OVERFLOW DEVELOPER SURVAY

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OUTLINE

- Executive Summary

- Introduction

- Methodology

- Results
  - Visualization – Charts
  - Dashboard

- Discussion
  - Findings & Implications

- Conclusion

- Appendix

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EXECUTIVE SUMMARY

- **Methodology :**

1) **Data gathering.**

2)**Data analysis.**

3) **Data visualizations.**

- **Results presentation supported with graphs and trends.**

- **Discussion of overall findings and implications regarding the results previously exposed.**

- **Final conclusions.**

INTRODUCTION

- **Stack Overflow's annual Developer Survey is the largest and most comprehensive survey of people who code around the world.**

- **Results don't represent everyone in the developer community .**

- **Trends to predict where the developers are going.**

- **Characterization of developers around the globe.**

METHODOLOGY

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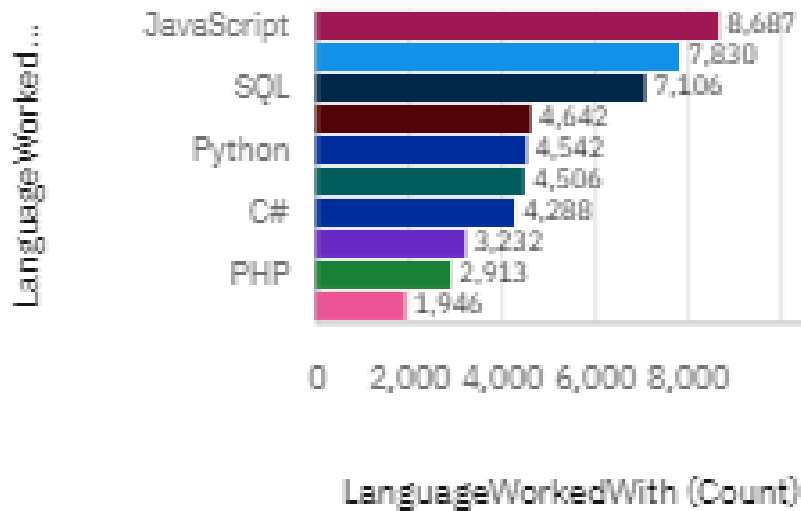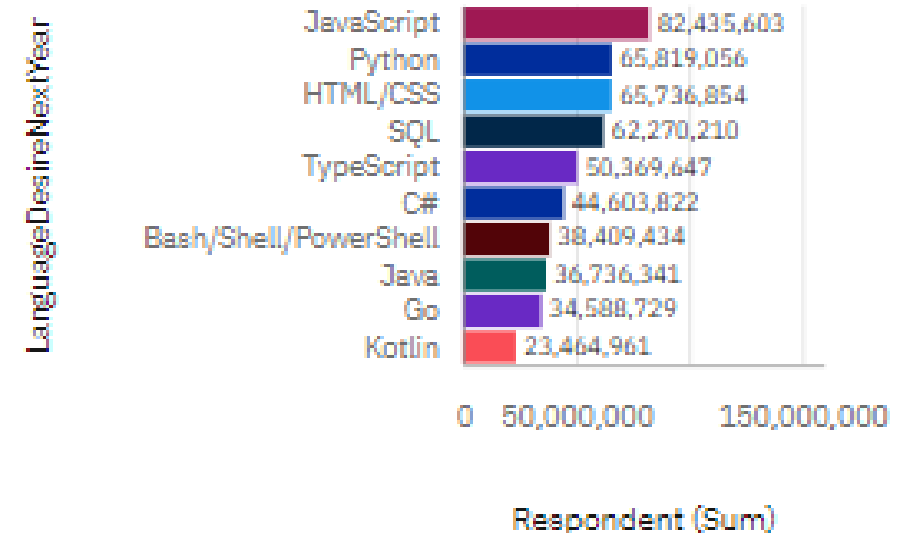- Dashboards

RESULTS

PROGRAMMING LANGUAGE TRENDS

Current Year

TOP 10 LanguageWorkedWith

Language Worked...	Count
JavaScript	8,687
SQL	7,830
(7,106)	7,106
Python	4,642
(4,542)	4,542
C#	4,506
(4,288)	4,288
(3,232)	3,232
PHP	2,913
(1,946)	1,946

LanguageWorkedWith (Count)

Next Year

TOP 10 LanguageDesireNextYear

LanguageDesireNextYear	Respondent (Sum)
JavaScript	82,435,603
Python	65,819,056
HTML/CSS	65,736,854
SQL	62,270,210
TypeScript	50,369,647
C#	44,603,822
Bash/Shell/PowerShell	38,409,434
Java	36,736,341
Go	34,588,729
Kotlin	23,464,961

Respondent (Sum)

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PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- Javascript is the top language used today
- Python is the 4th language
- Developers shows interest in html/css and sql

Implications

- Python will take advantage soon
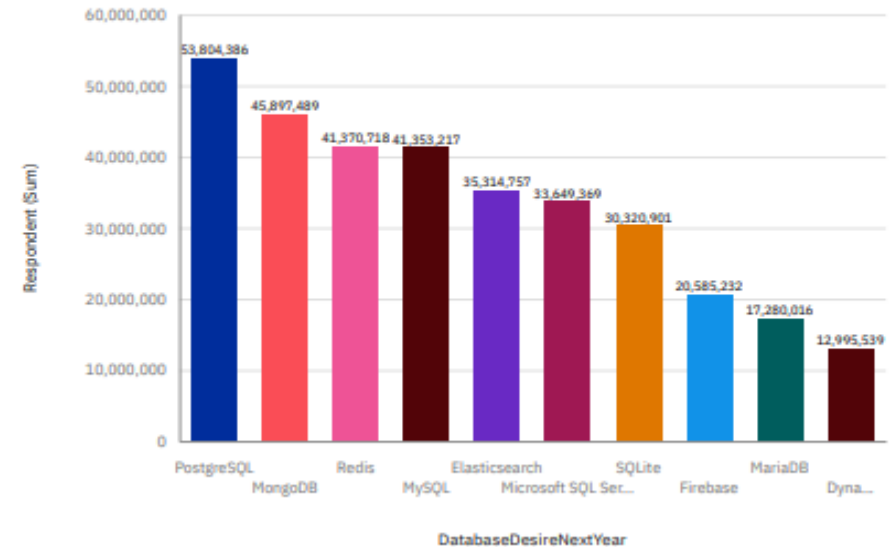- Javascript will remain in the first place

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DATABASE TRENDS

Current Year

TOP 10 DatabaseWorkedWith
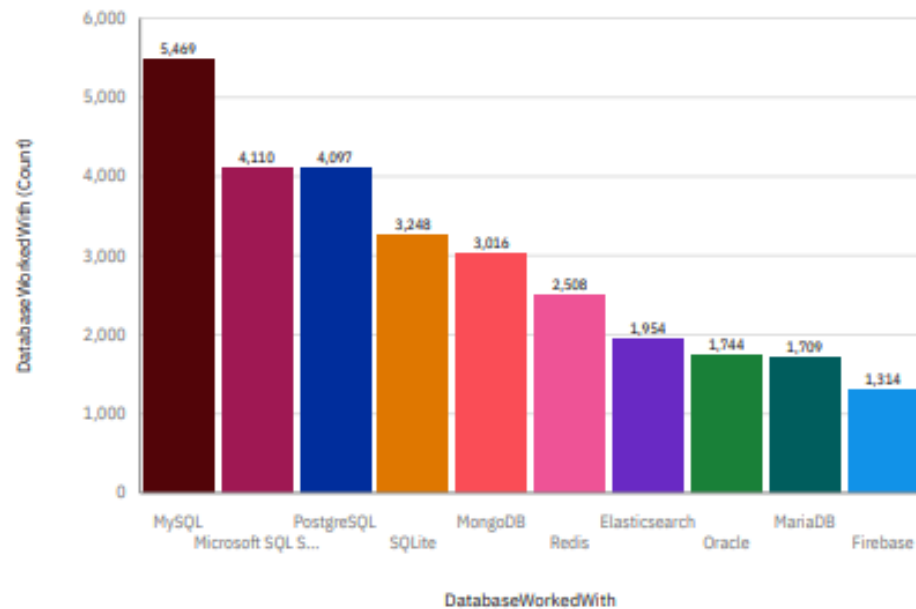
Next Year

TOP 10 DatabaseDesireNextYear

DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL is the first used database.

- Firebase is the least database.

- Microsoft sqlserver,postgresql and SQLite are commonly used too.

Implications

- PostgreSQL will take advantage over MySQL.

- Monodatabase will be used more than before.

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DASHBOARD

https://github.com/zainabusama/ibm-visualization-final-project.
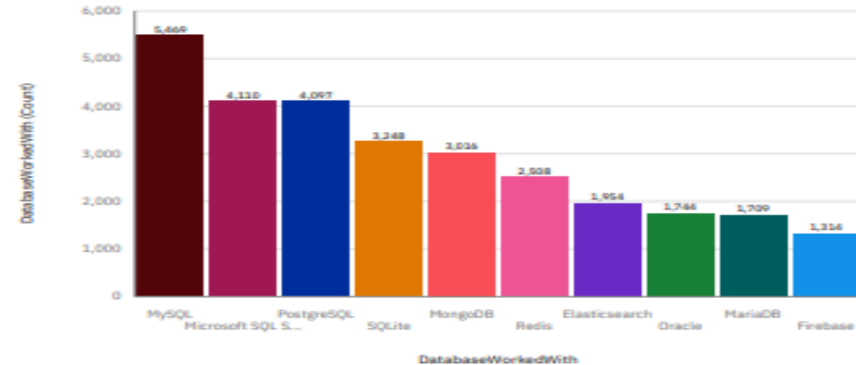
DASHBOARD TAB 1

DASHBOARD TAB 2

TOP 10 LanguageDesireNextYear
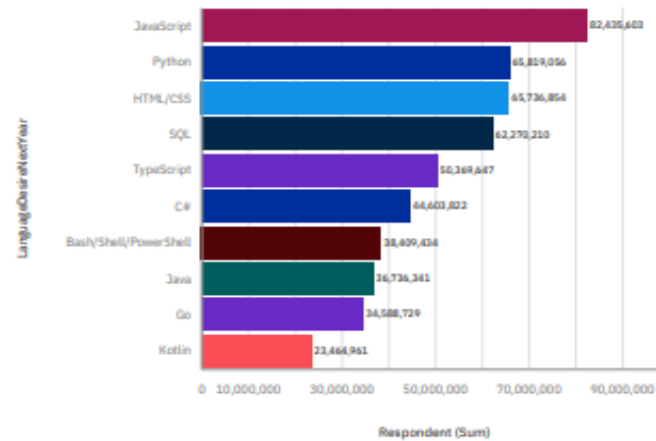
TOP 10 DatabaseDesireNextYear
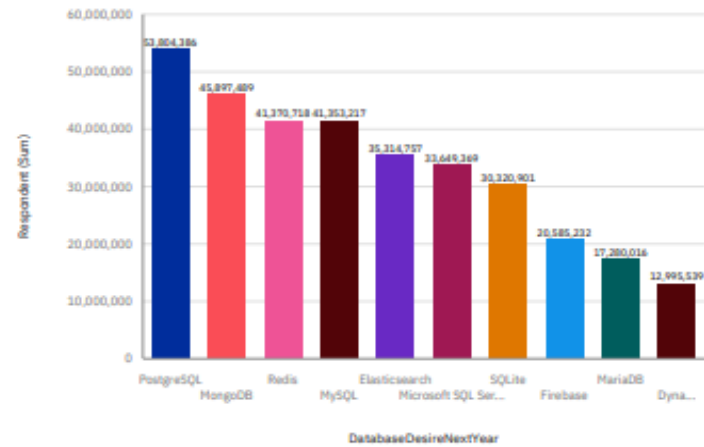
PlatformDesireNextYear
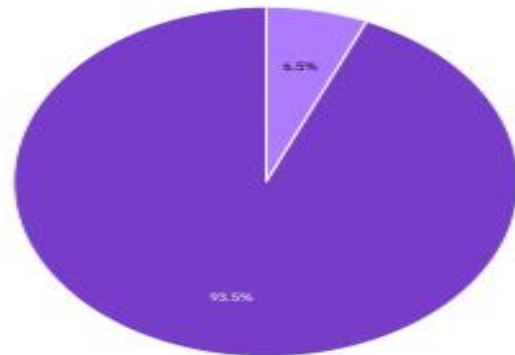
TOP 10 WebFrameDesireNextYear

DASHBOARD TAB 3
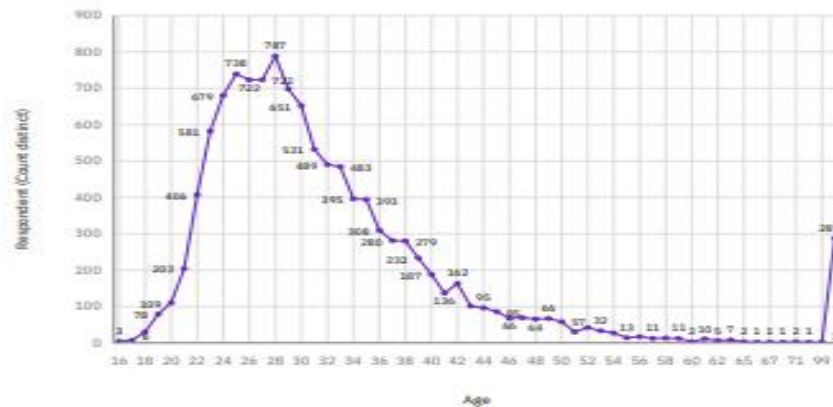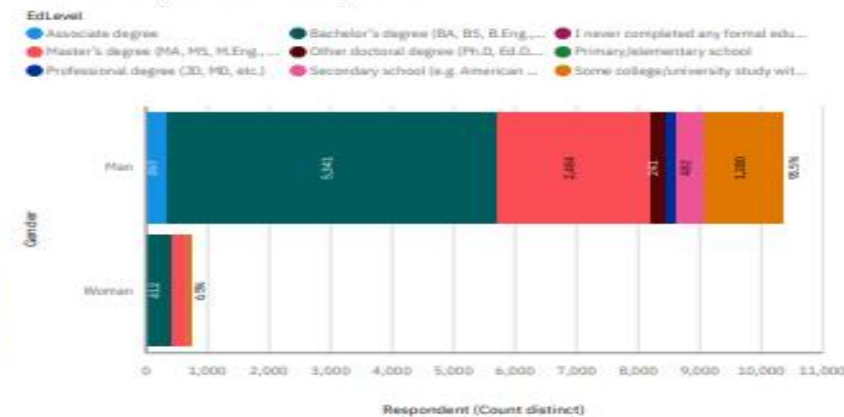
DISCUSSION

OVERALL FINDINGS & IMPLICATIONS

Findings

- 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.
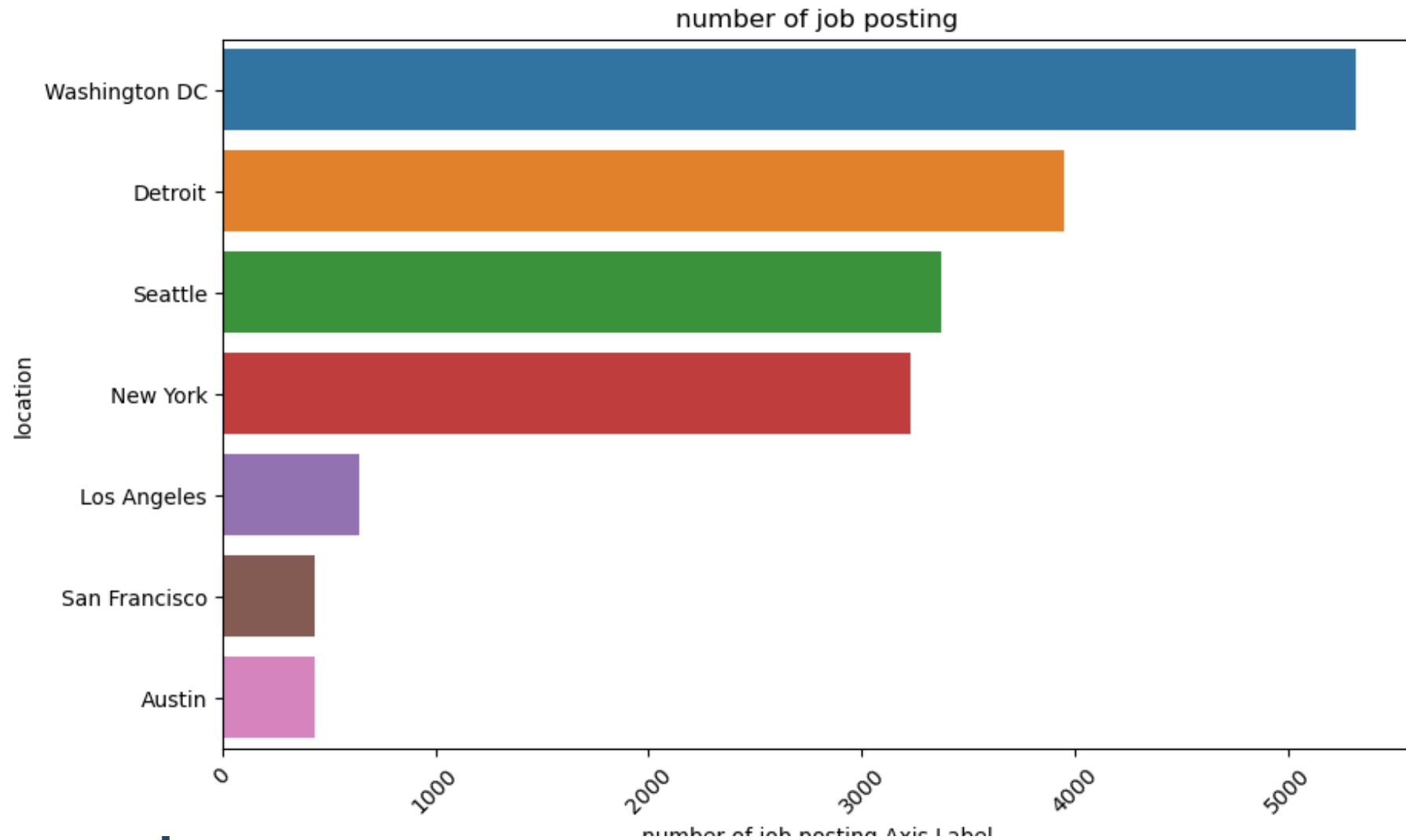
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CONCLUSION

- Developers are people with very marked characteristics.

- Trends of different tools, platforms and languages can be obtained.

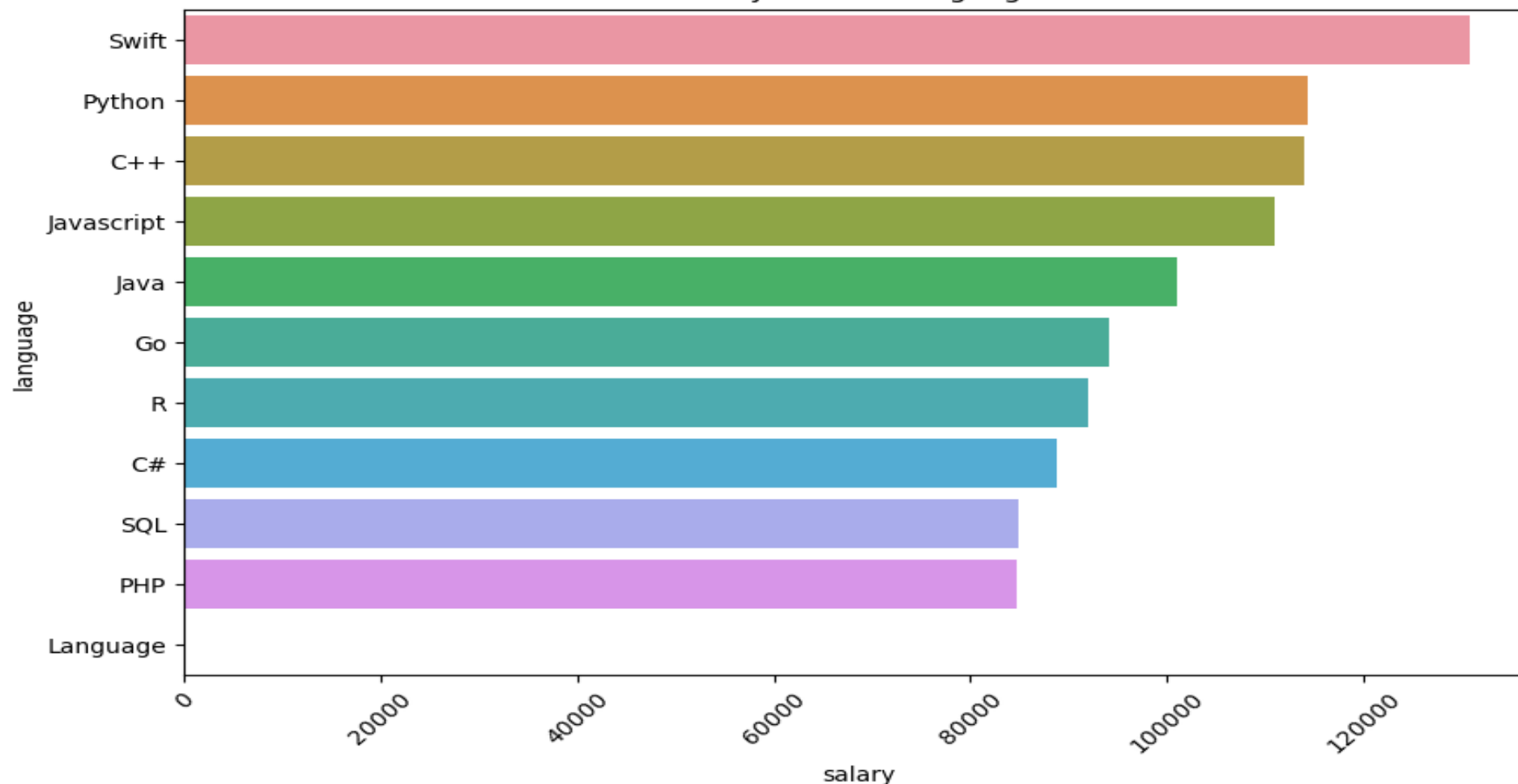- we can spread those ideas to the developed counties to help them.
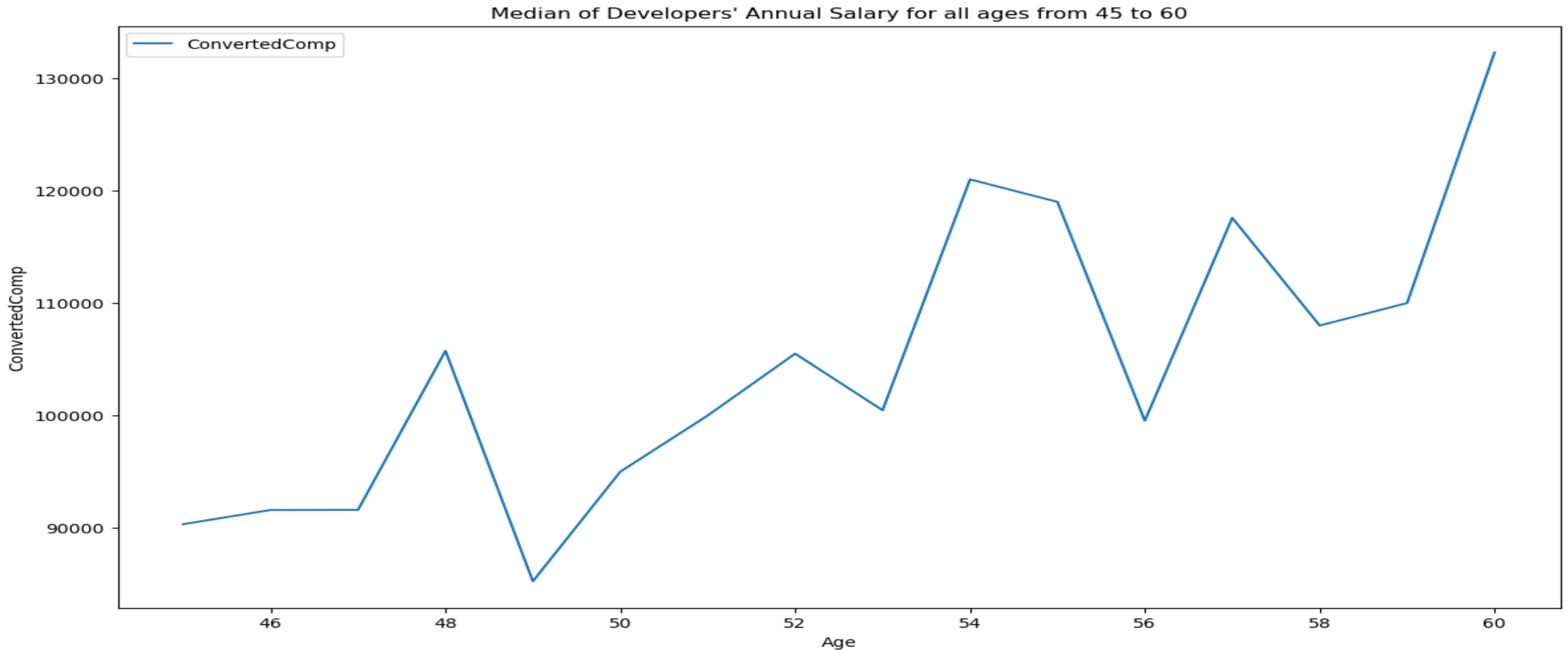
APPENDIX

JOB POSTINGS

number of job posting
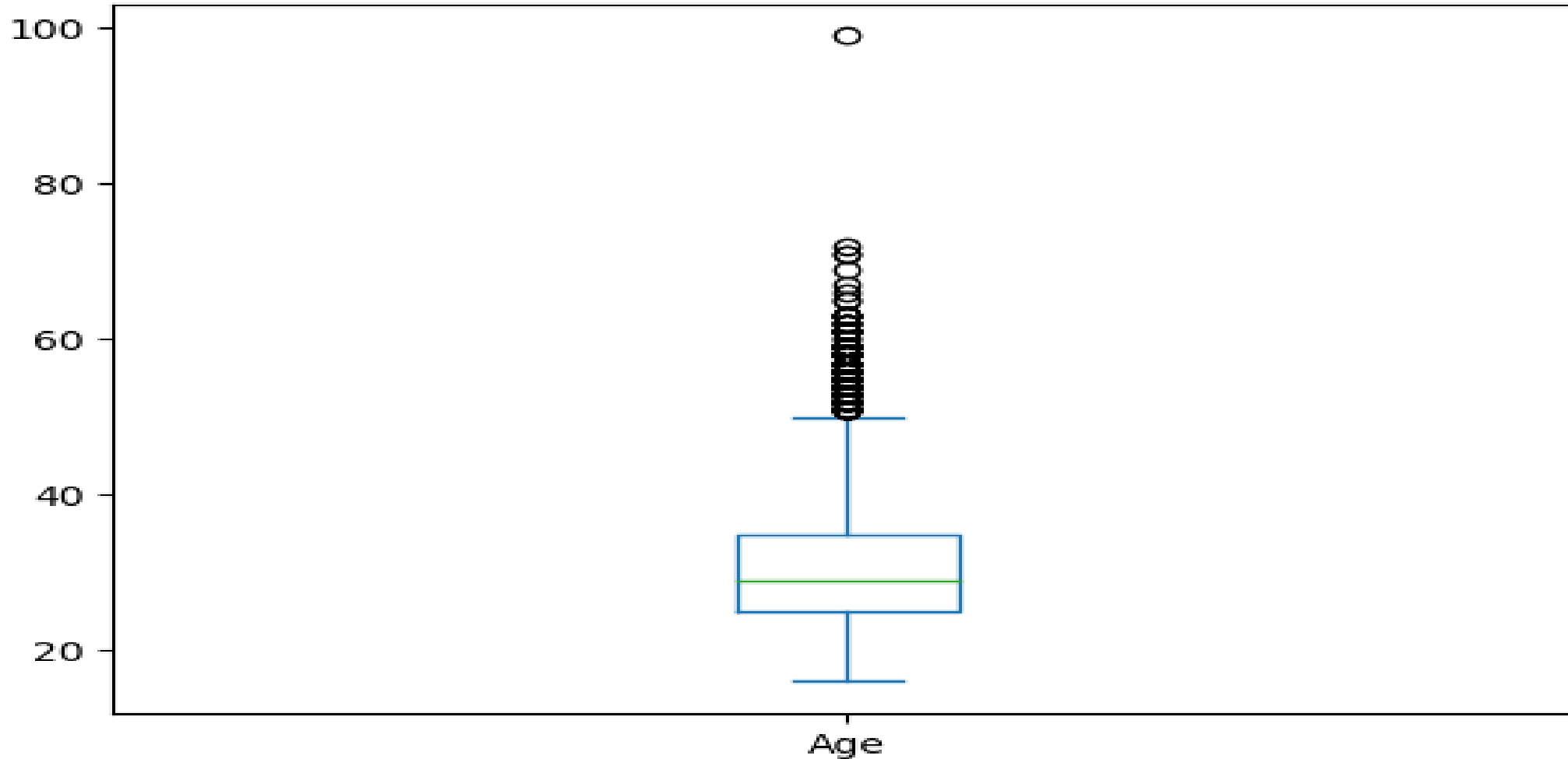
POPULAR LANGUAGES

salary for each language

Median of annual salary of developer from age 45 to 60

Median of Developers' Annual Salary for all ages from 45 to 60

Median of developer's ages

Correlation between age and all other numerical data

```
··   Correlation between Age and all other numerical columns:
     Respondent        0.004041
     CompTotal         0.006970
     ConvertedComp     0.105386
     WorkWeekHrs       0.036518
     CodeRevHrs       -0.020469
     Age               1.000000
     Name: Age, dtype: float64
```

1)Values =1 indicate a strong positive correlation.

2)Values = -1 indicate a strong negative correlation.

3)Values close to 0 indicate little to no linear relationship.