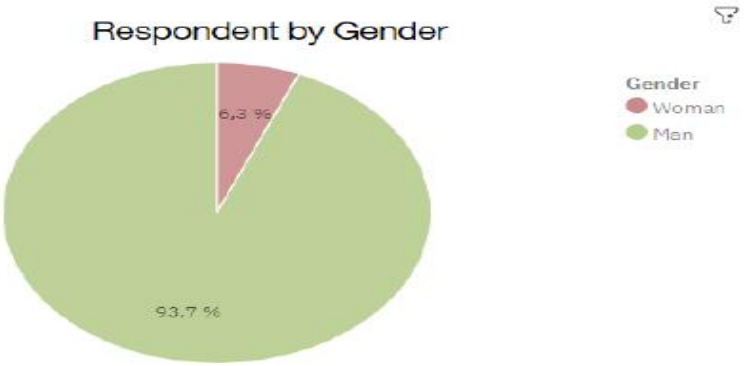


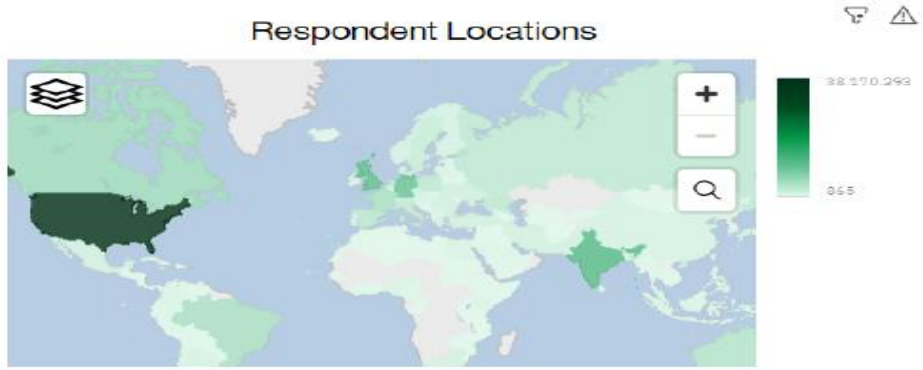


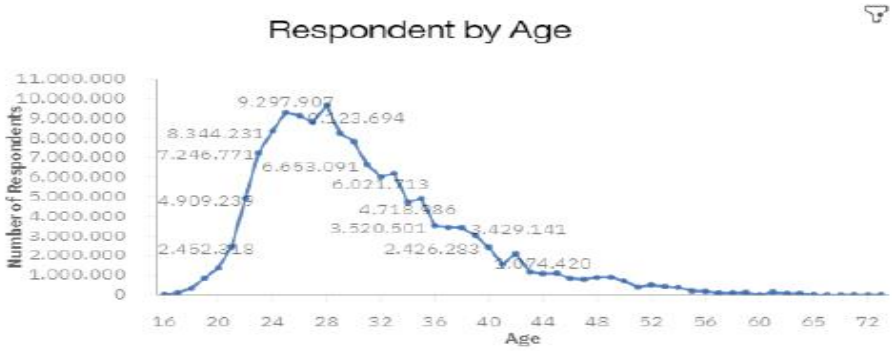



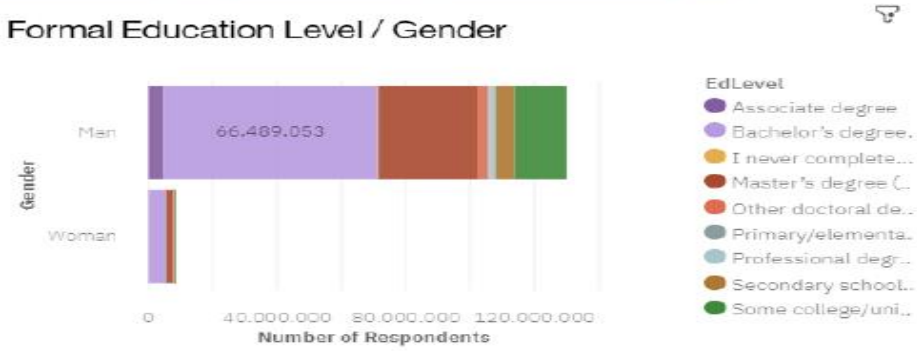
# DEMOGRAPHIC DISTRIBUTION

## DEMOGRAPHICS



# DISCUSSION

- Current technology trends helps in finding out the demands in market.
- Future trends may predict the scope of the skills, usage and emerging skills.
- Demographic distribution of developers and skills predict the availability of growth and possibility of technology boost.

# OVERALL FINDINGS & IMPLICATIONS

## Findings

- Python, JavaScript widely used and TypeScript getting popular.
- Over 90% young male developers.
- Developers mostly located in developed countries.

## Implications

- JavaScript and TypeScript web frames gaining followers.
- Global polarization of developers location and gender.
- Young developers without postgrad studies on its majority.

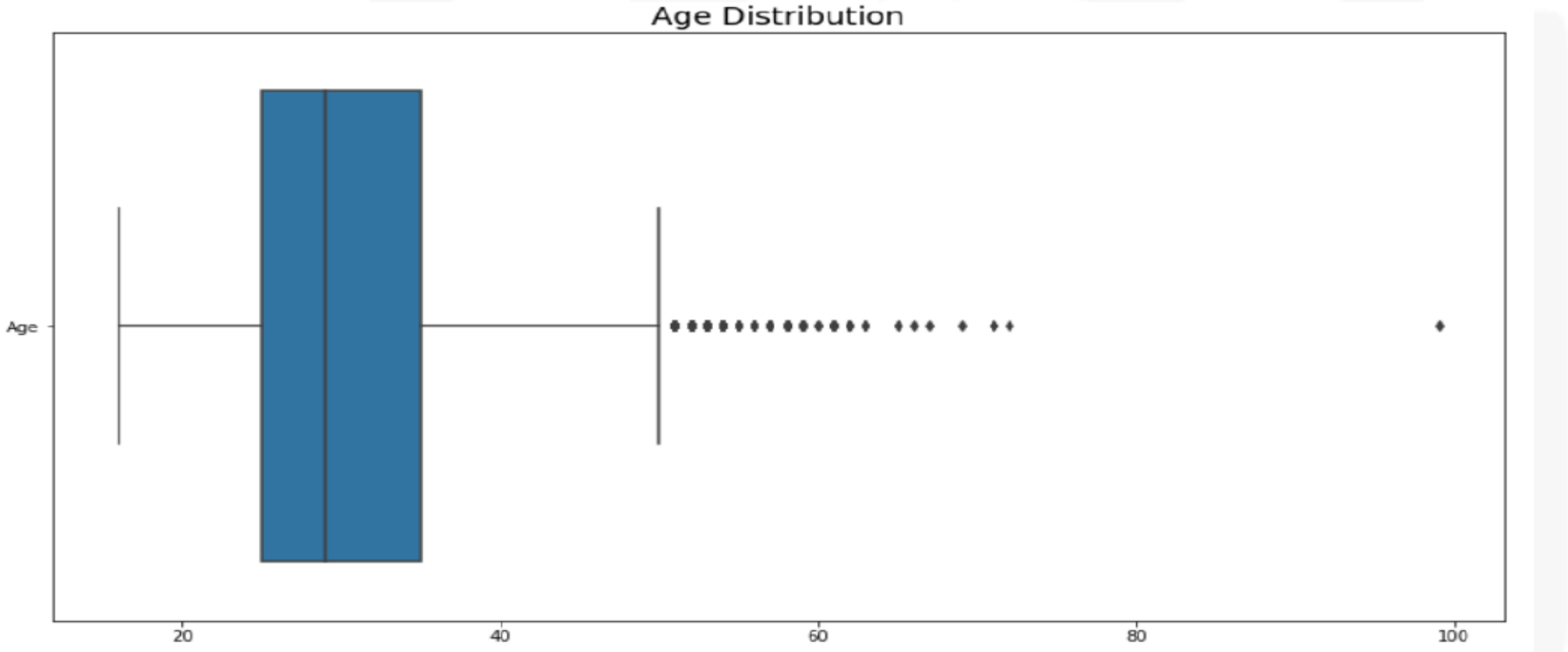
# CONCLUSION

- Developers are people with very marked characteristics.
- A good idea of popularity trends of different tools, platforms and languages can be obtained.
- There is a job to be done to spread accessibility of this labor market to countries in development.
- It boost the economy as the distribution are along with the demographic dividend range.

# APPENDIX

- Job Posting Distributions.
- Popular Language Analysis.

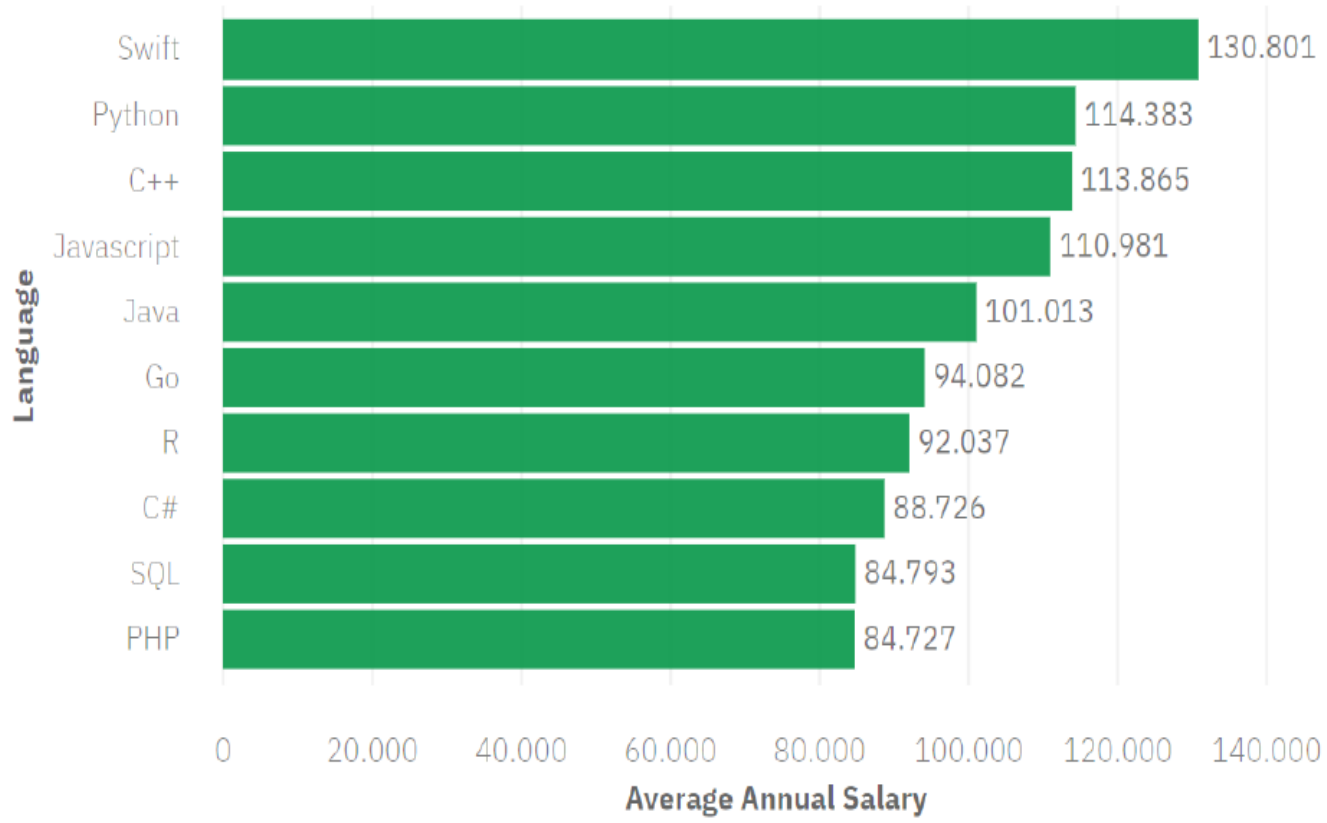
# JOB POSTINGS



# JOB POSTING DISTRIBUTION

- From the plot its clear that job postings are distributed between the younger and middle aged persons.
- In the range 25 to 35 larger job posting opportunities are available.

# POPULAR LANGUAGES



# POPULAR SKILL LANGUAGES ANALYSIS

- Larger developers or technical persons depend on swift, python, c++ programming languages.
- There is an equal opportunity in Java as well. People might change their skill set based on the demand in the market in future.