STACK OVERFLOW DEVELOPER SURVEY 2022

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OUTLINE

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

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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

- 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 evenly.

- More than 90,000 developers.

- Trends to predict where the developers are going.

- Characterization of developers around the world.

METHODOLOGY

- Collect survey data & explore its content
  - Web Scraping
  - APIs
  - Request library
- Data Wrangling
- Exploratory data analysis
  - Analyzing data distribution
  - Handling outliers
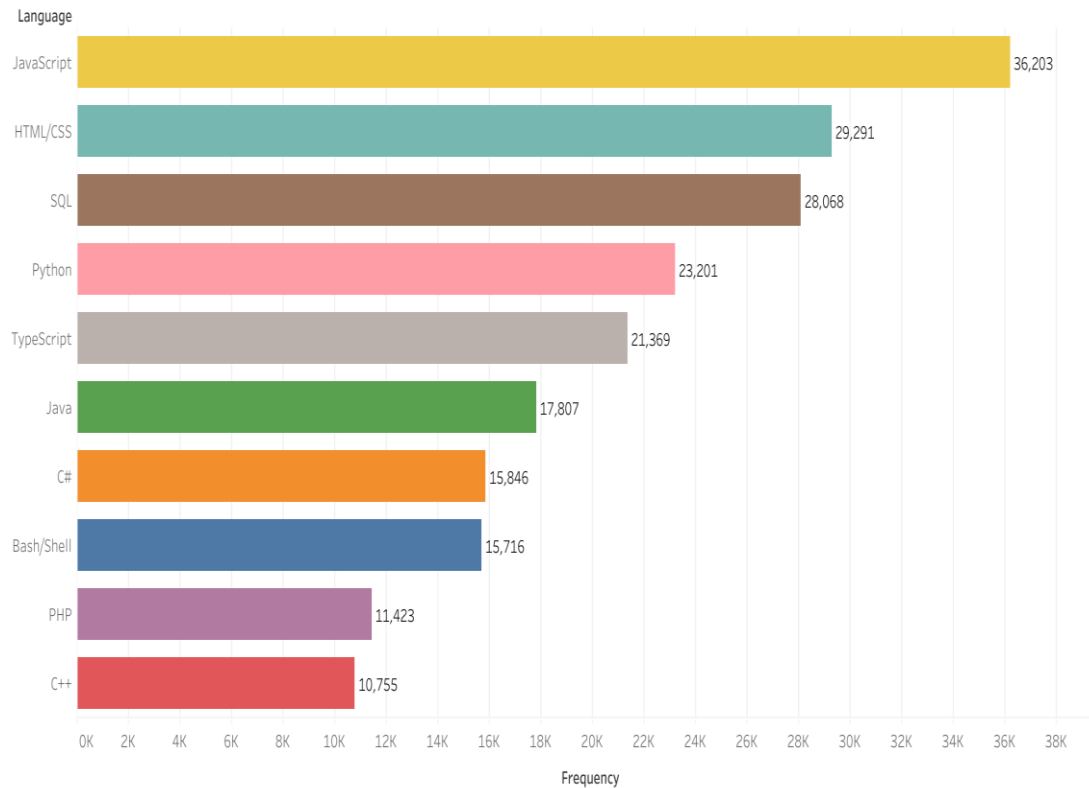 - Correlations
- Data Visualization
- Dashboards

RESULTS
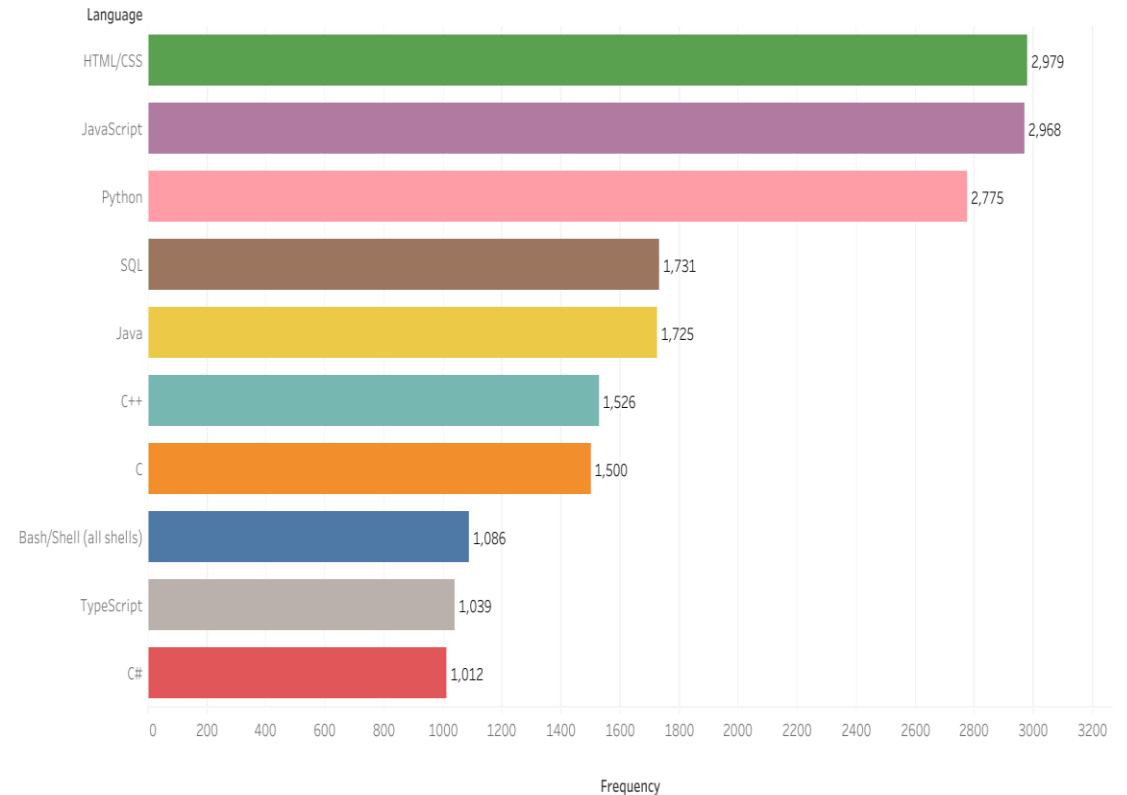
PROGRAMMING LANGUAGE TRENDS

Current Year (2022)

Top 10 Programming Language Experience

Language	Frequency
JavaScript	36,203
HTML/CSS	29,291
SQL	28,068
Python	23,201
TypeScript	21,369
Java	17,807
C#	15,846
Bash/Shell	15,716
PHP	11,423
C++	10,755

Next Year (2023)

Top 10 Programming language to learn

Language	Frequency
HTML/CSS	2,979
JavaScript	2,968
Python	2,775
SQL	1,731
Java	1,725
C++	1,526
C	1,500
Bash/Shell (all shells)	1,086
TypeScript	1,039
C#	1,012

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PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript seems to keep as leading language still.

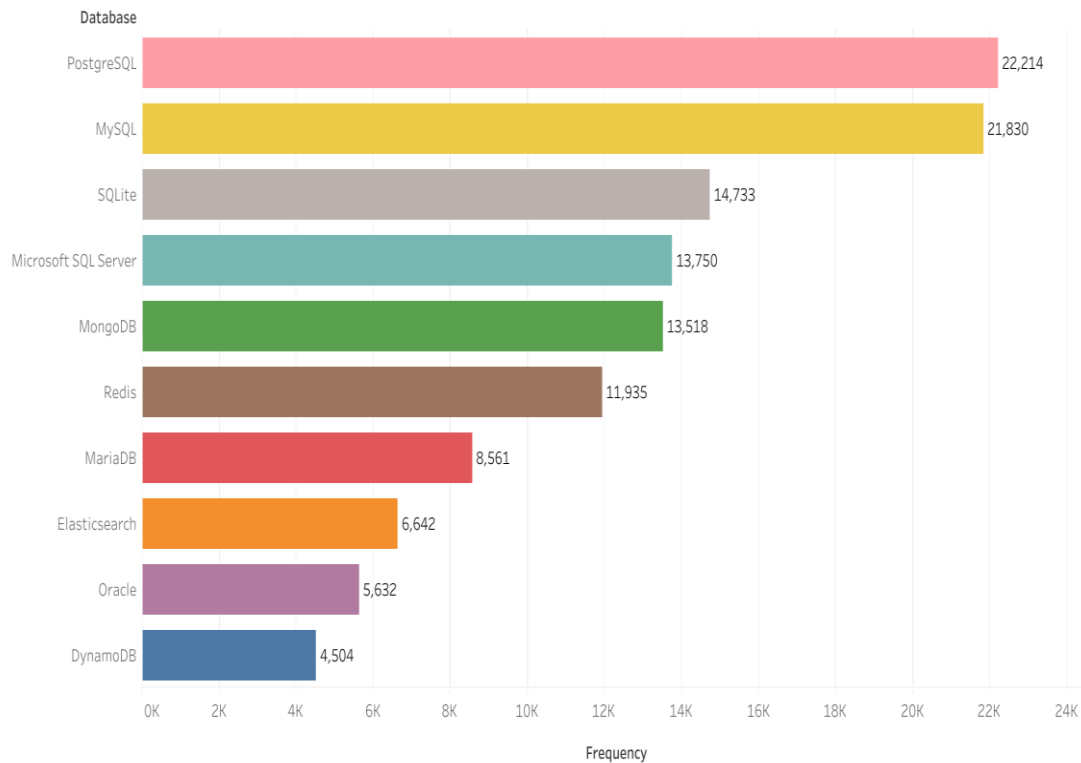- SQL fastest-growing.

- Great interest in Python.

Implications

- Possible developers migration from Fronted to Full-stack.

- E-commerce has needed.

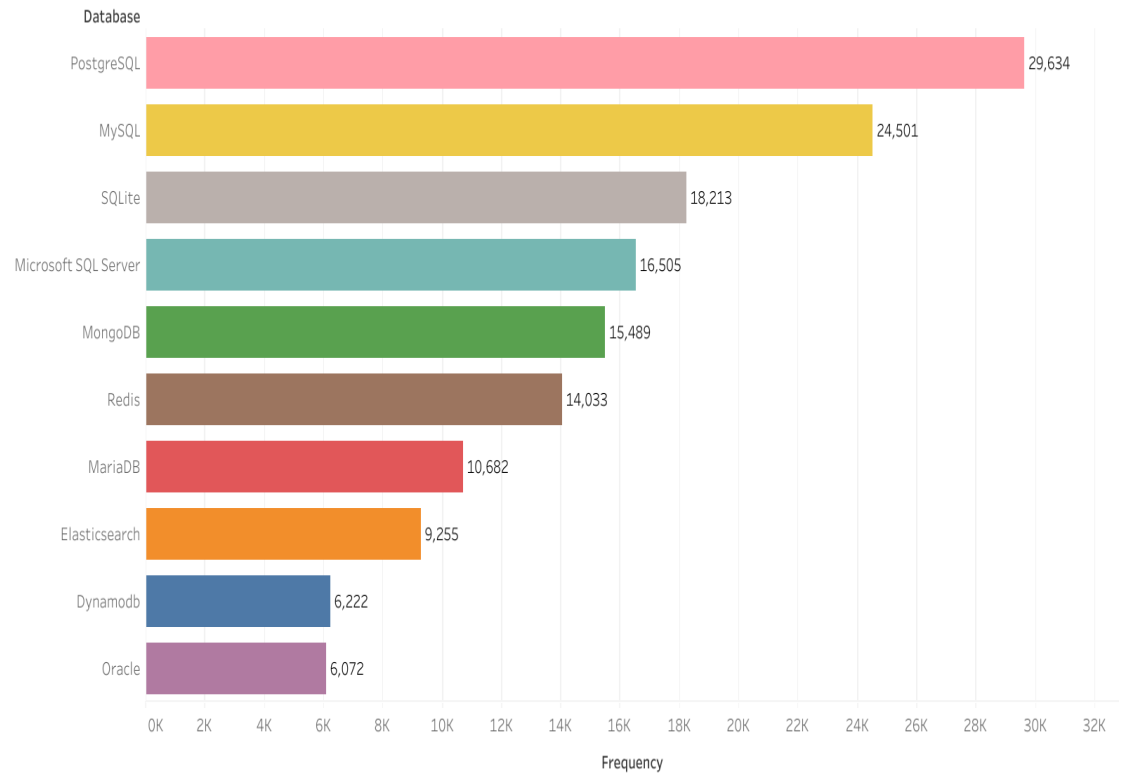- Python follows closely due to A.I raise.

DATABASE TRENDS

Current Year (2022)

Top 10 Databases worked with

Database	Frequency
PostgreSQL	22,214
MySQL	21,830
SQLite	14,733
Microsoft SQL Server	13,750
MongoDB	13,518
Redis	11,935
MariaDB	8,561
Elasticsearch	6,642
Oracle	5,632
DynamoDB	4,504

Frequency

Next Year (2023)

Top 10 Database to learn

Database	Frequency
PostgreSQL	29,634
MySQL	24,501
SQLite	18,213
Microsoft SQL Server	16,505
MongoDB	15,489
Redis	14,033
MariaDB	10,682
Elasticsearch	9,255
Dynamodb	6,222
Oracle	6,072

Frequency

DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings :

- PostgreSQL as most used database.
- MySQL is the second one.
- Increasing interest in SQLite.

Implications :

- PostgreSQL is far beyond than others.
- MySQL Server and SQLite are losing ground in the market.
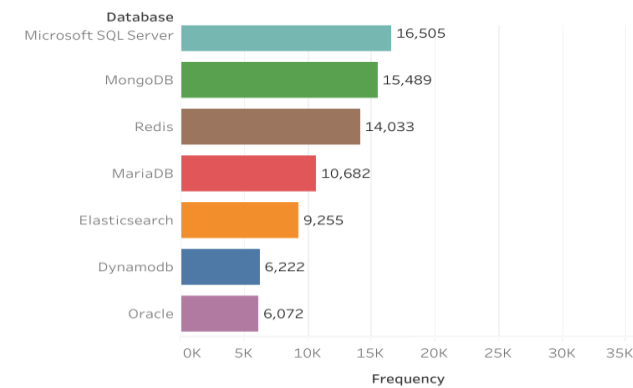
DASHBOARD

https://github.com/isaaccao0522/capstone_final/blob/main/22-Dashboard.pdf
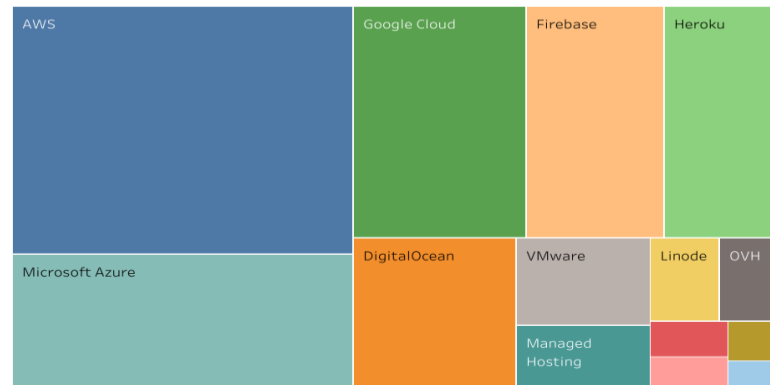
Current Technology Usage
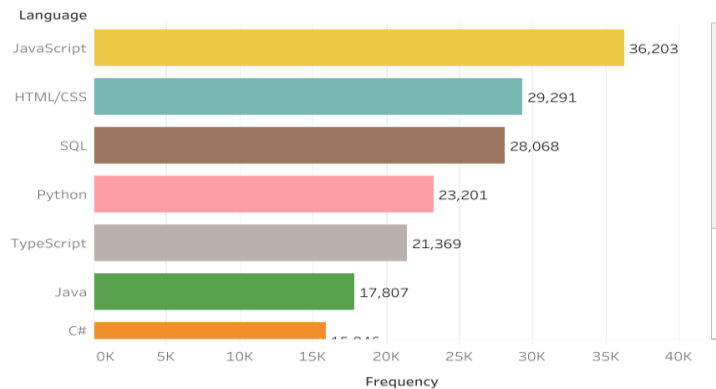
Future Technology Usage

Top 10 Database to learn
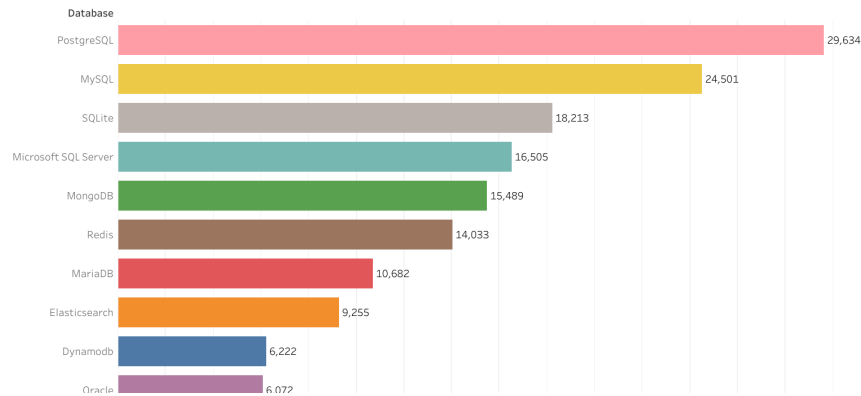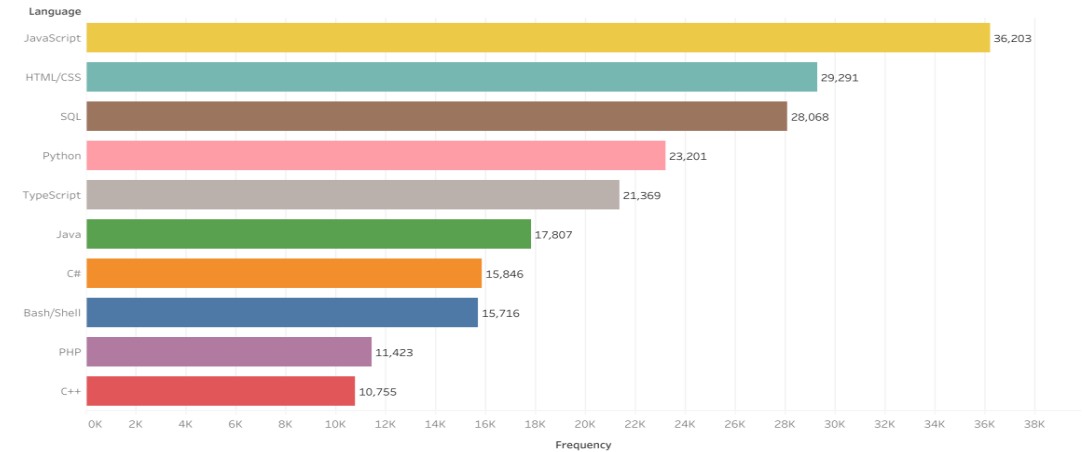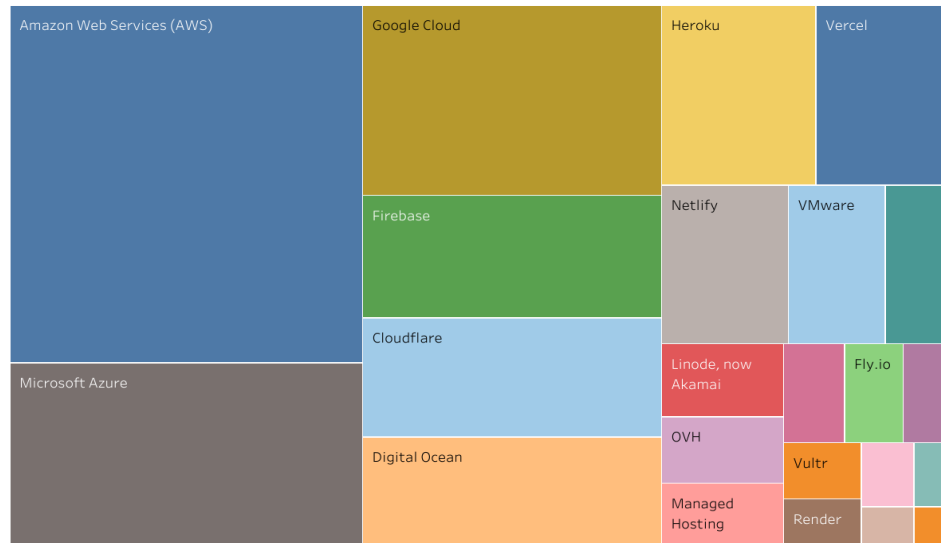
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Frequency

Platforms Interacted

Amazon Web Services (AWS), Google Cloud, Heroku, Vercel, Firebase, Netlify, VMware, Cloudflare, Microsoft Azure, Digital Ocean, Linode, now Akamai, Fly.io, OVH, Vultr, Managed Hosting, Render

Top 10 web frames

Vue.js, Express, jQuery, Spring Boot, Angular, ASP.NET, React, ASP.NET CORE, Next.js, Node.js

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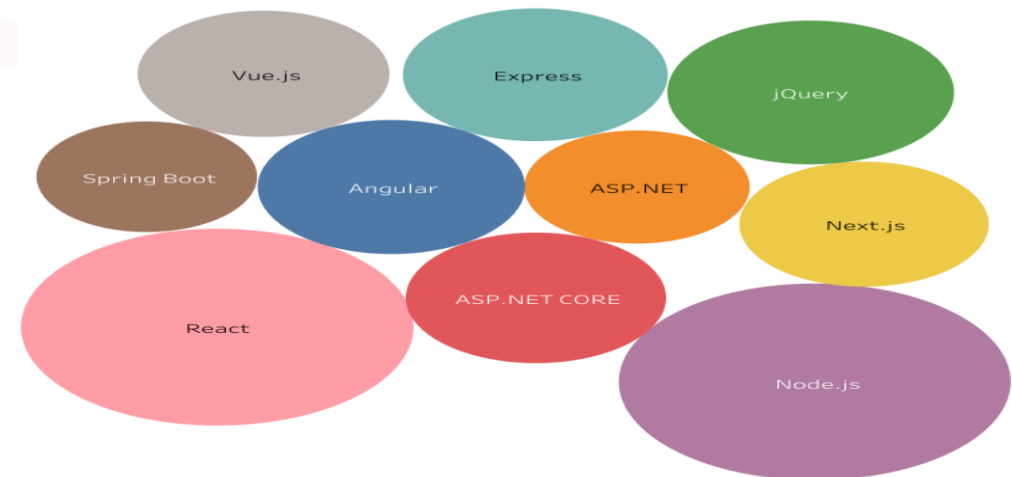
Demographics
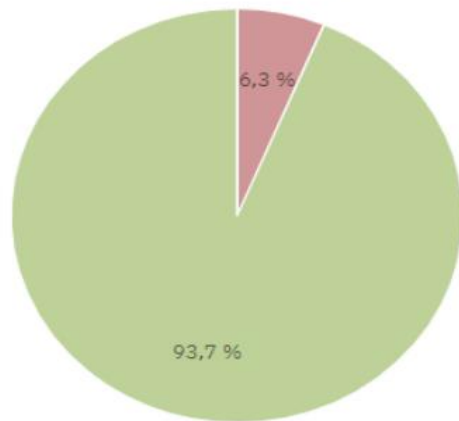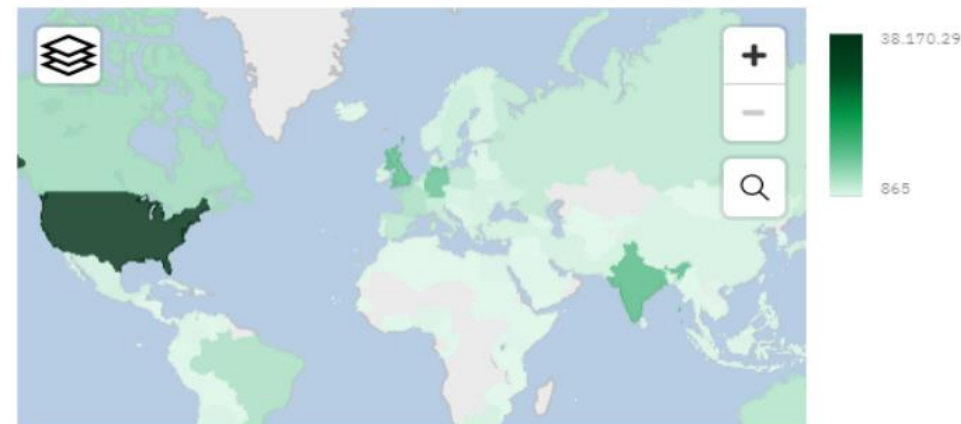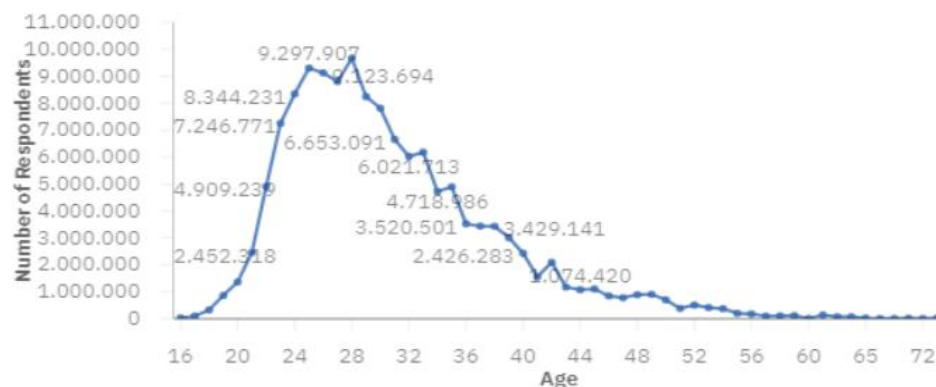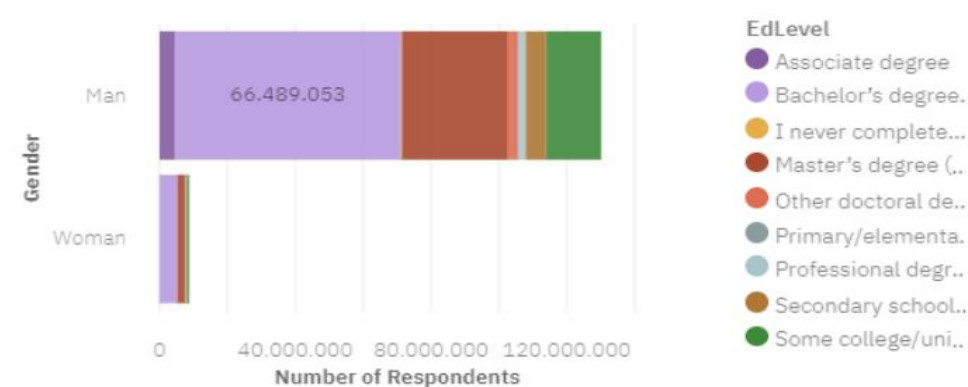
DISCUSSION

1. To learn coding languages , degree is necessary or not?

2. In the job requirements, what is unreasonable ?

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OVERALL FINDINGS & IMPLICATIONS

Findings

- JavaScript widely used.
- Over 90% young male developers.
- Developers mostly located in United State of America.

Implications

- JavaScript web frame is gaining followers.
- Global polarization of developers location and gender.
- Develops in India is gaining followers.
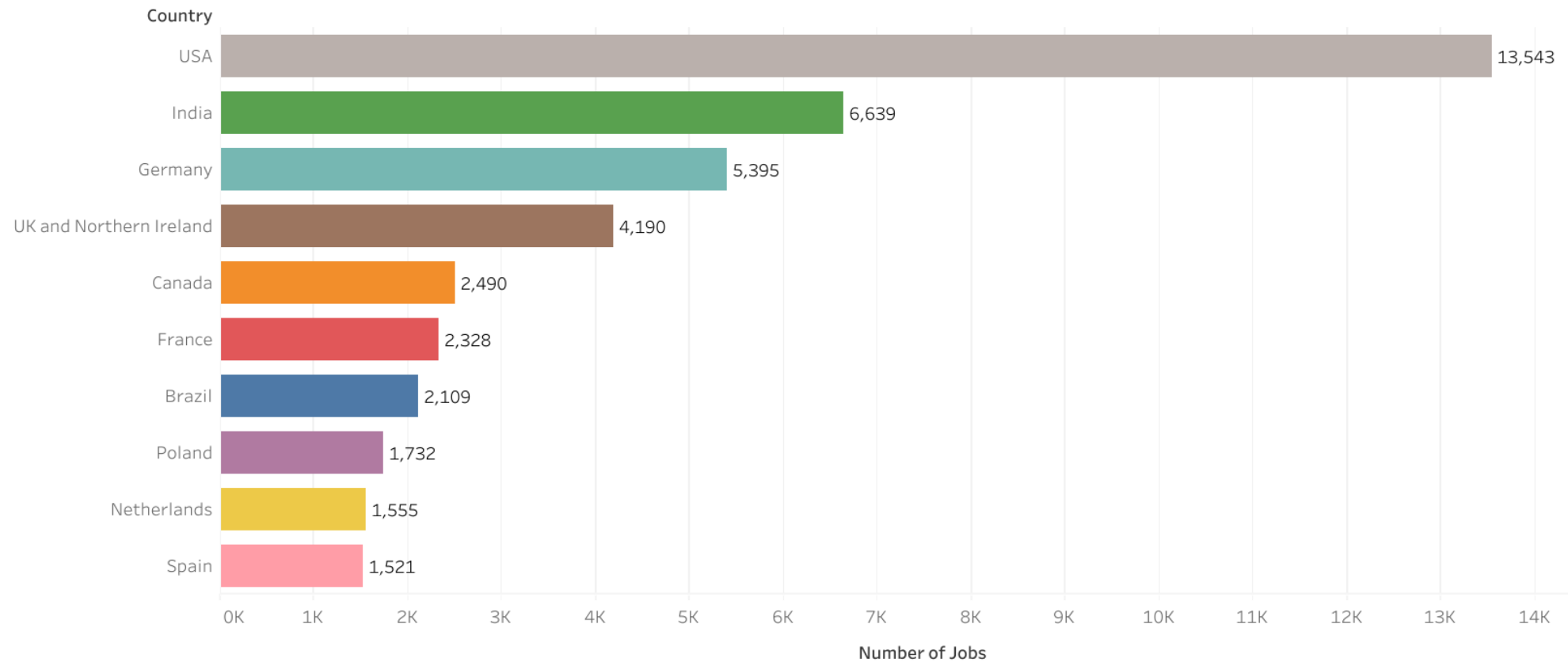
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CONCLUSION

- Developers are people with distinct characteristics.

- A good understanding of the popularity trends of different tools, platforms, and languages can be obtained.

- There is work to be done to increase the accessibility of this labor market to developing countries.

- Developers learn how to code not only from schools , but also from online courses.

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Online Course Survey

2022 Online Courses
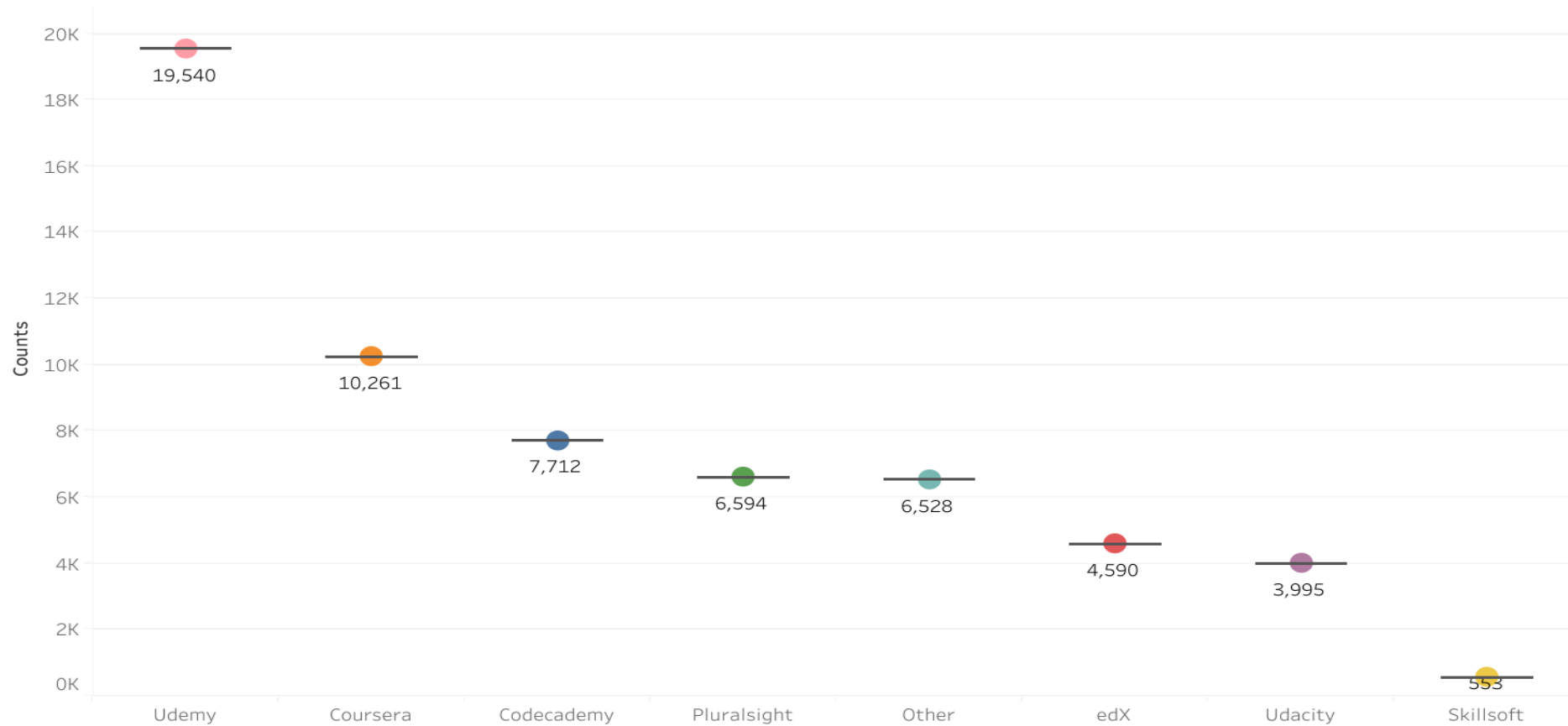
JOB POSTINGS

POPULAR LANGUAGES