



# Developer Survey IBM Capstone

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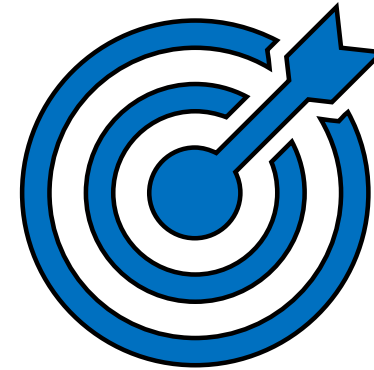
# OUTLINE



- 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 of the previously exposed
- Final conclusions of the carried out research.

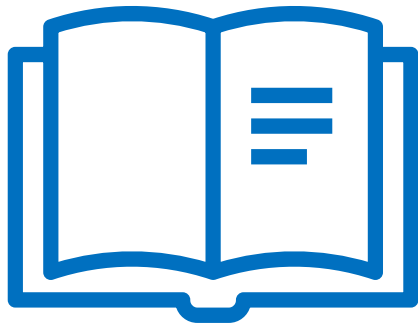




# INTRODUCTION

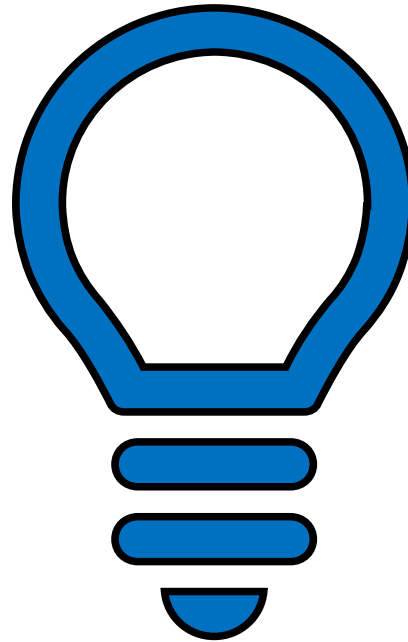
- Stack Overflow's annual Developer Survey is the largest and most comprehensive global survey of coders.
- The results do not reflect the entire developer community equally.
- The survey includes responses from nearly 90,000 developers.
- It identifies trends to forecast the future direction of the developer field.
- It provides insights into the characteristics of developers worldwide.

# 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 data distribution, relationships, composition and comparisons.
- Dashboards

# RESULTS





# PROGTAMING LANGUAGE –TRENDS FINDSINGS & IMPLICATIONS

## FINDINGS

JavaScript, HTML/CSS,SQL, Shell and Python are most widely used.

JavaScript, HTML/CSS, Python and Transcript will be the most used languages next year and future years

Python will have more demand than SQL next year

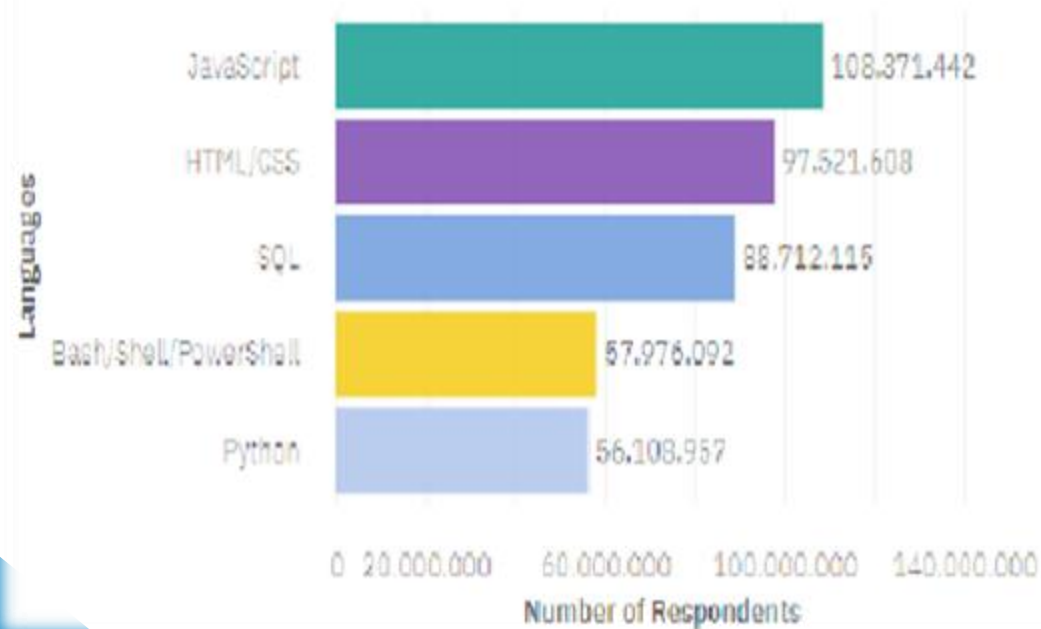
## IMPLICATIONS

JavaScript and HTML are used for web development meaning, web development as a tech skill has the highest demand especially as Typescript is becoming popular

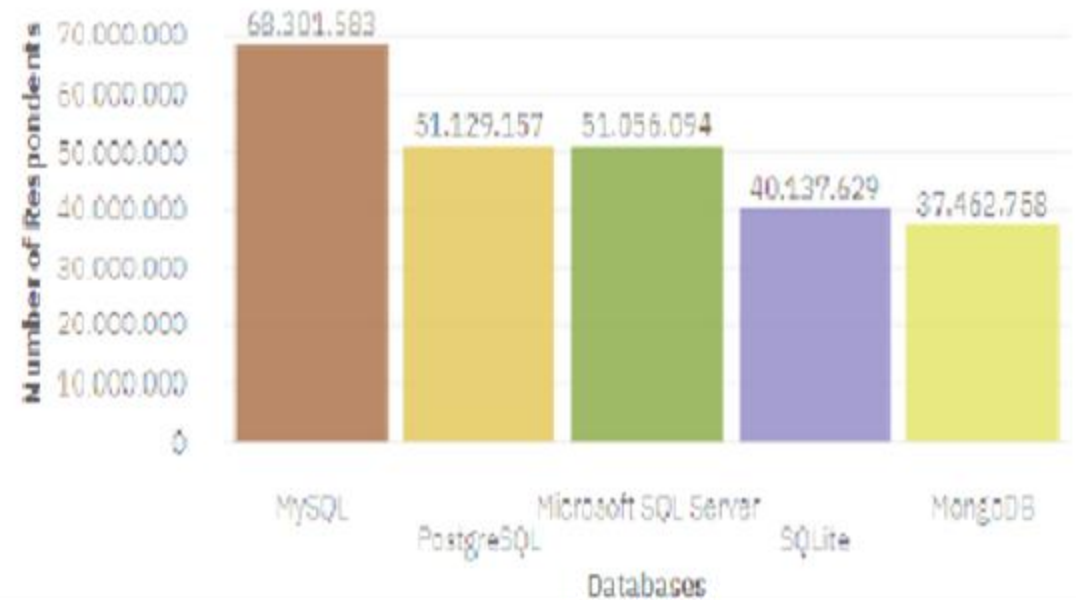
Python is gaining more and more traction due to the increase demand for AI and ML skills

# LANGUAGE TRENDS

## Top 5 Programming Language Experience



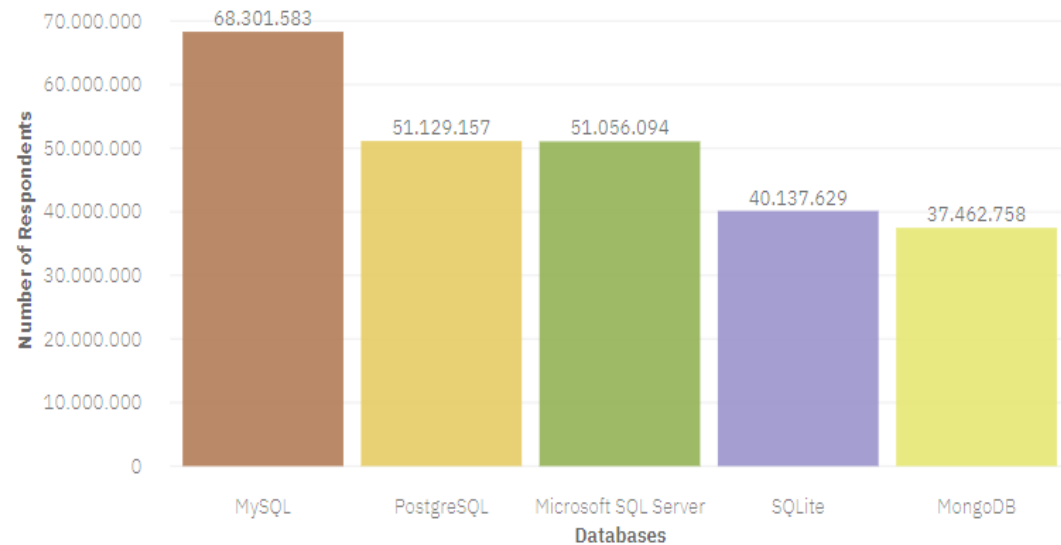
## Top 5 Databases Worked with



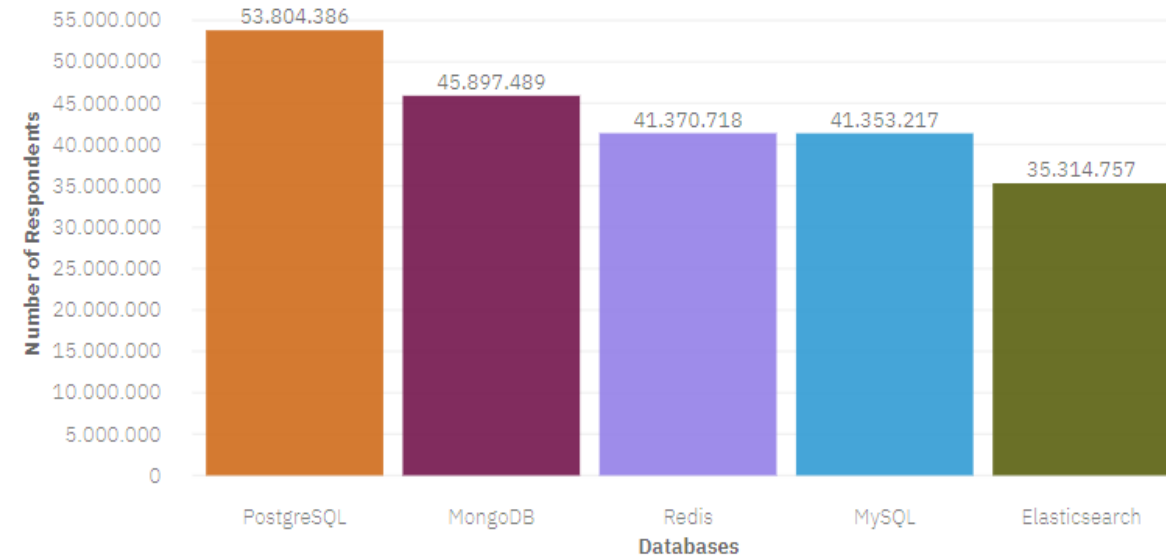


# DATABASE TRENDS

Top 5 Databases Worked with



Top 5 Desired Database to Learn



# DATABASE TRENDS & IMPLICATIONS

## Findings

- MySQL, PostgreSQL, SQLite and MongoDB are the top most used Databases at the moment
- However, PostgreSQL, MongoDB, Redis, MySQL and Elasticsearch are projected to become more popular in the future
- Redis and Elasticsearch are relatively new tools and are set to gain more traction in the IT Space

## Implications

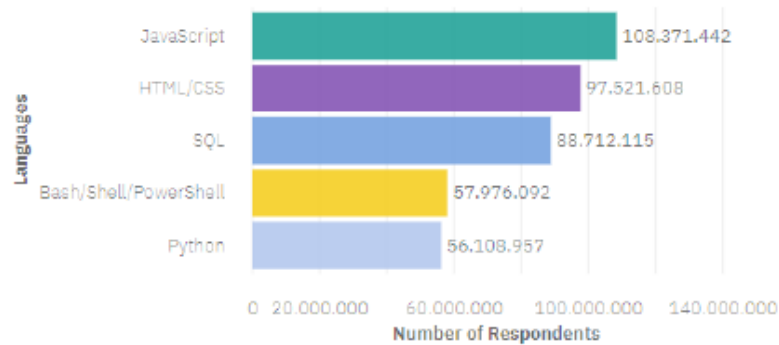
- SQL is still a top tool to watch out for in data specialists
- Companies still prefer Open source databases.
- Oracle SQL was not among the top, losing relevance as time passes

# Dashboard

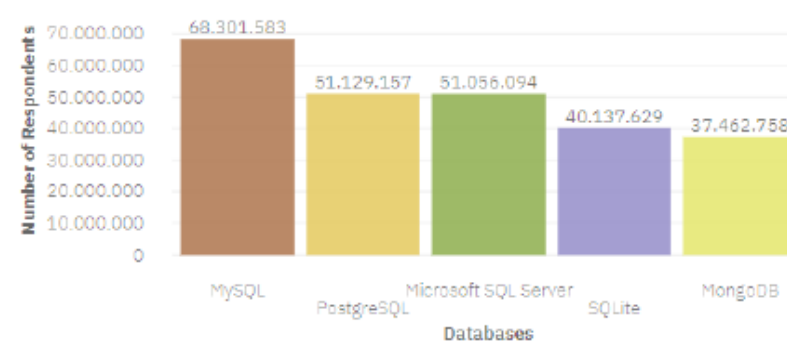
[https://github.com/JamesStewart89/testasses/blob/main/6-Dashboard-with-Cognos-Dashboard-Embedded-\(CDE\).pdf](https://github.com/JamesStewart89/testasses/blob/main/6-Dashboard-with-Cognos-Dashboard-Embedded-(CDE).pdf)

# CURRENT TECHNOLOGY USAGE

Top 5 Programming Language Experience



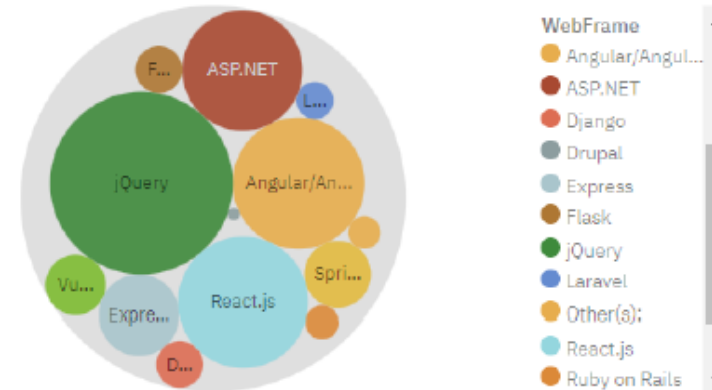
Top 5 Databases Worked with



Platforms Interacted

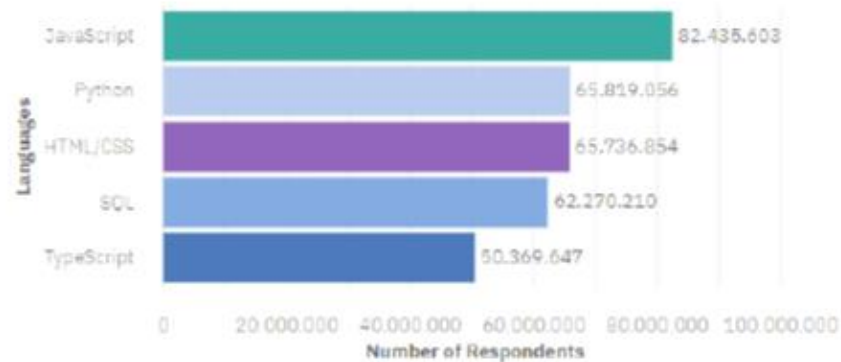


Top 10 WebFrames Used



# FUTURE TECHNOLOGY TREND

Top 5 Desired Language to Learn



Top 5 Desired Database to Learn



Platform Next Year

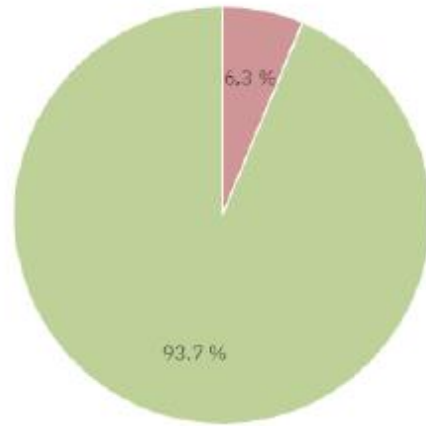


Top 10 WebFrame Next Year



# DEMOGRAPHICS

Respondent by Gender

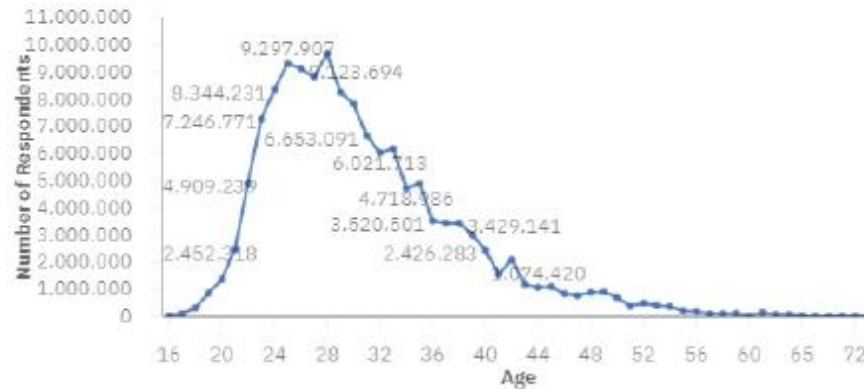


Gender  
Woman  
Man

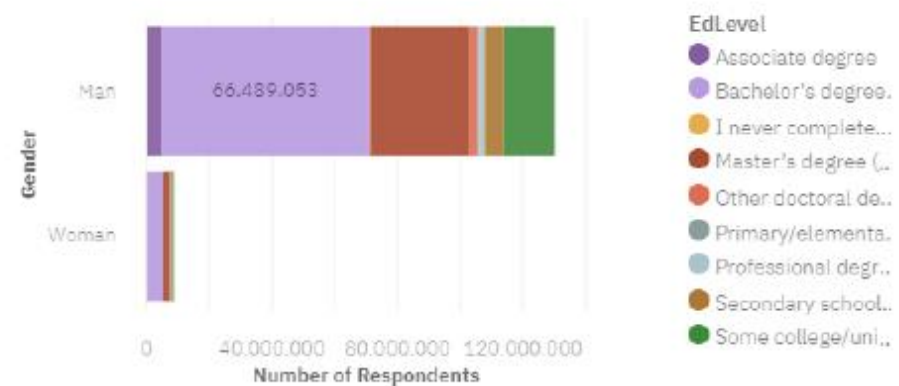
Respondent Locations



Respondent by Age



Formal Education Level / Gender



# DISCUSSION

- upskilling trends in the technology sector.
- Future relevance of Oracle SQL.
- Is a master's degree truly necessary?
- Expanding tech education, access, and development in underdeveloped regions.

# OVERALL FINDINGS AND IMPLICATIONS

## Findings

- JavaScript widely used and TypeScript is gaining popularity
- Over 90% young male developers.
- Developers are 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

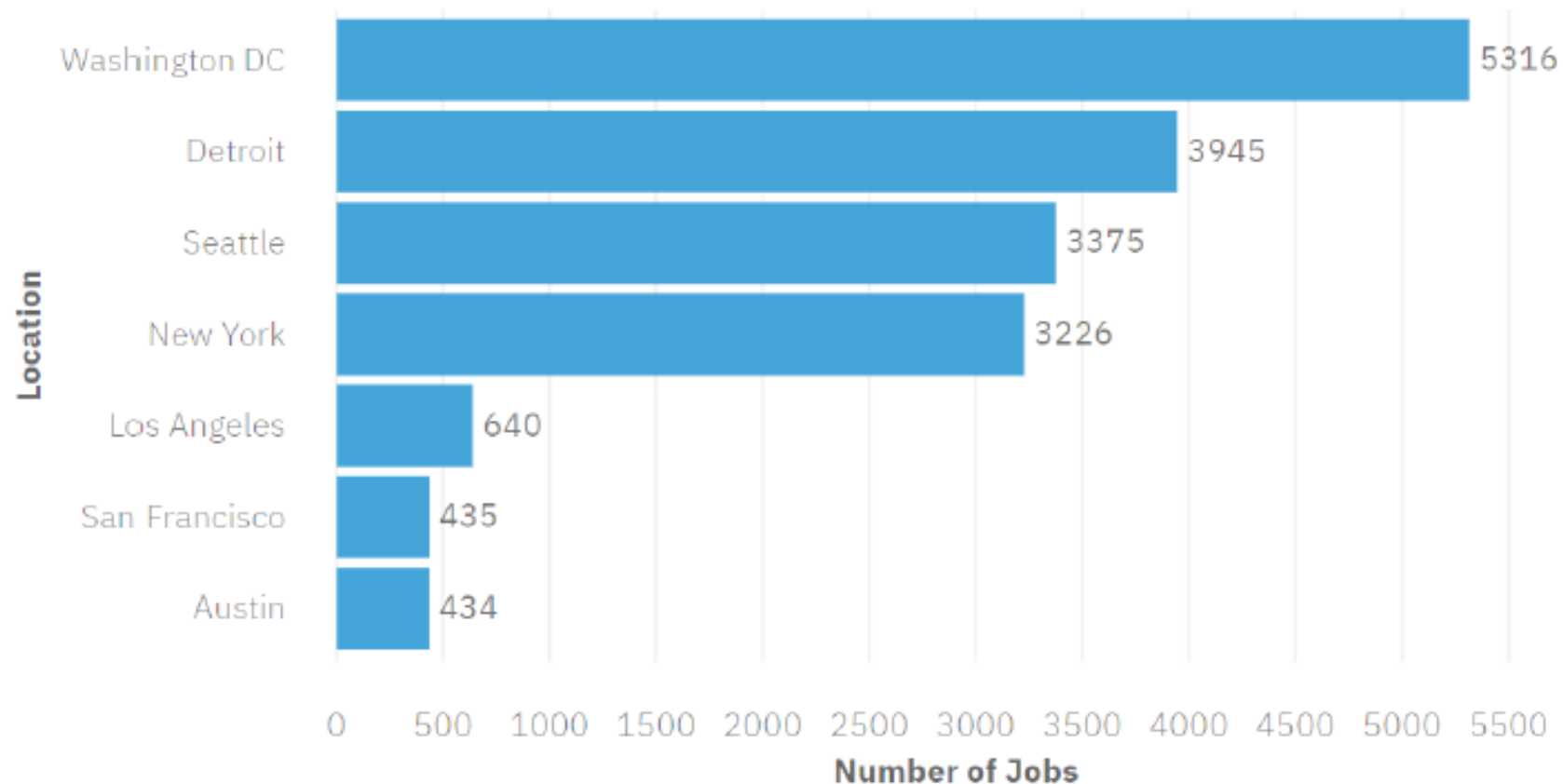


- Developers have distinct and notable characteristics..
- A good idea of popularity trends of different tools, platforms and languages can be obtained.
- There is a job to be done to spread accessibility of this labor market to countries in development.

# APPENDIX

# JOB POSTINGS

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# AGE DISTRIBUTION BOXPLOT

