

Stack Overflow Developer Survey 2019



A data analyst result of the I.T. Industry

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OUTLINE



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

EXECUTIVE SUMMARY



- Collection of Data Analysis jobs
- Trends and insights based on the top # of:
 - Programming Languages
 - Database Usage
 - Platforms
 - Web Frame
- Graph and trend results
- Results uncovered the total discoveries and suggestions
- Fulfill the research with final conclusion

INTRODUCTION



- Developer Survey in Stack Overflow is largest and most comprehensive worldwide
- Almost all developer communities involved as respondents
- Approx. millions developers responded
- Prediction on I.T. solution and consultant programming changes
- What are the programming, database, platform and web frame skills by
 - currently working?
 - move on next year?

METHODOLOGY



- Collect survey responses and research content by:
 - Web Scraping
 - APIs
 - Requests library
- Data Wrangling
- Exploratory Data Analysis
- Data Visualization:
 - Distribution of relationship, composition and comparison chart culminations
- Dashboards with IBM Cognos

Silge, J. (2019, April 9). *The 2019 stack overflow developer survey results are in*. Stack Overflow Blog. <https://stackoverflow.blog/2019/04/09/the-2019-stack-overflow-developer-survey-results-are-in/>

RESULTS



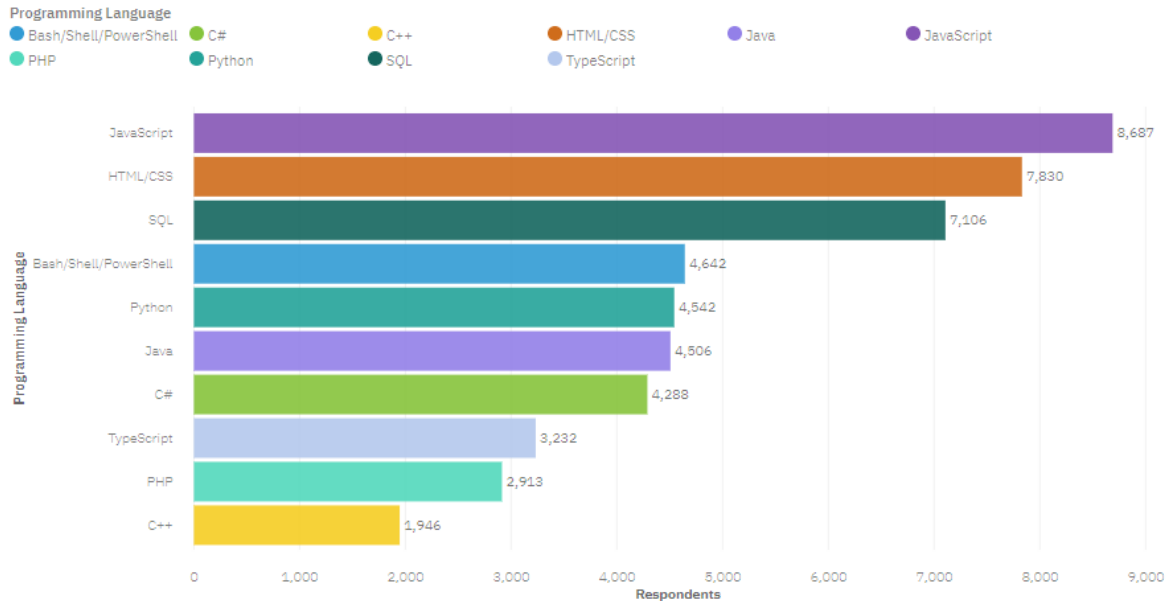
**How Stack Overflow Developer
analyzing goes for each
Respondents?**

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PROGRAMMING LANGUAGE TRENDS

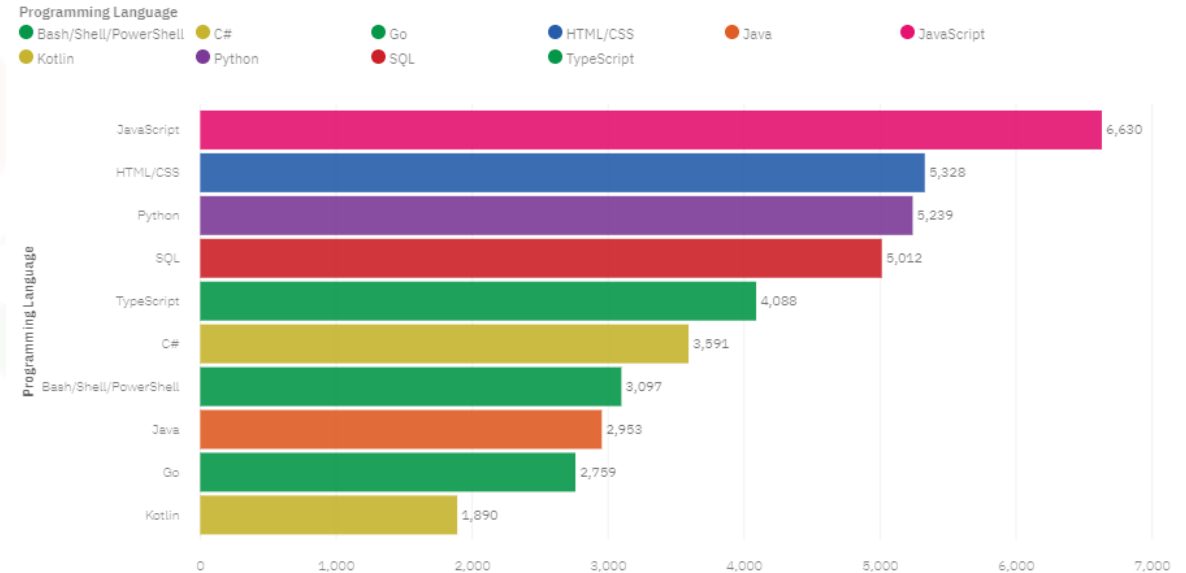
Current Year

Top 10 Programming Languages Worked With



Next Year

Top 10 Programming Languages Desires Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript is the top working
- Python eventually replace SQL as third
- TypeScript expected 5th place as learner

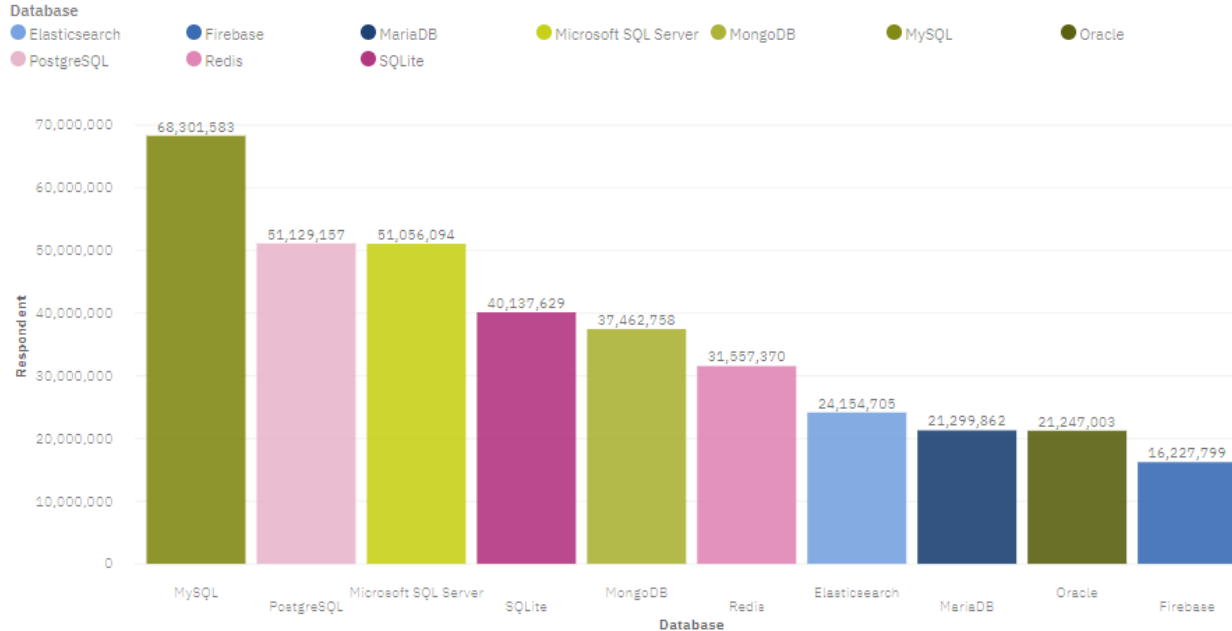
Implications

- Developers moves JavaScript into TypeScript
- Further interest with Python
- SQL as secondary usage

DATABASE TRENDS

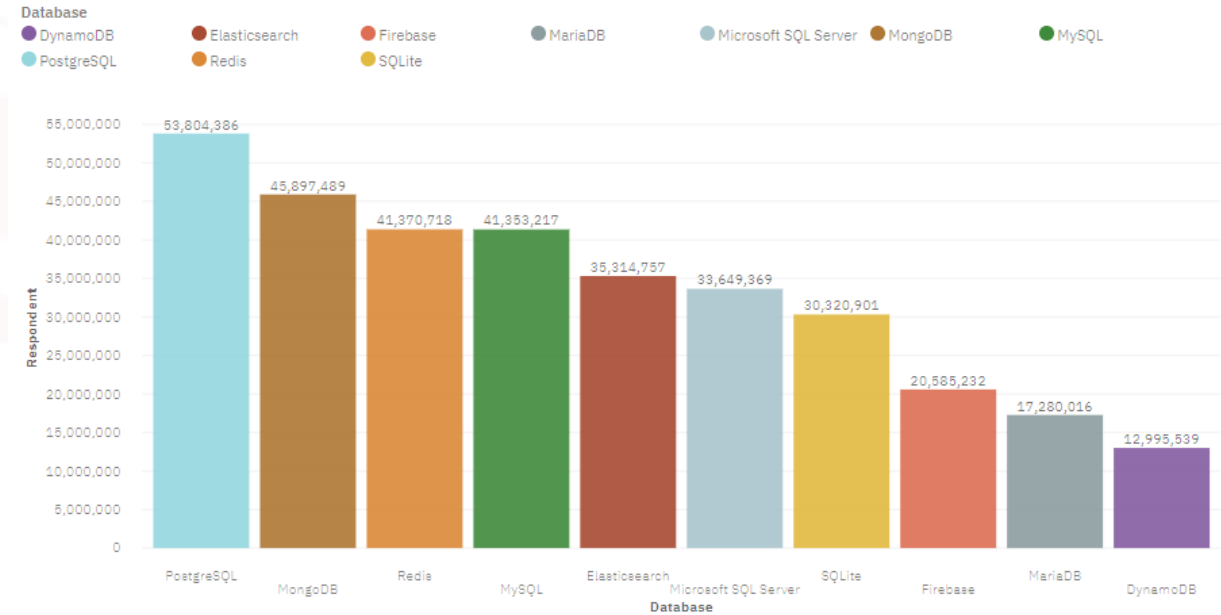
Current Year

Top 10 Database Worked With



Next Year

Top 10 Database Desires Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL popular in one year and down for another year
- PostgreSQL and MongoDB takes over Microsoft and MySQL
- Newcomers Redis and Elasticsearch placed as replacement

Implications

- At least MySQL experience necessary for database
- PostgreSQL, MongoDB and Redis demonstrates the market
- MongoDB replaces the top in later years

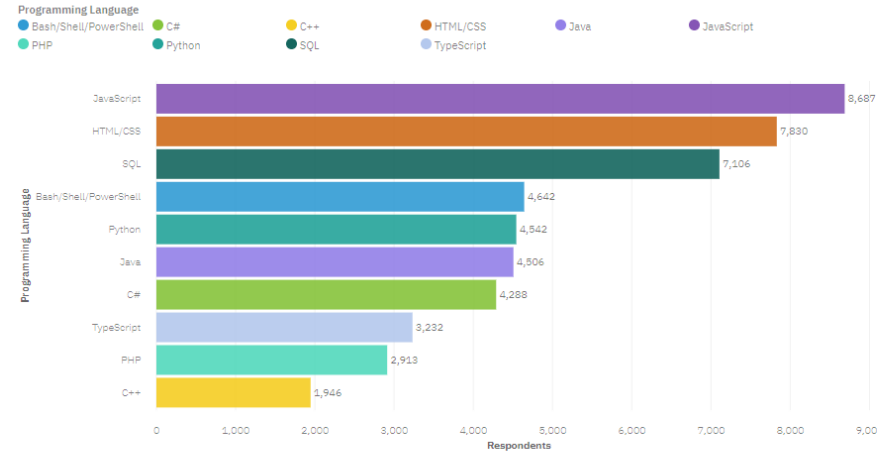
DASHBOARD



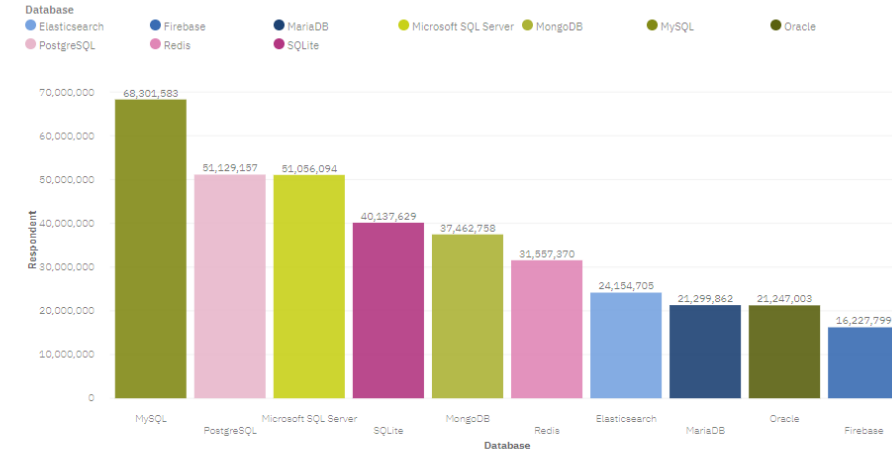
[Click Here for
the Dashboard](#)

Current Technology Usage

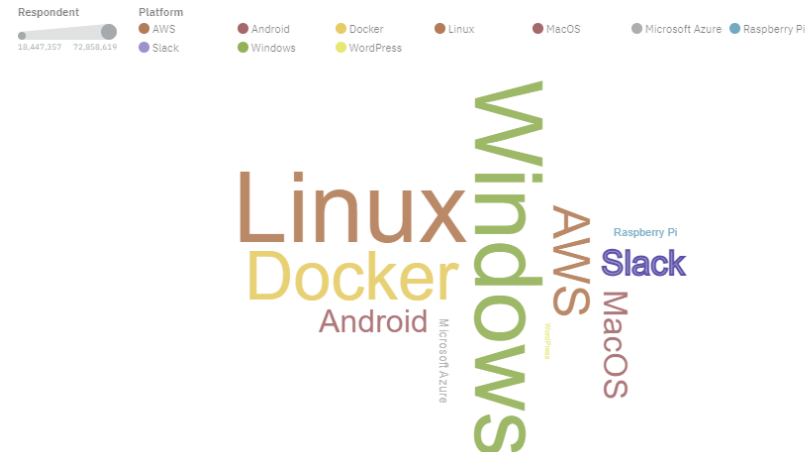
Top 10 Programming Languages Worked With



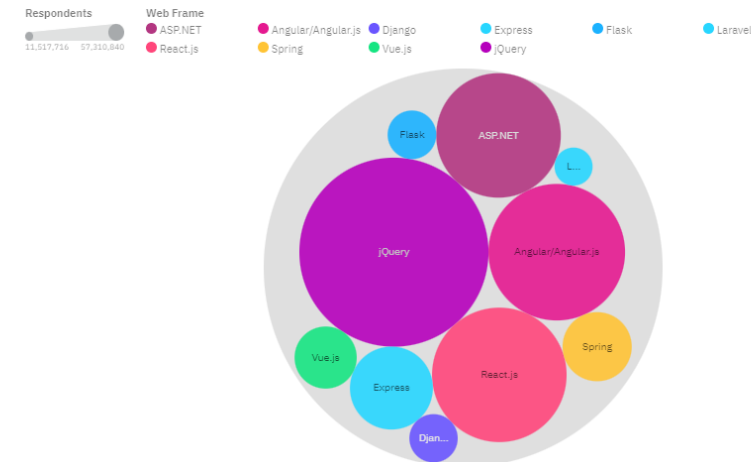
Top 10 Database Worked With



Top 10 Platform Worked With

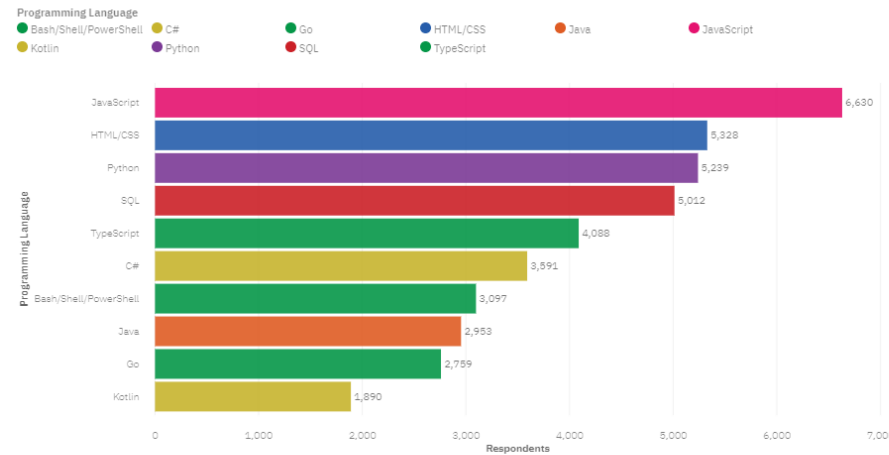


Top 10 Web Frame Worked With

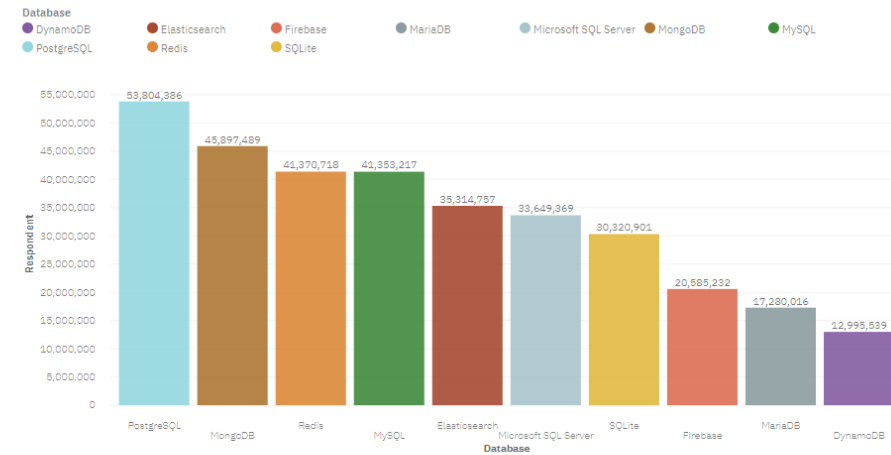


Future Technology Trends

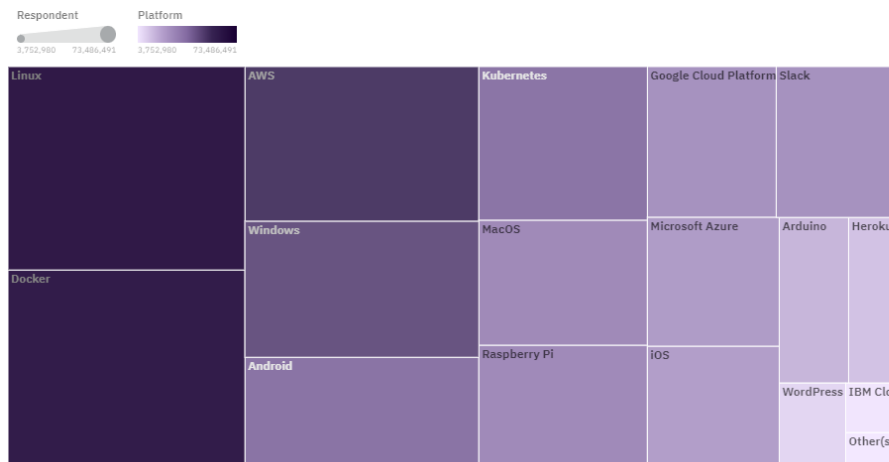
Top 10 Programming Languages Desires Next Year



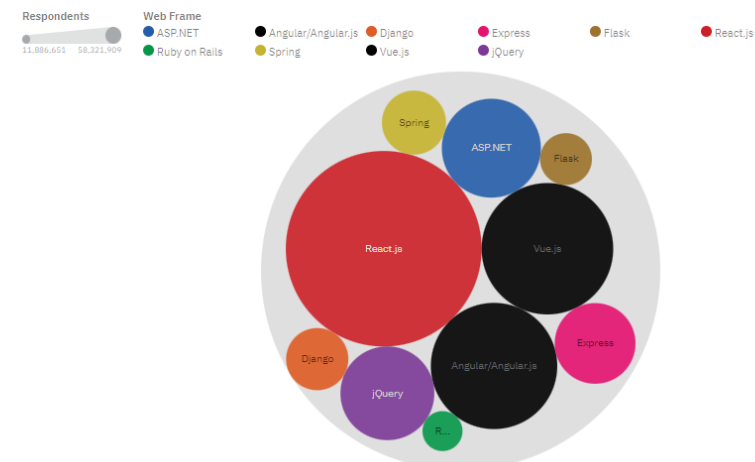
Top 10 Database Desires Next Year



Platforms Desires Next Year



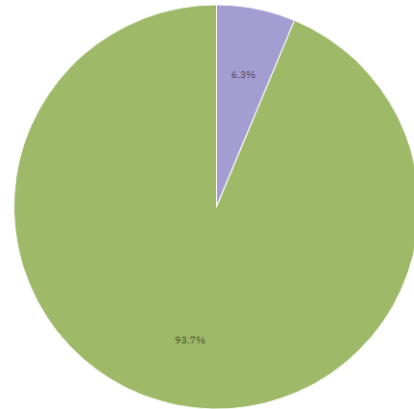
Top 10 Web Frame Desires Next Year



Demographics

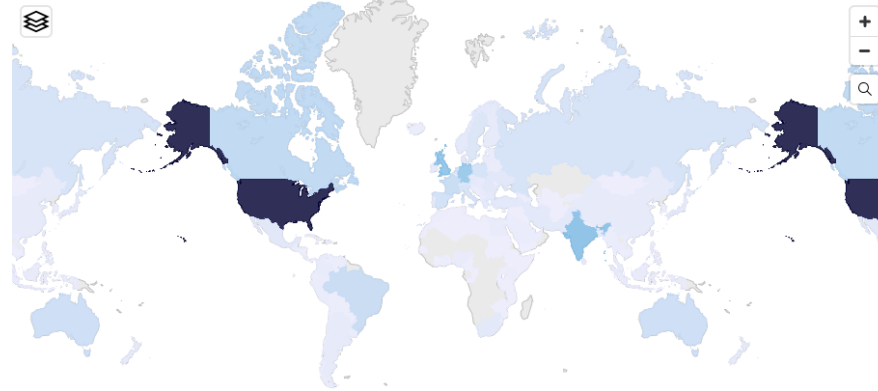
Respondent Classified by Gender

Gender
Woman Man



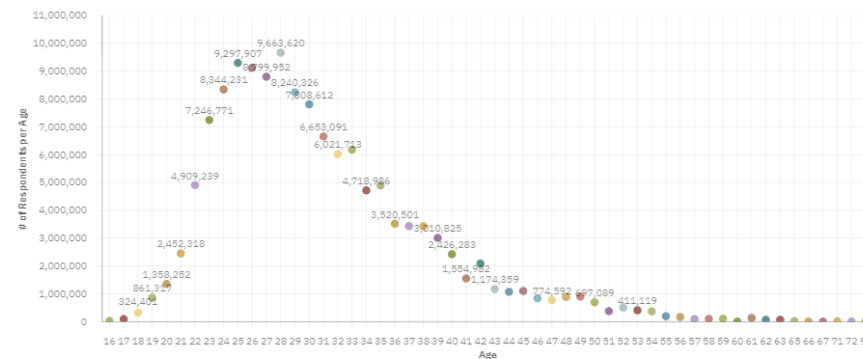
Respondent Count for Countries

Respondent (Sum)
865 98,570,517



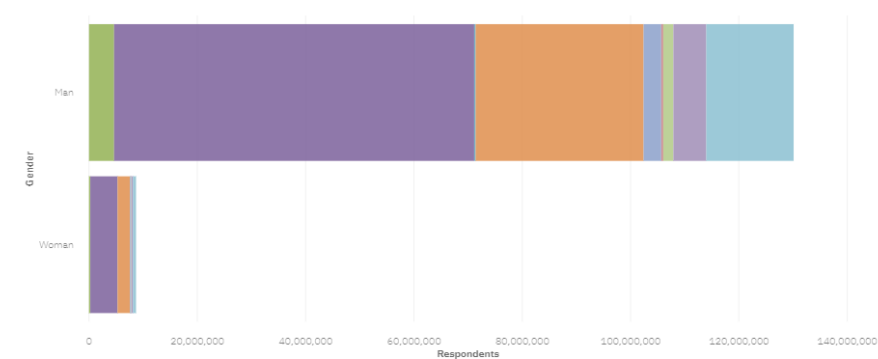
Respondent Count by Age

Age
16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 71 72 99



Respondent Count by Gender, classified by Formal Education Level

Education Level
Associate degree Bachelor's degree (BA, BS, B.E... I never completed any formal ... Master's degree (MA, MS, M.E... Other doctoral degree (Ph.D, E... Primary/elementary school Professional degree (JD, MD, e... Secondary school (e.g. Americ... Some college/university study ...



OVERALL FINDINGS & IMPLICATIONS

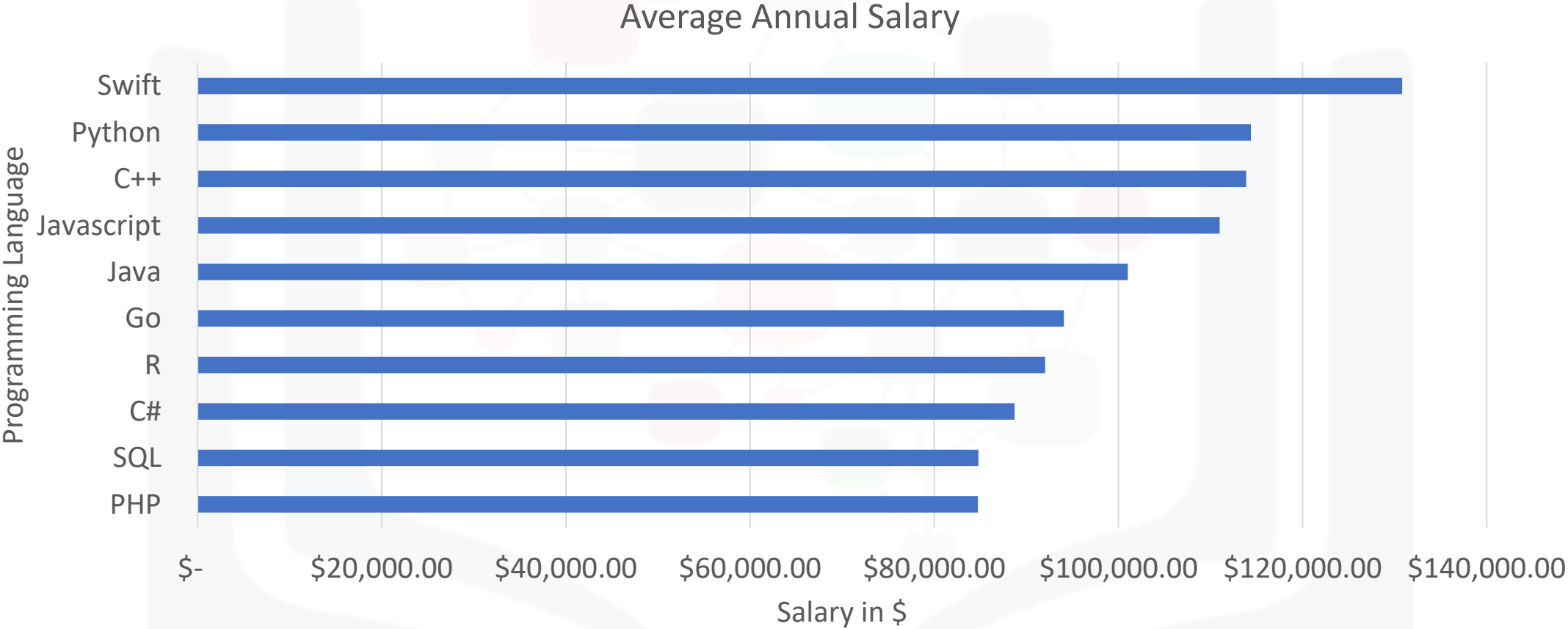
Findings

- TypeScript becomes popular as alternative JavaScript
- Most of the gender are men
- Mainly populated in the USA, while top 3 in UK and India

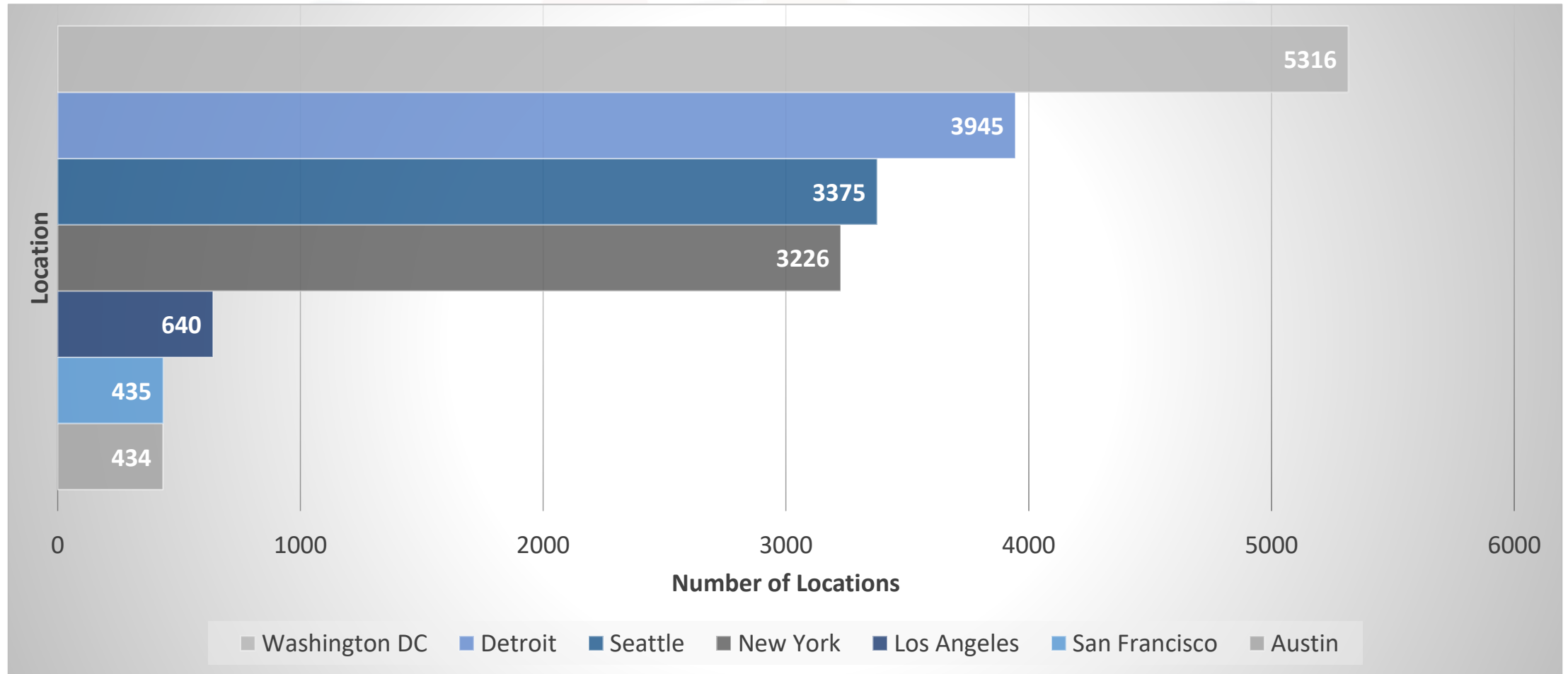
Implications

- Increases the rise of TypeScript
- SQL servers replaces into PostgreSQL
- Linux and Docker are better for I.T. industry

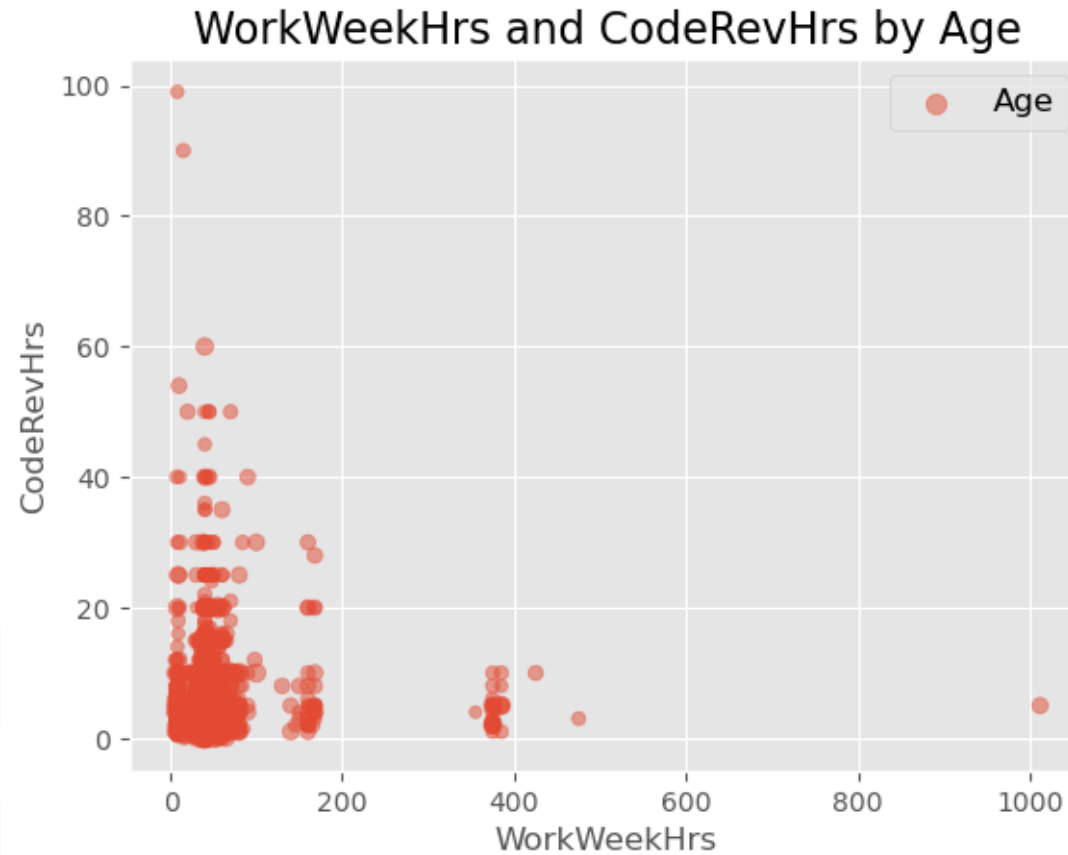
POPULAR LANGUAGES



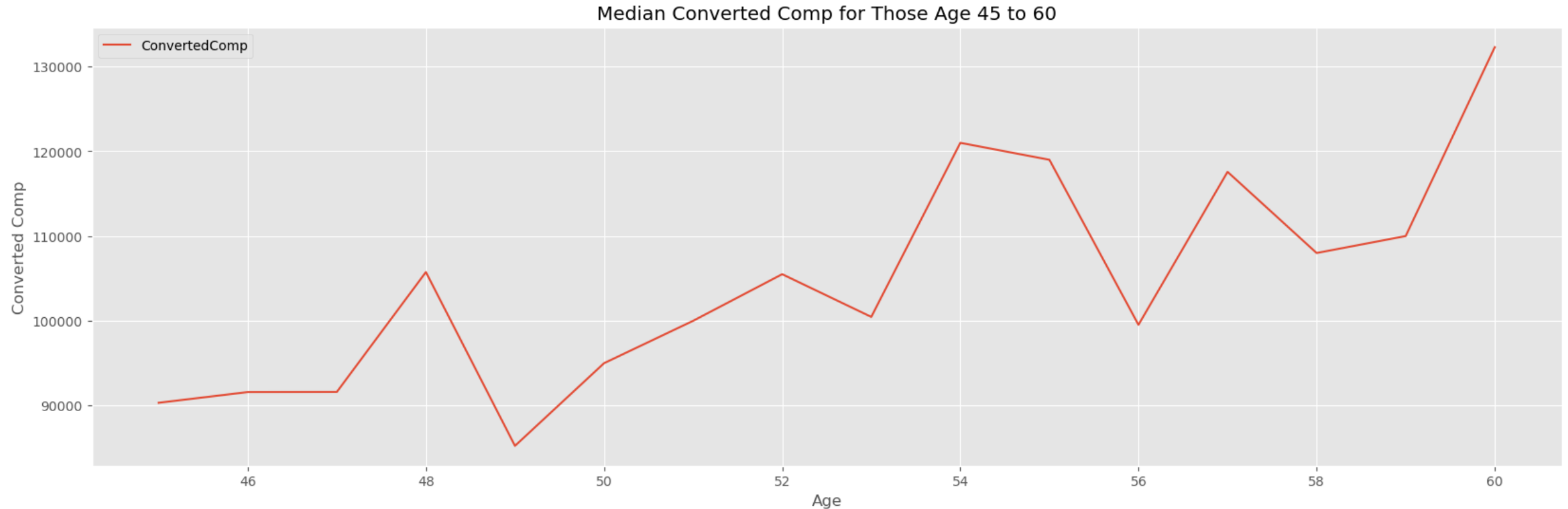
JOB POSTINGS



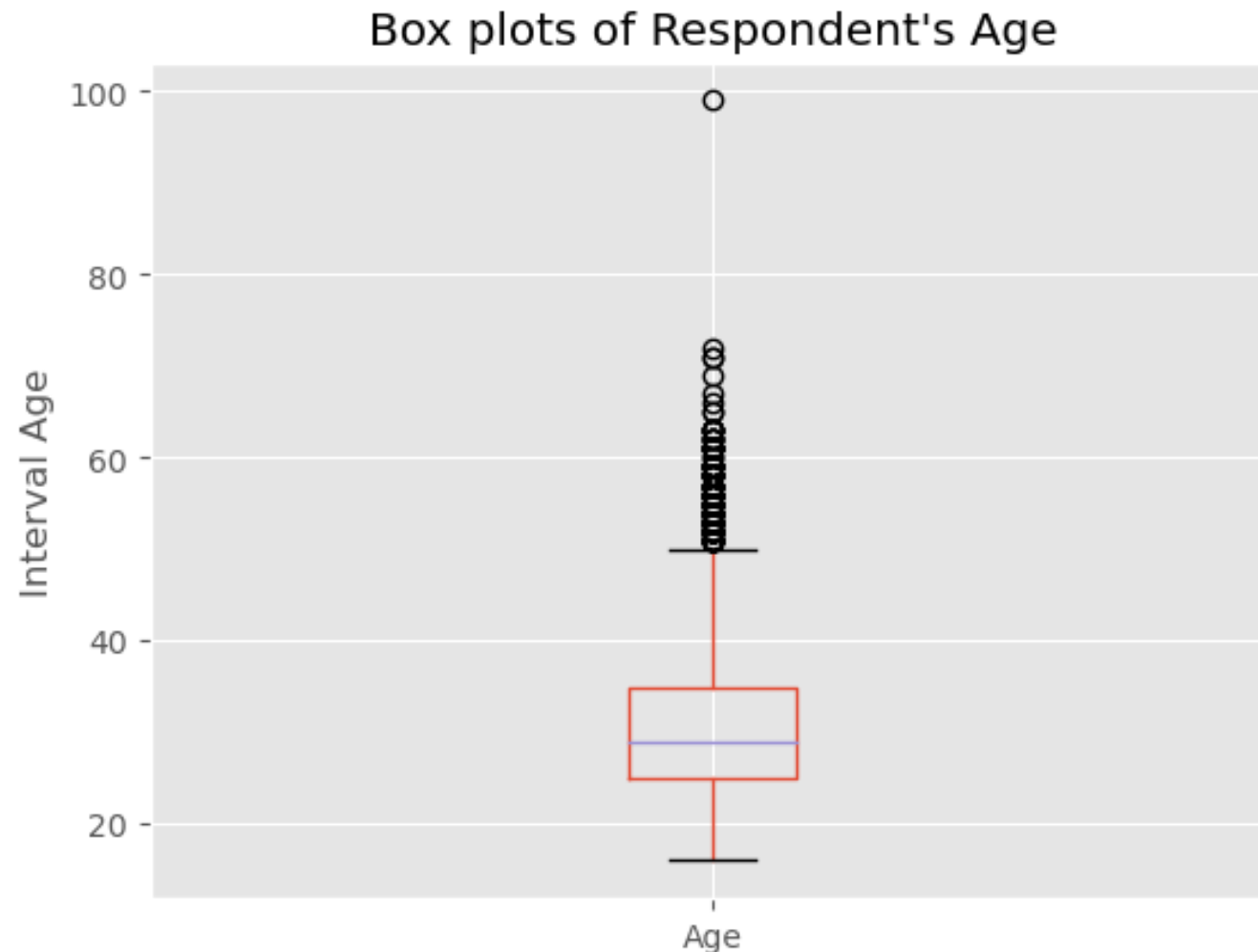
OVERALL AGE AND WORKWEEKHRS



MEDIAN CONVERTED COMP



Respondent's Age Box Plot



DISCUSSION



- The low IT Industry for Women
- What is HTML/CSS datascraping required for requests?
- Why is the SQL database remains reverent for the I.T. industry?
- How TypeScript is different from JavaScript?

CONCLUSION



- The platforms Linux and Docker as main priority
- Main demographic is Men
- Database Demands on PostgreSQL
- HTML/CSS remains key of webscrapping
- Converting JavaScript into TypeScript
- Popular trends on various tools, platforms and languages
- Increase accessibility for various countries in development