



2019 Stack Overflow Technology Survey

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OUTLINE



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 - Dashboard
- Discussion
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EXECUTIVE SUMMARY



- Stack Overflow survey conducted to see which technologies are currently being used and where the trend is projected to head.
- Job and salary information acquired through GitHub Jobs.
- JavaScript is currently the most used programming language with Python quickly gaining popularity.
- PostgreSQL is the database most wish to learn next year.

INTRODUCTION



- Visual representation of different emerging technologies.
- Current usage and future interest in different programming languages, databases, platforms, and web frames.
- Job postings and salary information
- Analysis Inquiries:
 - Which are the top 3 programming languages currently in demand?
 - Which database is the most popular?

METHODOLOGY



- Data Collection
 - Web Scraping using API and Beautiful Soup
- Data Wrangling
 - Identifying duplicated rows, finding missing values, and normalizing the data.
- Exploratory Analysis/ Data Visualization
 - Distribution of data, relationships between data, the composition of data, and comparison of data.
- Cognos Analytics Dashboard

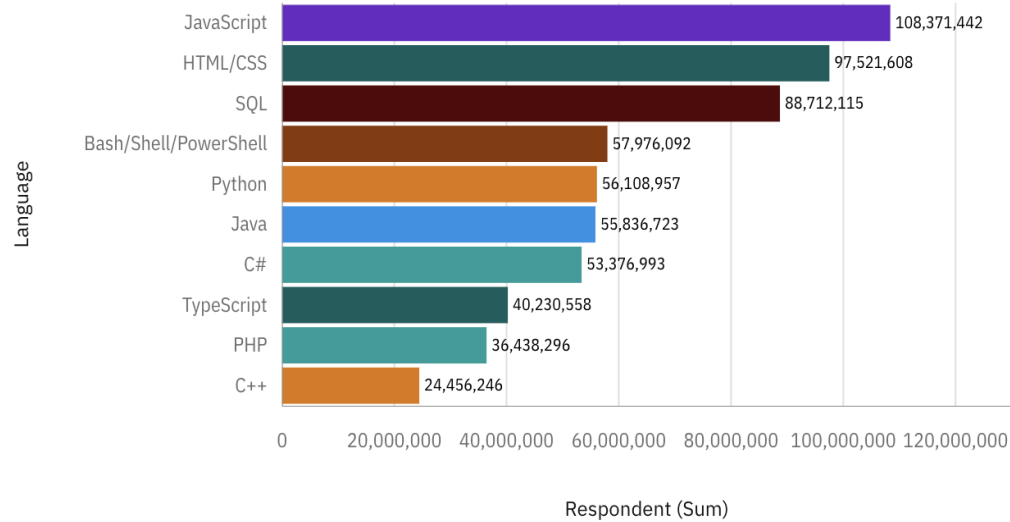
RESULTS



PROGRAMMING LANGUAGE TRENDS

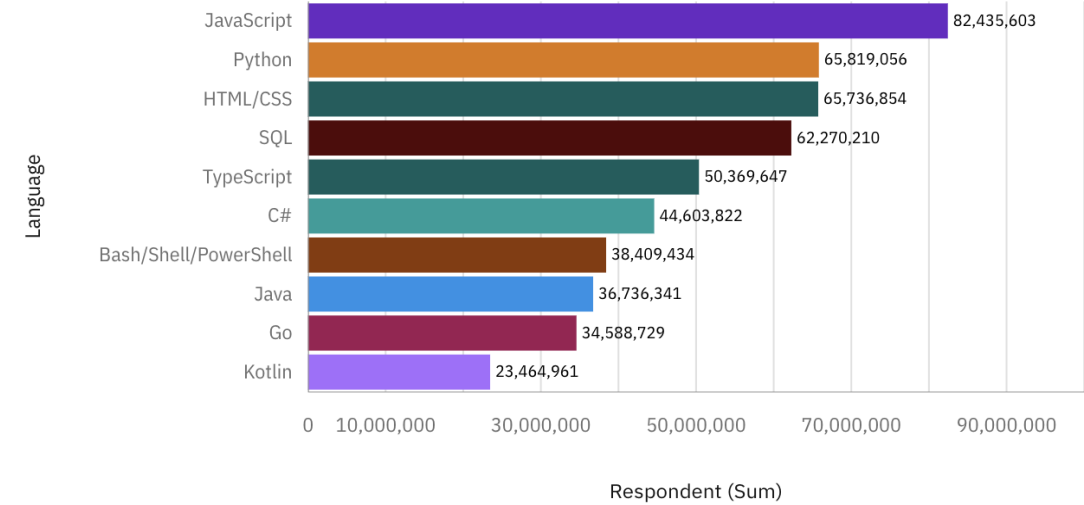
Current Year

Top 10 Languages



Next Year

Top 10 Languages Desired to Learn



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript, HTML/CSS, and SQL are the top programming languages.
- Python and TypeScript are quickly gaining interest

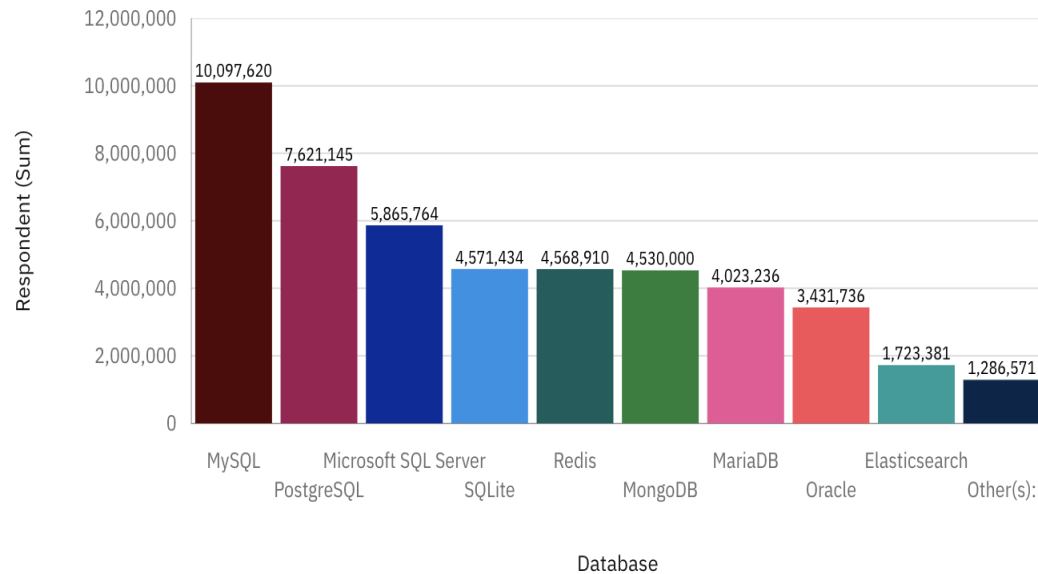
Implications

- JavaScript and HTML/CSS are still in top demand for the near future
- Python gaining popularity due to AI and Machine Learning.
- TypeScript becoming a favorite for Front-End applications.

DATABASE TRENDS

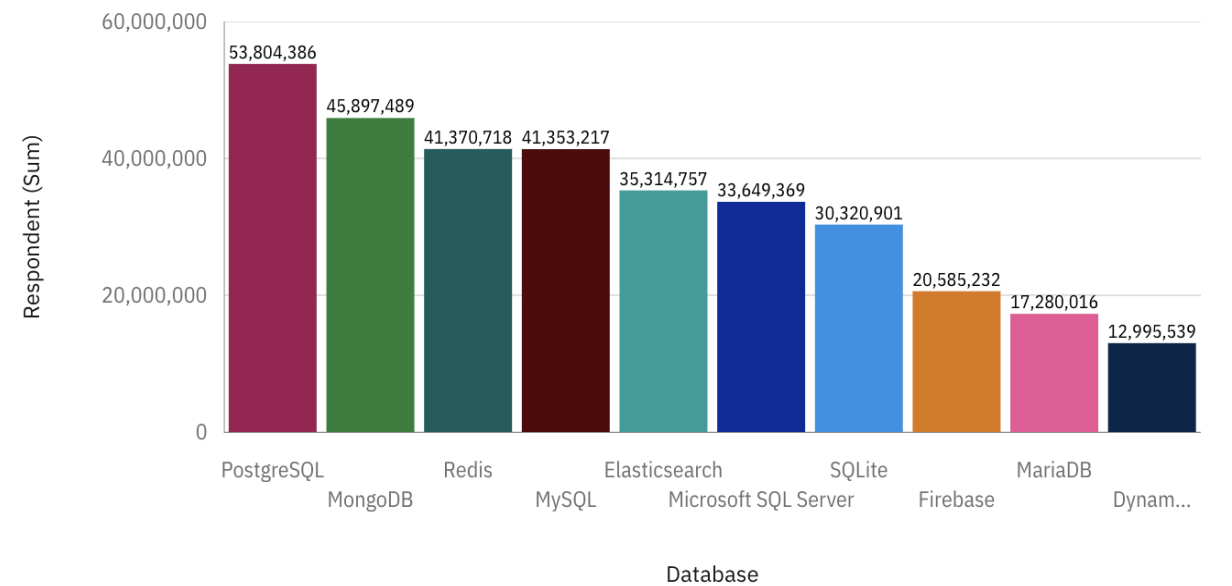
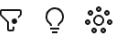
Current Year

Top 10 Databases



Next Year

Top 10 Databases Desired to Learn



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL, PostgreSQL, and Microsoft SQL Server are the top 3 databases in use.
- PostgreSQL has the most interest for next year.
- MongoDB, Redis, and Elasticsearch gaining popularity.

Implications

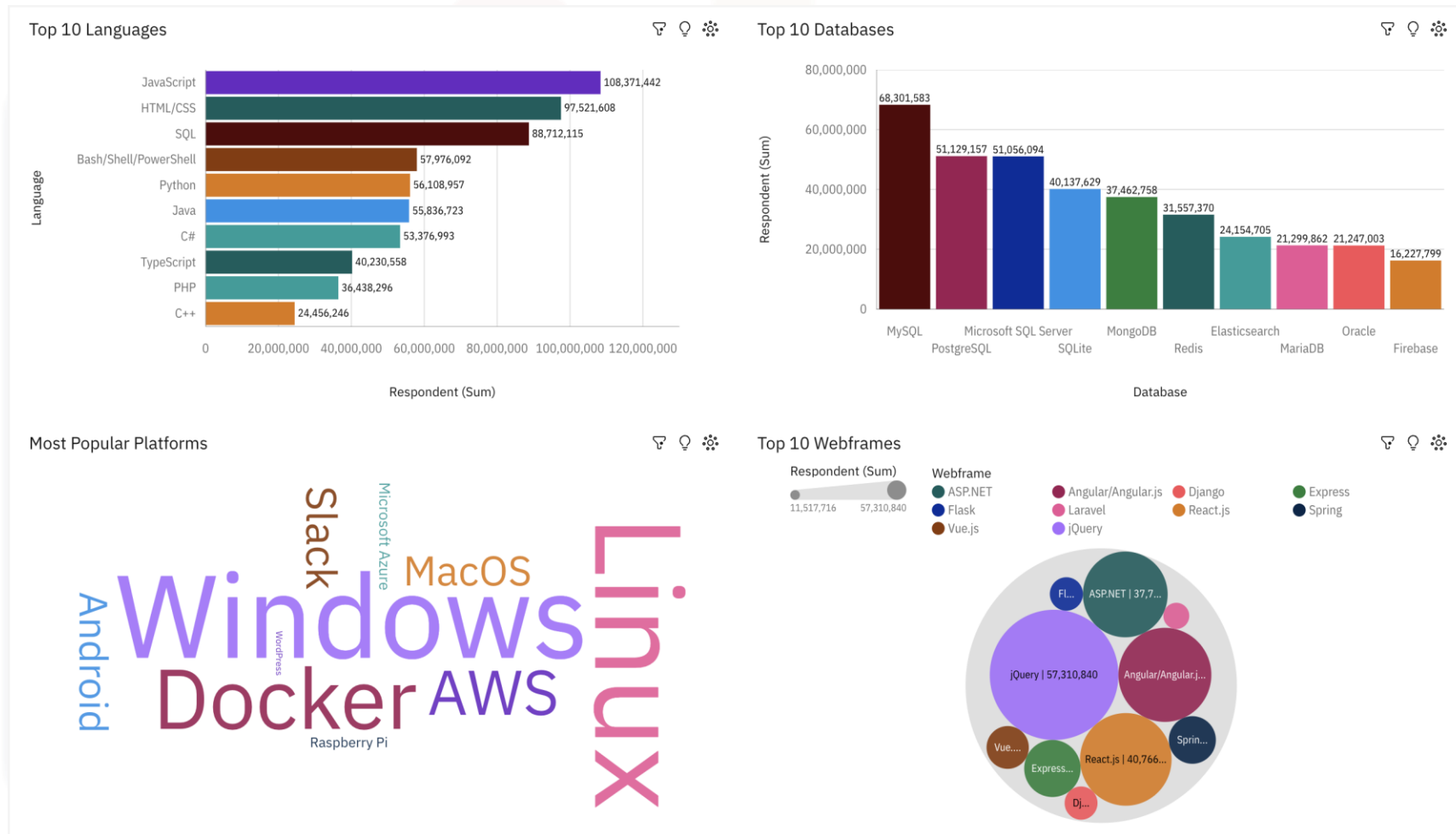
- PostgreSQL projected to be the most used database.
- MongoDB, Redis, and Elasticsearch will become just as popular as MySQL.

DASHBOARD



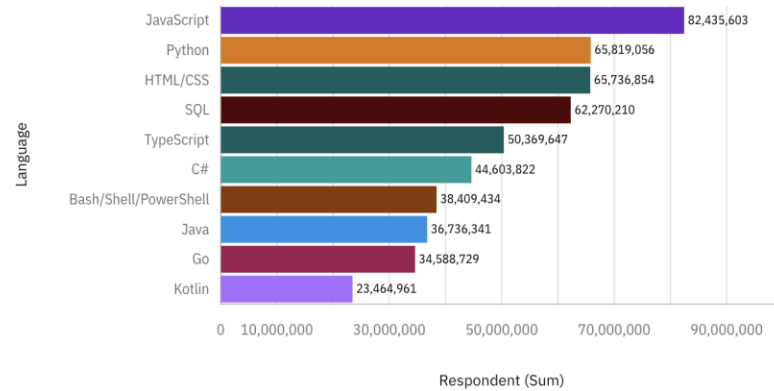
GitHub: <https://github.com/nopicklesplz/Cognos-Dashboard.git>

DASHBOARD TAB 1

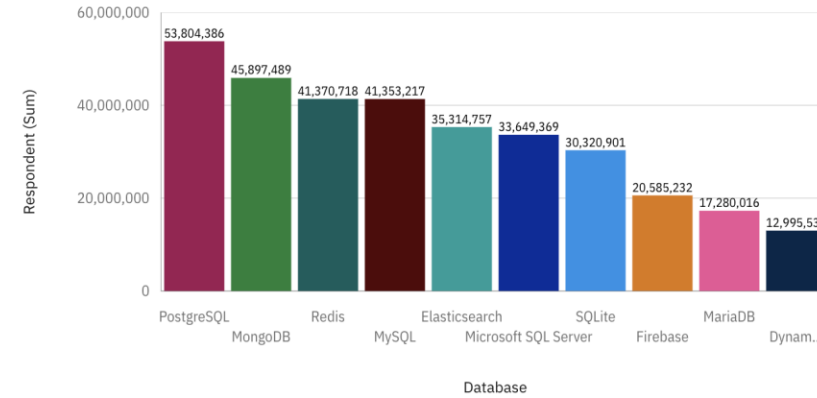


DASHBOARD TAB 2

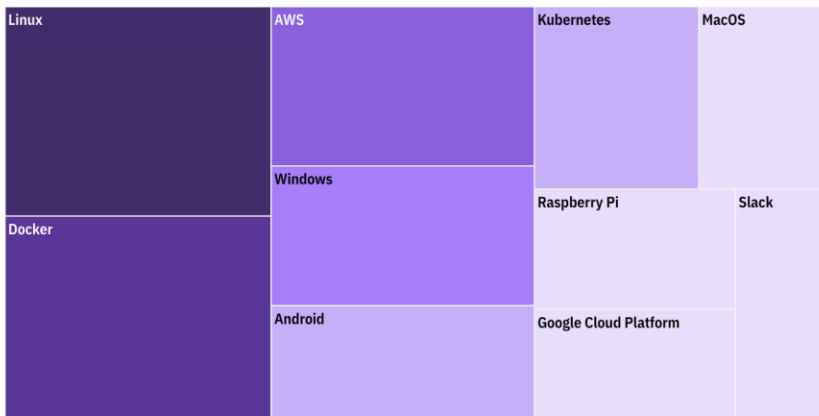
Top 10 Languages Desired to Learn



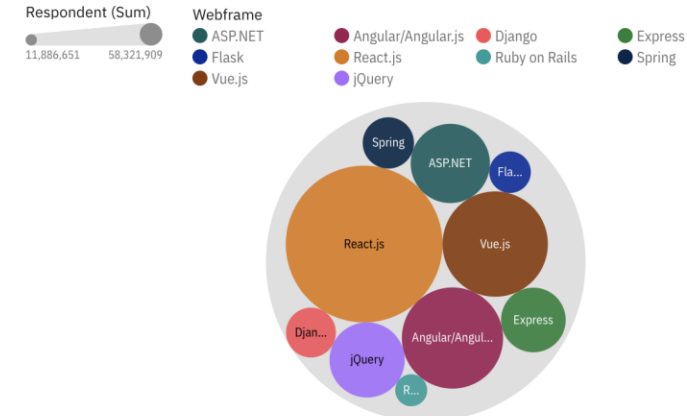
Top 10 Databases Desired to Learn



Top 10 Platforms Desired to Learn



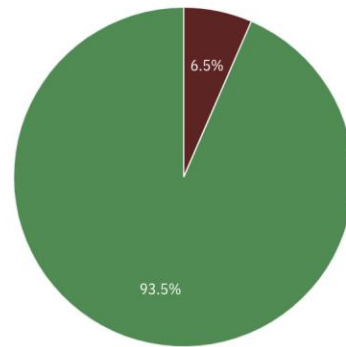
Top 10 Webframes Desired to Learn



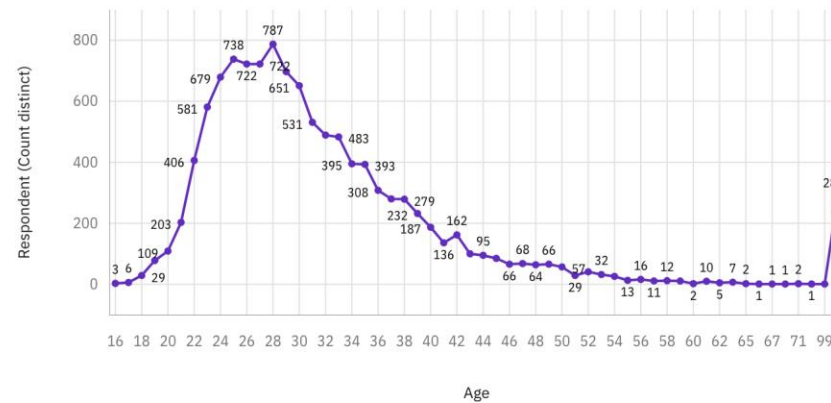
DASHBOARD TAB 3

Respondent by Gender

Gender
● Woman ● Man

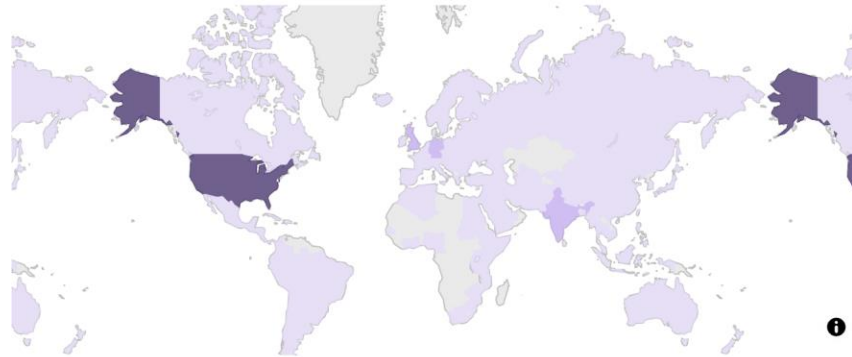


Respondent by Age



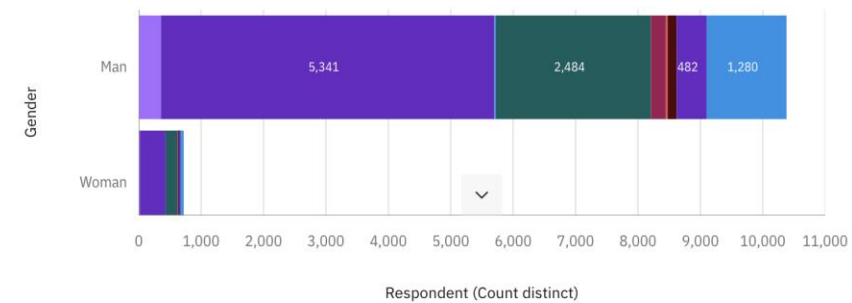
Respondent for Country regions

Respondent (Count)
1 3,127



Respondent Education Level by Gender

EdLevel
● Associate degree ● Bachelor's degree (BA, BS, B.Eng....
● Master's degree (MA, MS, M.Eng.,.... ● Other doctoral degree (Ph.D, Ed.D...
● Professional degree (JD, MD, etc.) ● Secondary school (e.g. American ...
● I never completed any formal edu... ● Primary/elementary school
● Some college/university study wit...



DISCUSSION



- JavaScript and HTML/CSS are the top programming languages and are projected to remain so for the near future.
- SQL also remains popular amongst programmers but Python and TypeScript are quickly rising the ranks.
- PostgreSQL is the overall favorite database with MongoDB and MySQL also having high interest.

OVERALL FINDINGS & IMPLICATIONS

Findings

- Responders to the survey were majority male with Bachelor's and/or Master's degrees.
- Web development languages remain popular.
- Developers have an interest in learning different databases next year.

Implications

- Learning TypeScript and Python is highly recommended.
- It may prove beneficial to learn both SQL and NoSQL databases.

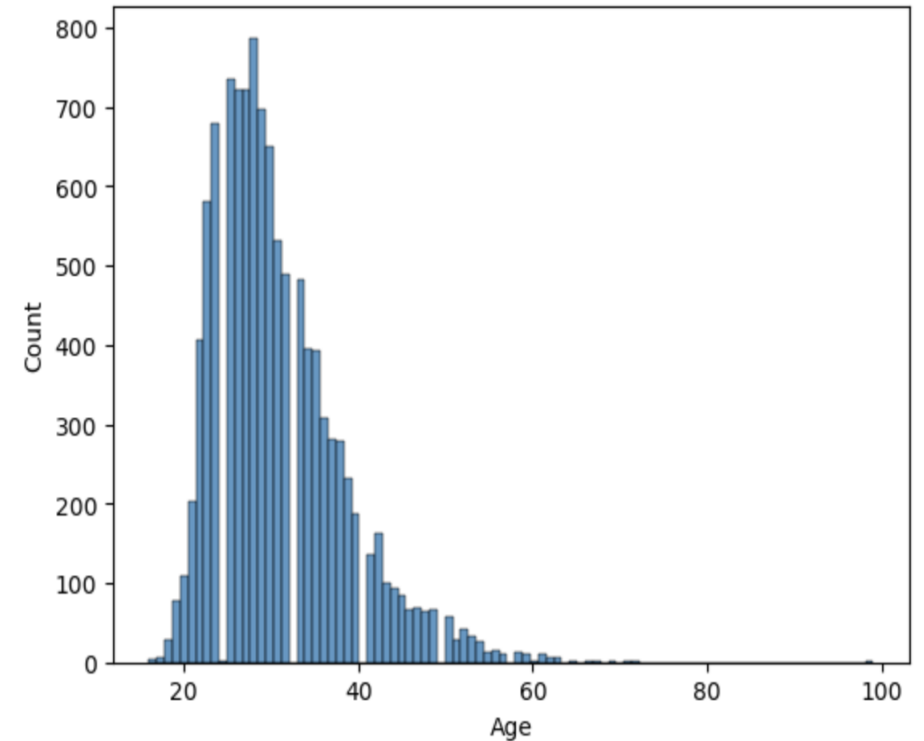
CONCLUSION



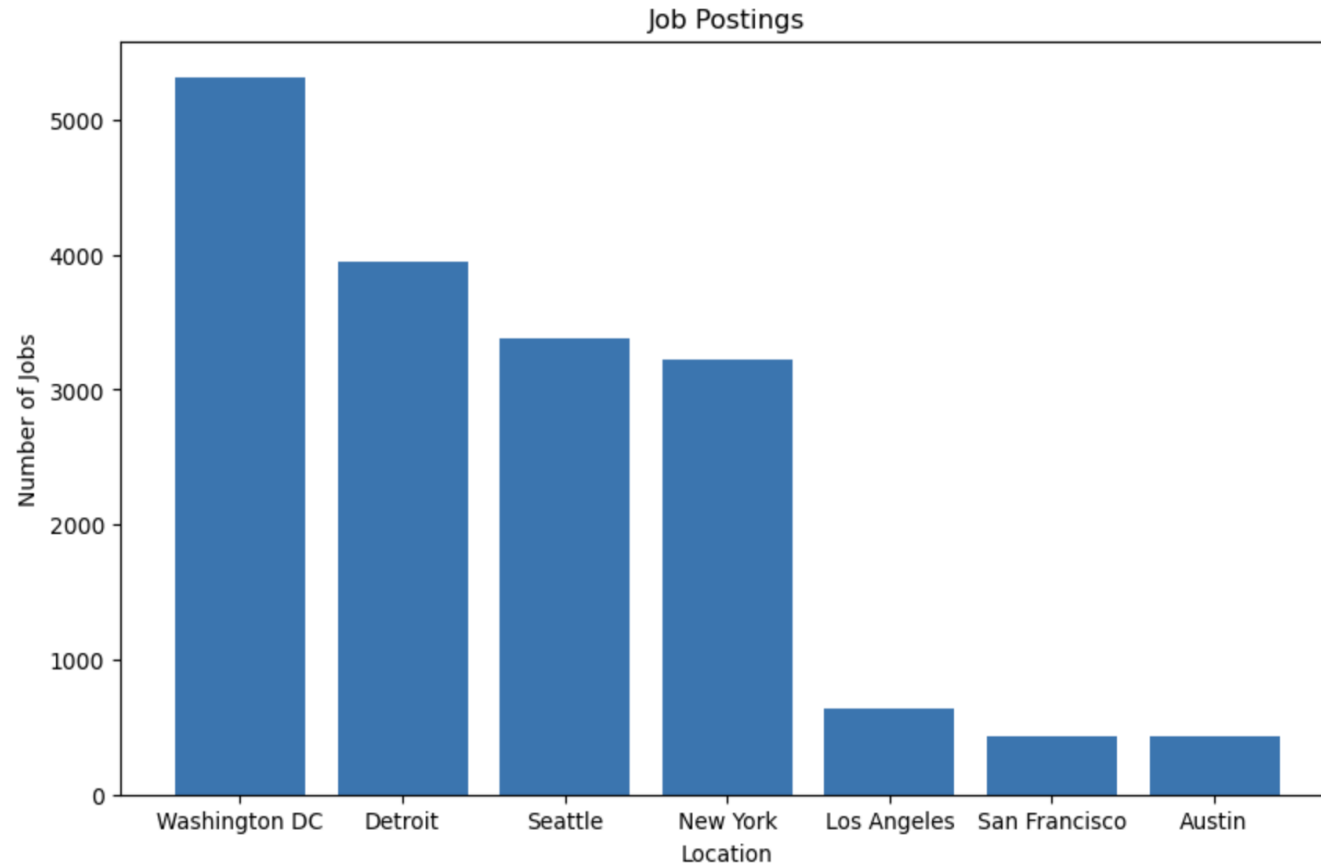
- Technologies in the development sector are ever changing. It is important to stay up to date with the latest trends to improve work efficiency.
- It is also helpful to stay updated on the latest job postings and the programming languages, databases, and web frameworks they require.

APPENDIX

Man	10480
Woman	731
Non-binary, genderqueer, or gender non-conforming	63
Man;Non-binary, genderqueer, or gender non-conforming	26
Woman;Non-binary, genderqueer, or gender non-conforming	14
Woman;Man	9
Woman;Man;Non-binary, genderqueer, or gender non-conforming	2
Name: Gender, dtype: int64	



JOB POSTINGS



Bar chart depicting number of job postings according to city. Data was acquired using GitHub Jobs API.

POPULAR LANGUAGES

Popular languages ordered by their average annual salary. Data was web scraped from GitHub Jobs data.

