



# Stack overflow developer survey Results

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30/07/2024

# OUTLINE

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

# EXECUTIVE SUMMARY

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- Collecting Job Data Using APIs and Web scraping and Exploring data on Survey dataset
- Data Wrangling on survey dataset
  - Finding duplicates and removing them
  - Finding missing values and removing them
  - Normalizing data
- Analyzing the data distributions ,finding and removing outliers, showing the correlations
- Visualizing data distributions, relations ,comparisons and compositions
- Dashboards

# INTRODUCTION

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- Stack Overflow's annual Developer Survey is the largest and most comprehensive survey of people who code around the world.
- The survey have 135 countries and 11,398 Respondents
- Trends to predict the developers evolution based on :
  - Programming languages
  - Database
  - Platform
  - Web frame
- Characterization of developers around the world
  - Currently work with
  - Desire to work next year

# METHODOLOGY

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- Data collection : Online survey
  1. Web scraping
  2. APIs
  3. Request library
- Data wrangling
- Exploratory data analysis
  1. Data distributions
  2. Handling outliers
  3. Correlations
- Data visualizations
  1. Highlight distribution of data, relationships, the composition and comparison of data.
  2. Dashboards

# RESULTS

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**I. Programming languages Trends**

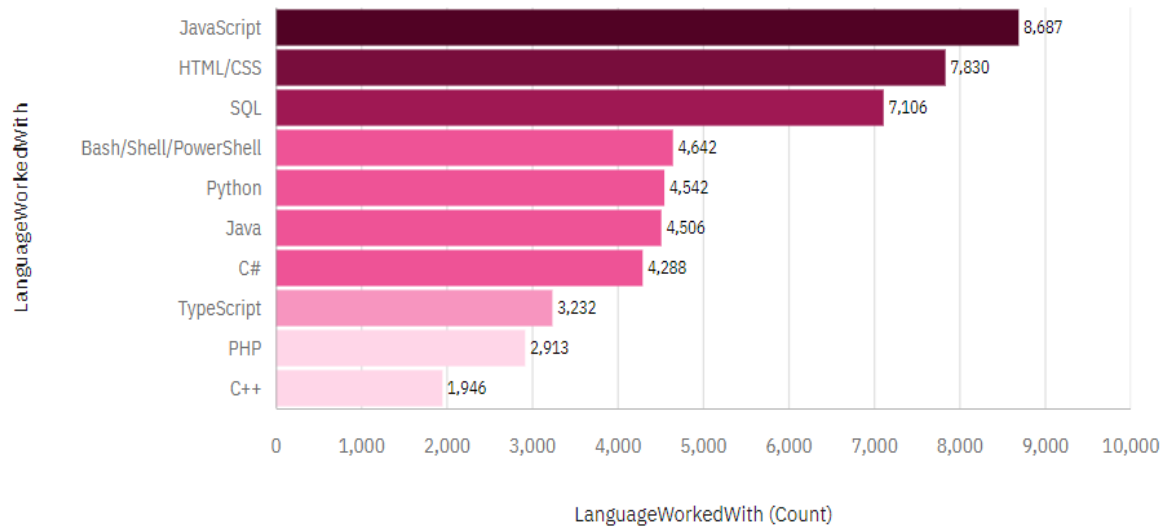
**II. Database Trends**

# PROGRAMMING LANGUAGE TRENDS

## Current Year

Top 10 Language WorkedWith

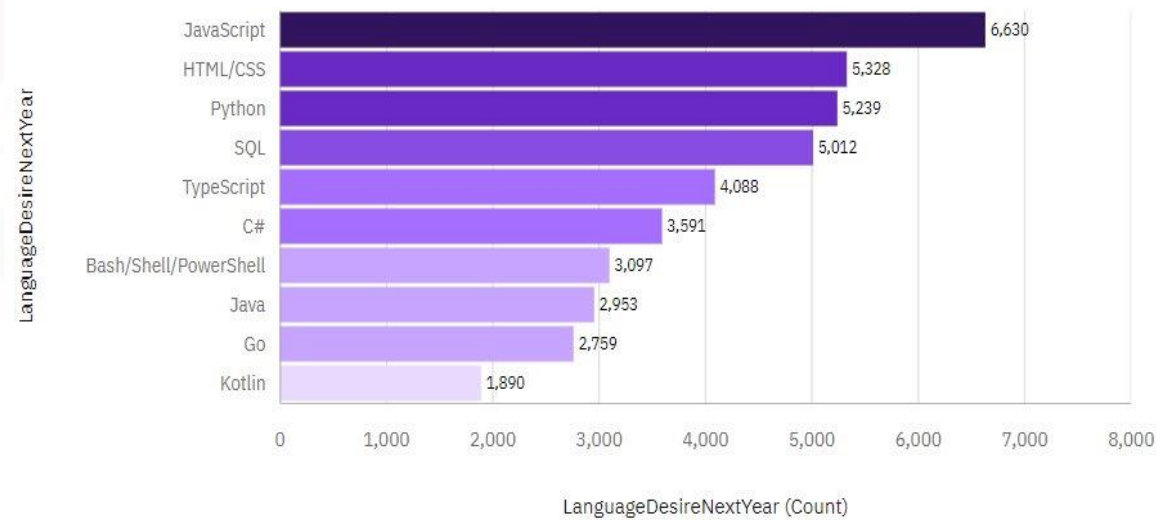
Respondent (Sum)  
24,456,246 108,371,442



## Next Year

Top 10 LanguageDesireNextYear.

Respondent (Sum)  
23,464,961 82,435,603



# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- JavaScript and HTML/CSS are Dominate
- Python vastly growing
- Great interest on typescript

## Implications

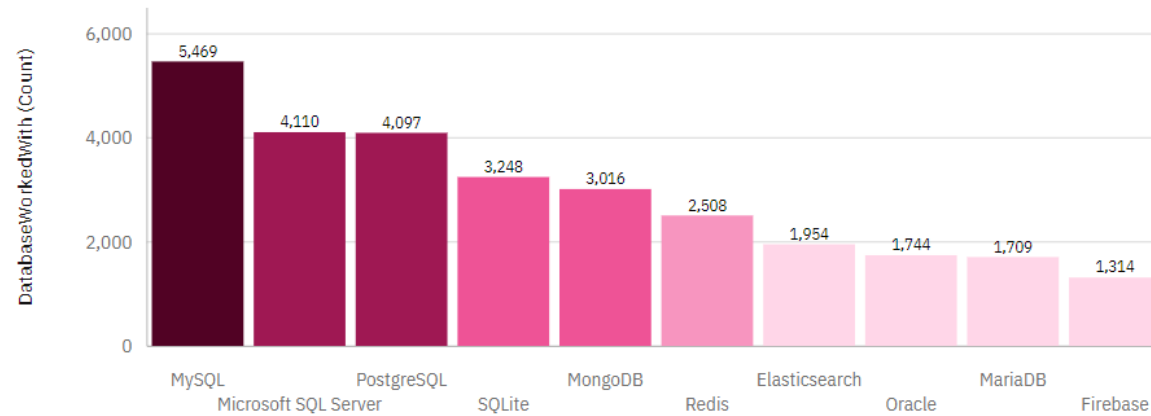
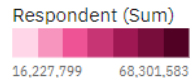
- Web development/or front-end
- Invest in Python programming
- Merging to typescript is possible



# DATABASE TRENDS

## Current Year

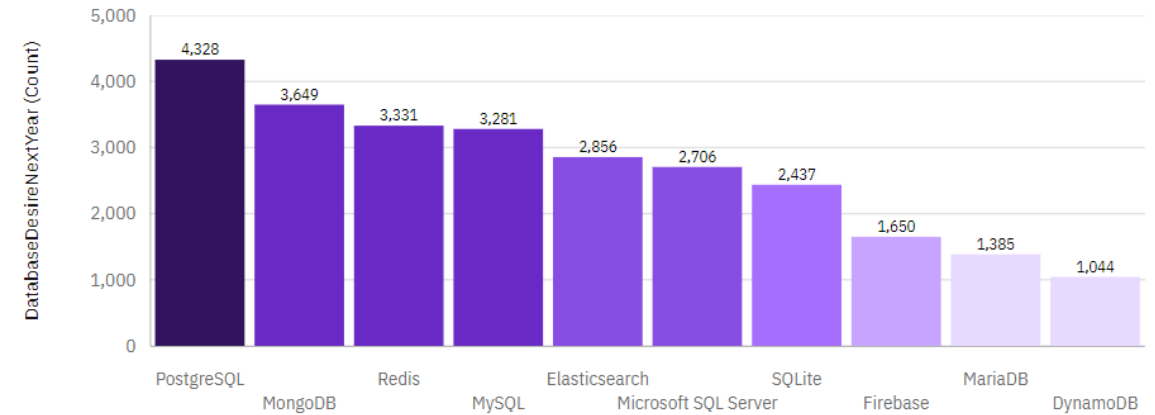
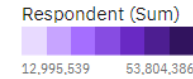
Top 10 DatabaseWorkedWith



DatabaseWorkedWith

## Next Year

Top 10 DatabaseDesireNextYear



DatabaseDesireNextYear

# DATABASE TRENDS - FINDINGS & IMPLICATIONS

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## Findings

- MySQL mostly used database
- The interest in PostgreSQL and MongoDB are increasing
- The interest in Microsoft SQL Server and SQLite decrease

## Implications

- Maintain MySQL proficiency
- Invest in PostgreSQL and MongoDB skills
- Microsoft SQL Server and SQLite losing ground in the market.

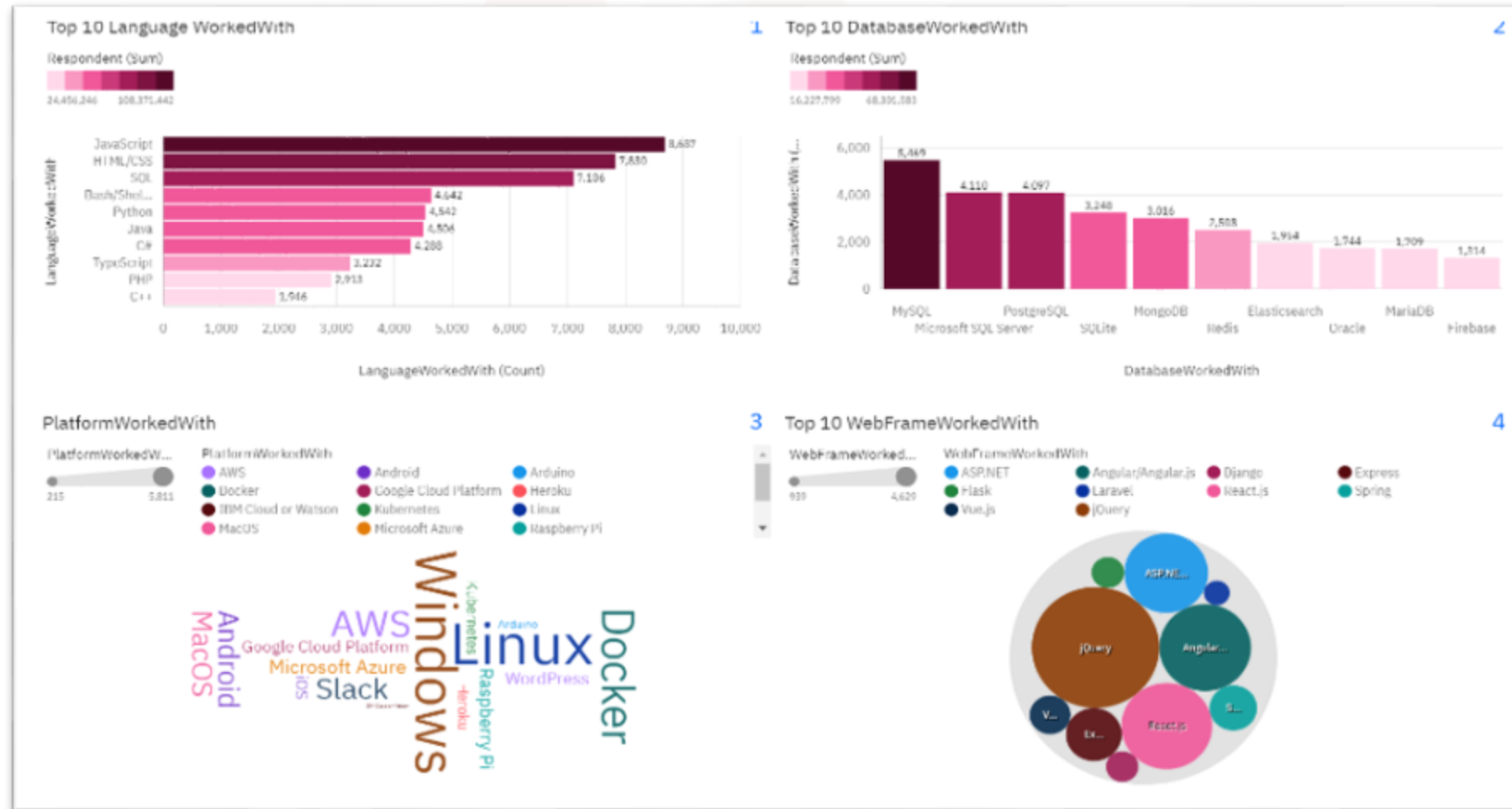
# DASHBOARD

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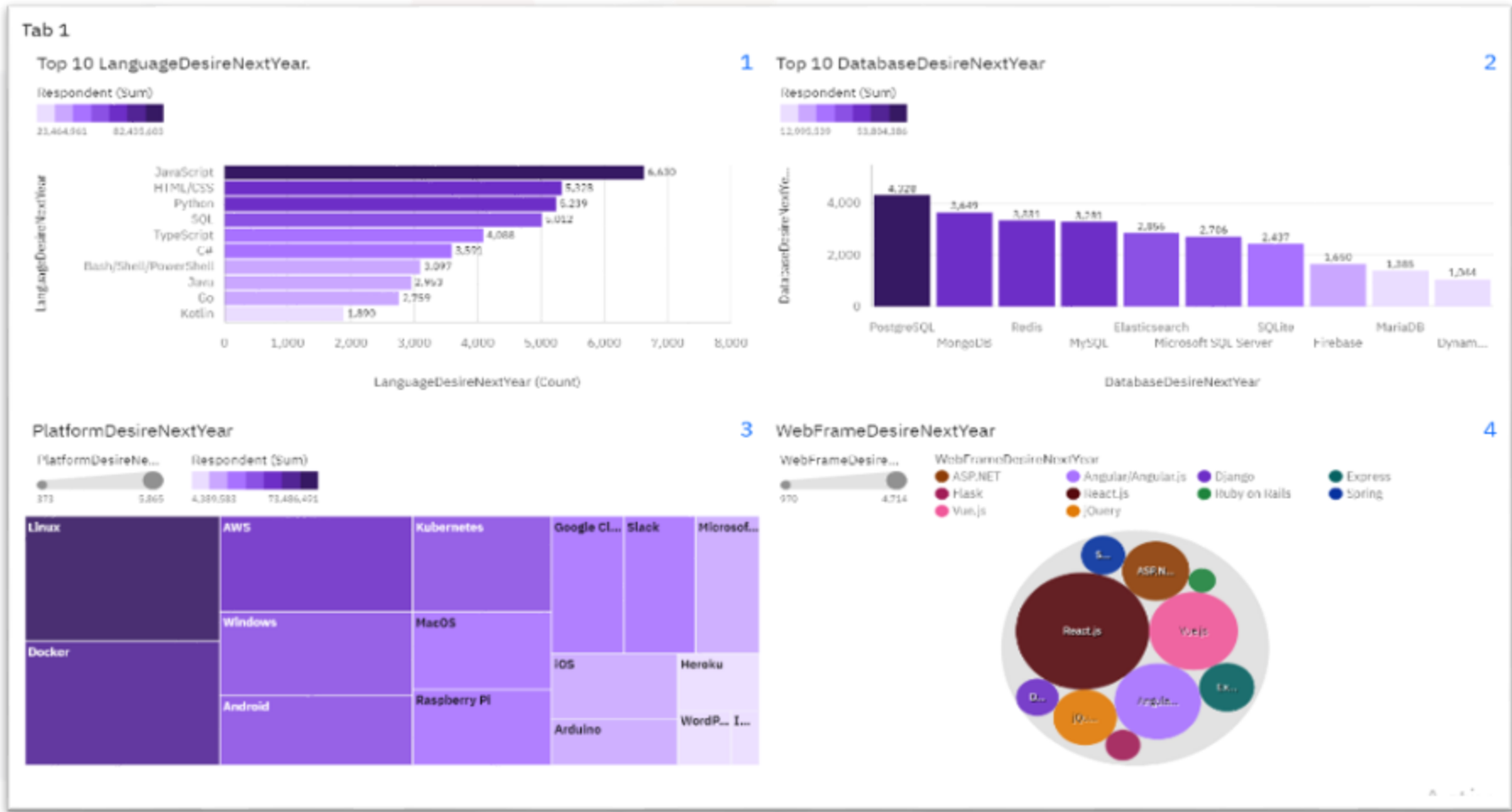


<https://github.com/zahrababacar6c/Dashboard>

# CURRENT TECHNOLOGY USAGE



# FUTURE TECHNOLOGY TREND

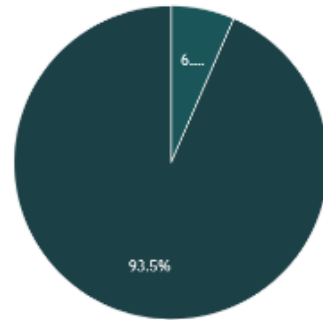


# DEMOGRAPHICS

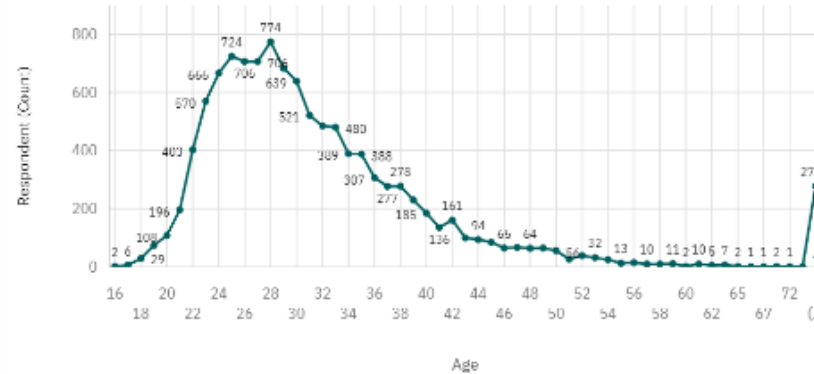
Tab 1

Respondent classified by Gender

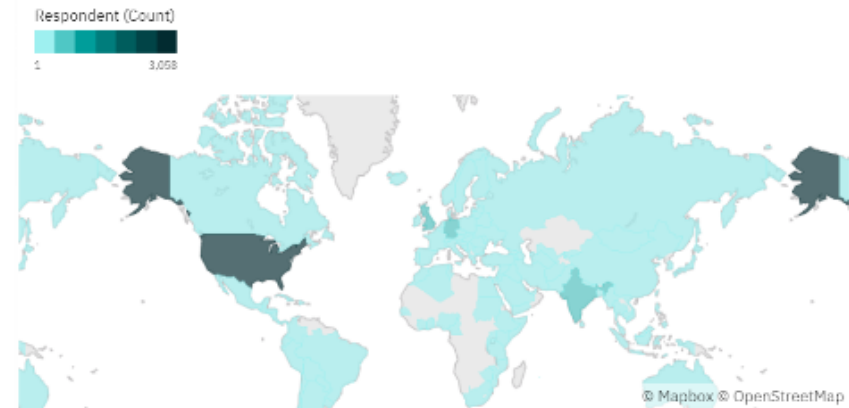
Gender  
● Woman ● Man



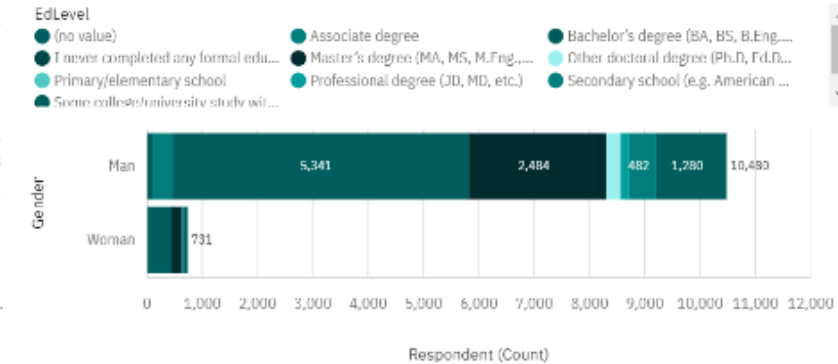
Respondent Count by Age



1 Respondent Count for Countries



3 Respondent Count by Gender, classified by Formal Education Level



# DISCUSSION

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- Of the top countries on our survey, China has developers that are the most optimistic, believing that people born today will have a better life than their parents. Developers in Western European countries like France and Germany are among the least optimistic about the future
- When thinking about blockers to productivity, different kinds of developers report different challenges. Men are more likely to say that being tasked with non-development work is a problem for them, while gender minority respondents are more likely to say that toxic work environments are a problem.

# OVERALL FINDINGS & IMPLICATIONS

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## Findings

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

## Implications

- Web development reigns supreme
- Global developers location and gender.
- Young developers without postgrad studies on its majority.



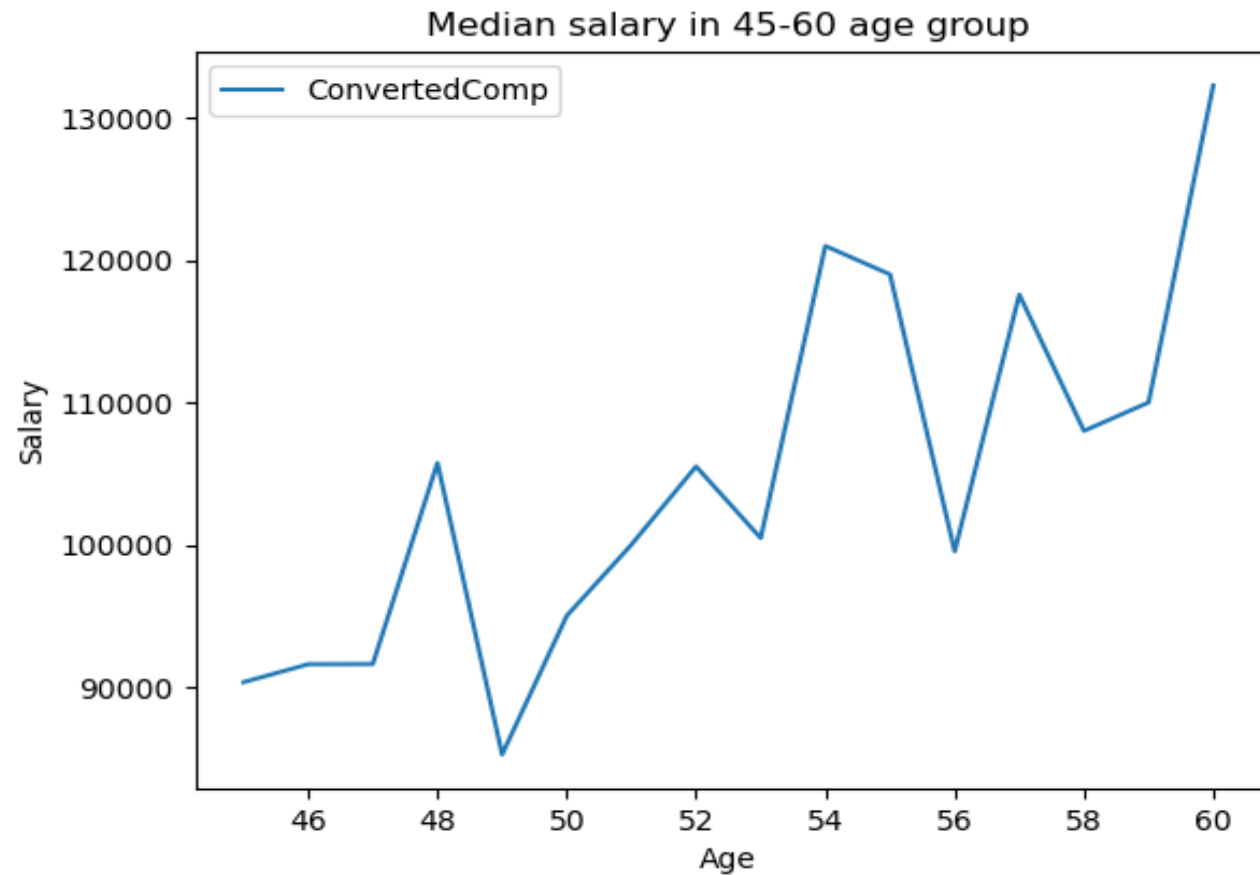
# CONCLUSION

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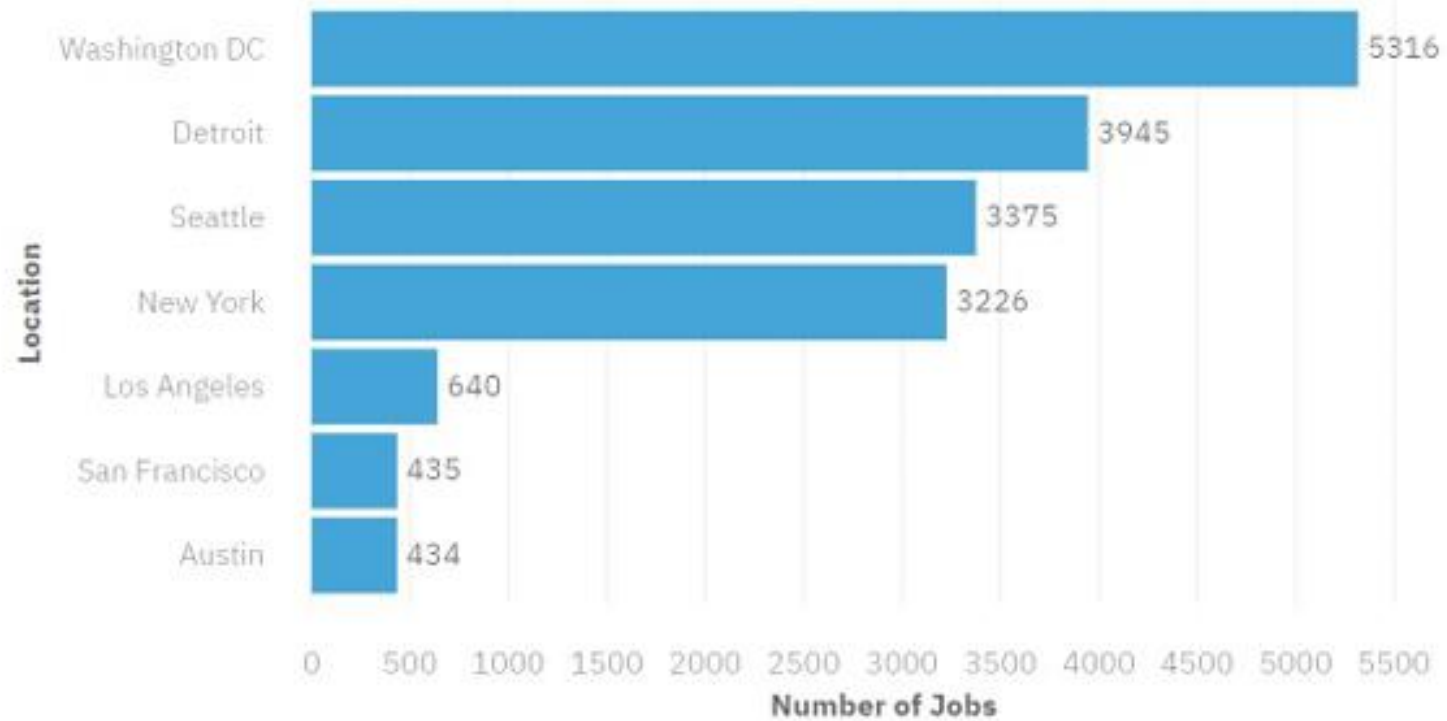
- Point 1
- Point 2
- Point 3
- Point 4

# APPENDIX



# JOB POSTINGS

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# POPULAR LANGUAGES

