



Top Programming Skills in Demand

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OUTLINE



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EXECUTIVE SUMMARY



In this report, we focus on identifying emerging skills in the technology sector, specifically in programming. Our methodology involves collecting data from various reliable sources including job postings, training portals, and surveys. Through rigorous analysis, this report aims to provide insights on:

- The top programming languages currently in demand.
- Must-have database skills employers are looking for.
- Popular Integrated Development Environments (IDEs) professionals are using.

The goal is to offer a comprehensive view of the skill landscape, in order to keep pace with the changing technology environment to remain competitive.

INTRODUCTION



- **Nature of Analysis**

- This presentation aims to analyze the ever-changing landscape of technology skills, with a focus on programming. Using a blend of qualitative and quantitative research methods, we've sourced our data from job postings, training portals, and surveys to present a holistic view of the current market demands.

- **Problem Statement**

- In a rapidly evolving tech industry, both job seekers and employers face challenges in identifying the most relevant skills. Failure to adapt to the current trends can result in a skills gap that affects productivity and career progression.

- **Questions to Be Answered**

- Our analysis revolves around answering key questions to address the problem stated:
 1. What are the top programming languages in demand now and will be in the future?
 2. What are the essential database skills sought by employers in the future?
 3. What web frames are most in use by respondents in the survey and desire in the future?

METHODOLOGY



Planning

- Data Collection
 - Jobs API
 - Web scrapping from a web URL to get popular programming languages with their respective salaries.
- Performed Data Wrangling
 - To identify & replace missing/null values.
 - To normalize the annual compensation column to compare salaries among developers that get paid weekly, monthly and yearly.
- Perform exploratory data analysis(EDA) using visualization and SQL.
- Created a dashboard to perform interactive visual analytics using IBM Cognos

RESULTS

Current Technology Usage

- The top 5 programming languages currently used by respondents are:
 1. JavaScript
 2. HTML/CSS
 3. SQL
 4. Bash/Shell/PowerShell
 5. Python

Future technology Trends

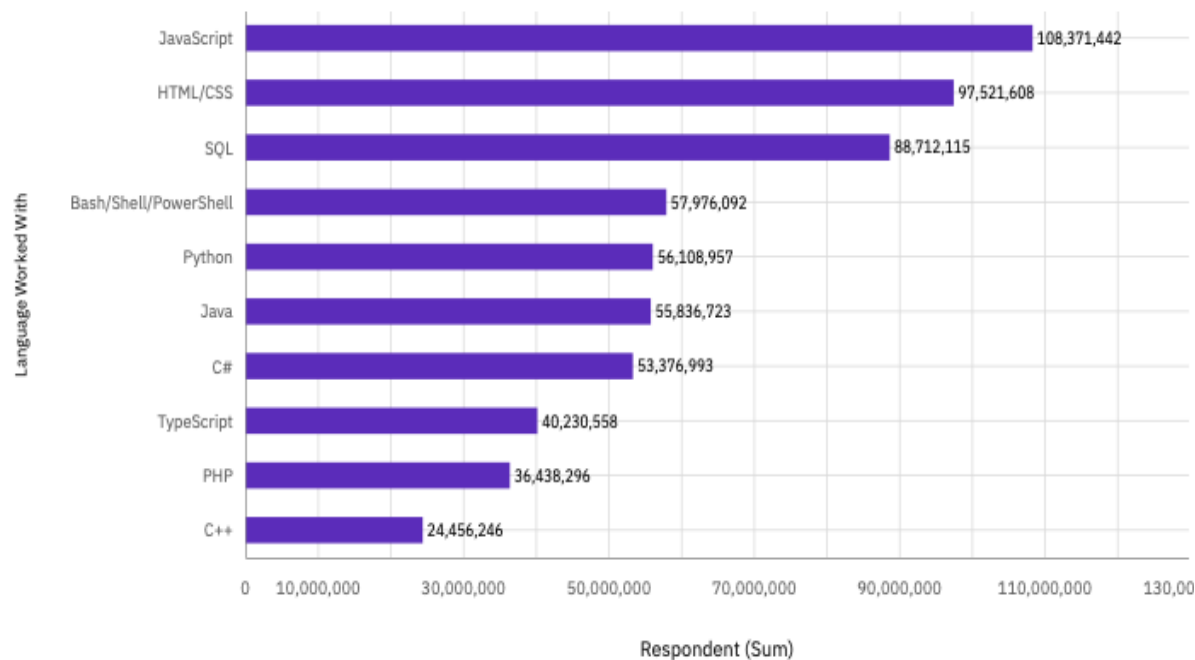
- The top 5 programming languages that respondents would like to use in the future are:
 1. JavaScript
 2. Python
 3. HTML/CSS
 4. SQL
 5. TypeScript

PROGRAMMING LANGUAGE TRENDS



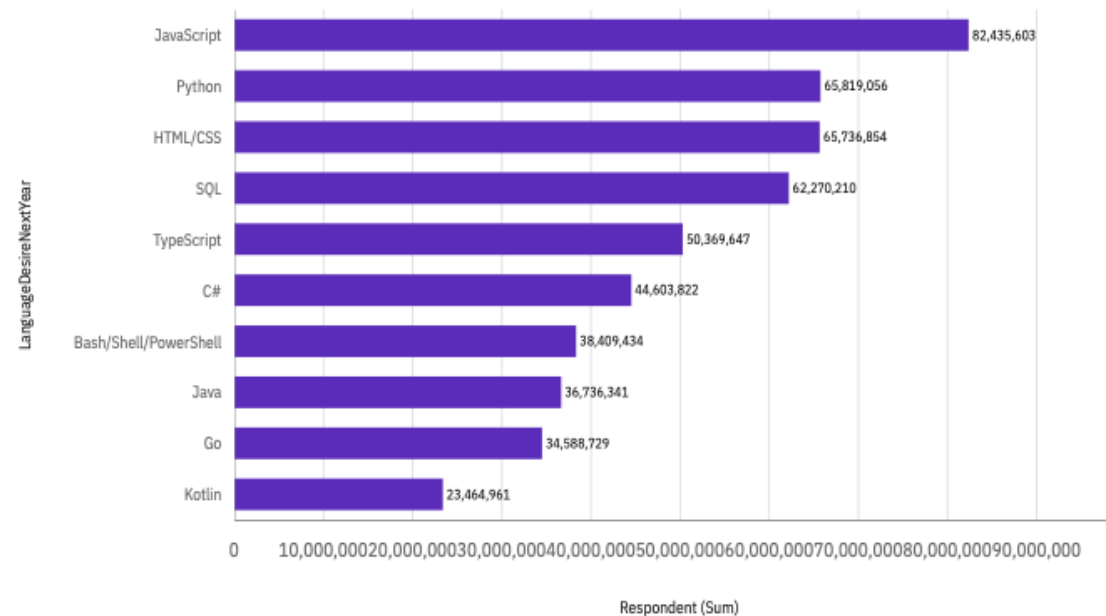
Current Year

Top 10 Languages used by respondents



Next Year

Top 10 Languages respondents desire to use in the future



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS



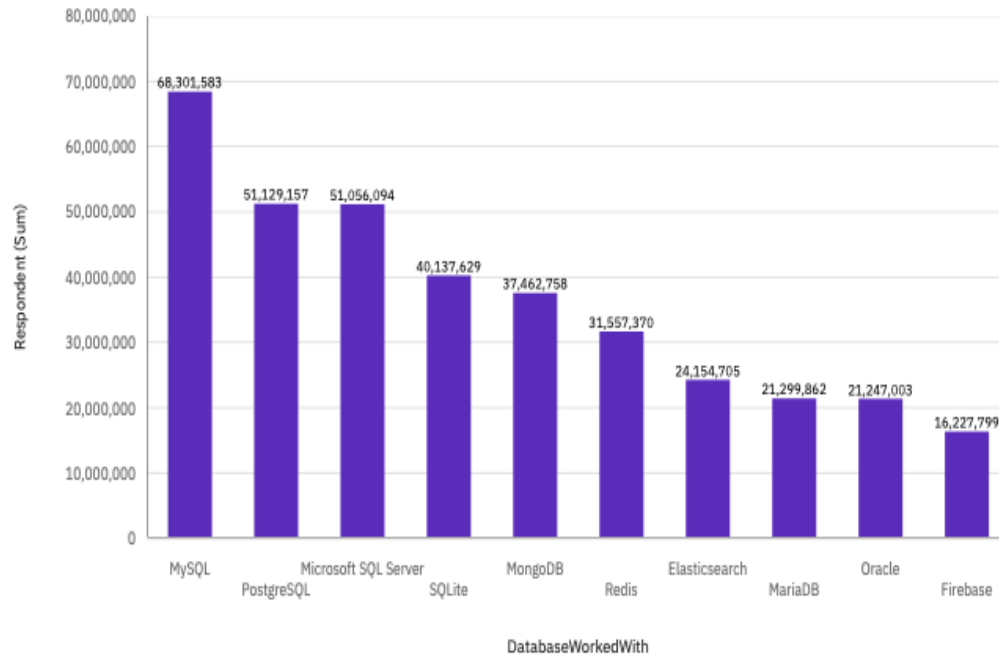
JavaScript is used by most *developers* today. *JavaScript* will continue to be the preferred programming language in the future. Therefore it would make sense for companies to use *JavaScript* as their primary programming language to stay competitive in the industry.

DATABASE TRENDS



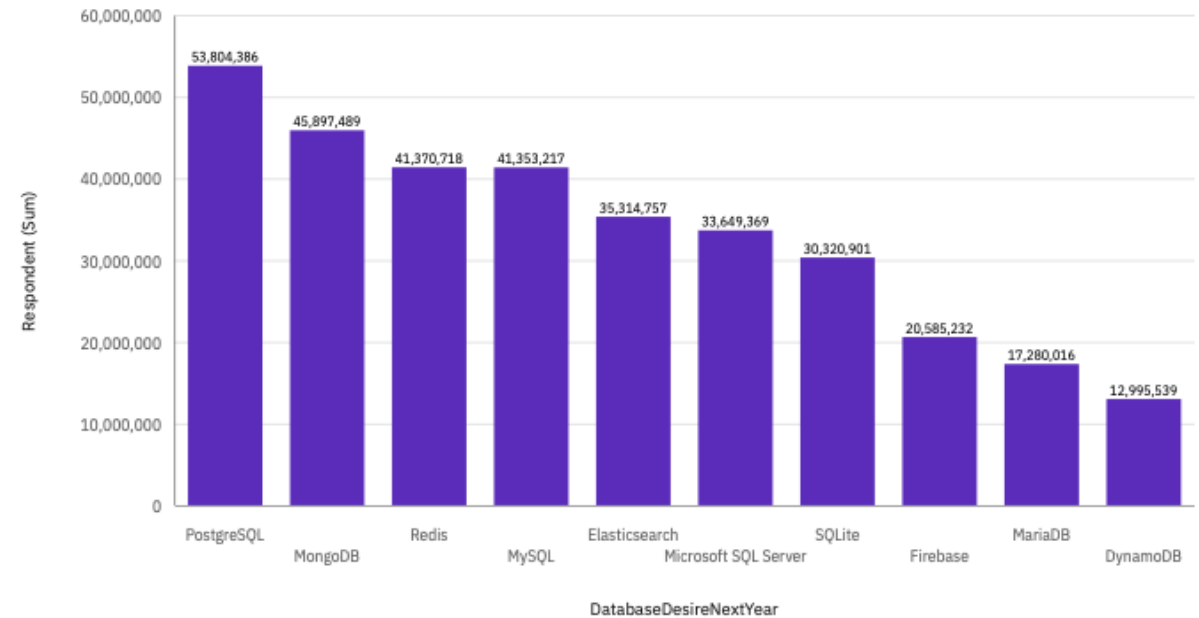
Current Year

Top 10 Databases used by respondents



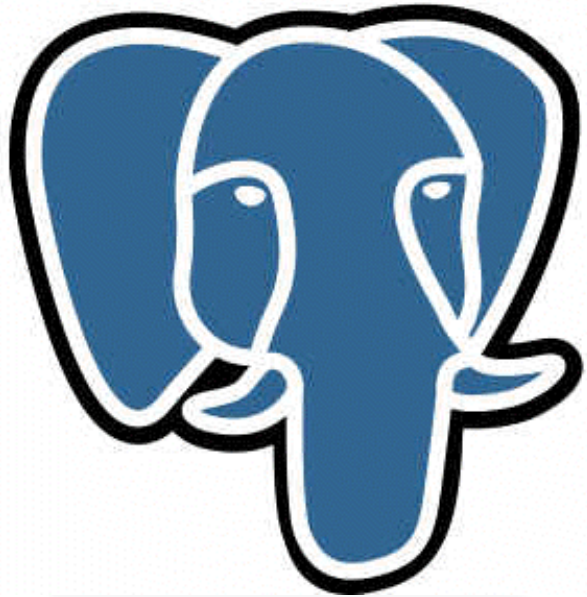
Next Year

Top 10 Databases respondents desire to use in the future



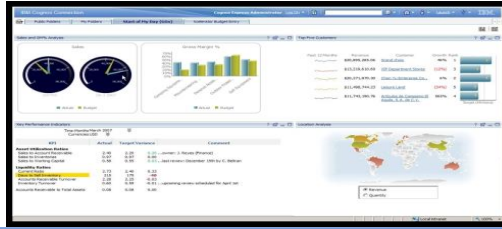
DATABASE TRENDS - FINDINGS & IMPLICATIONS

PostgreSQL



MySQL is currently the most popular database program used today. However based on the trends illustrated by the column bar chart, developers have the desire to use *PostgreSQL* in the future as their main database.

DASHBOARD



<https://github.com/JHastings46/Cognos-Dashboard/blob/9b3487c5a957fd1c20339c184a55ff76ed39fc18/Cognos%20Project.pdf>

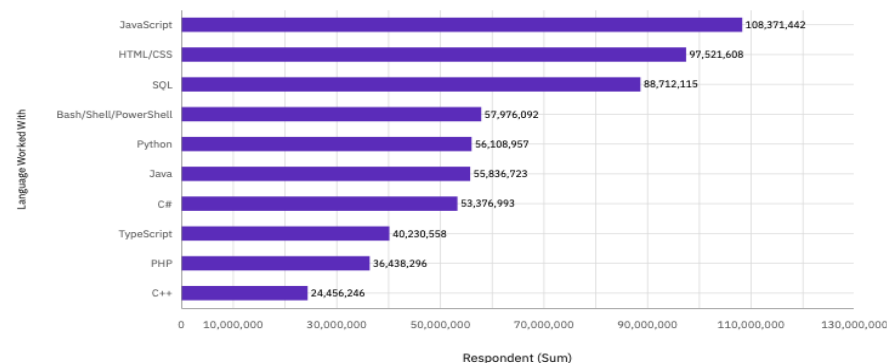


IBM Cognos Analytics

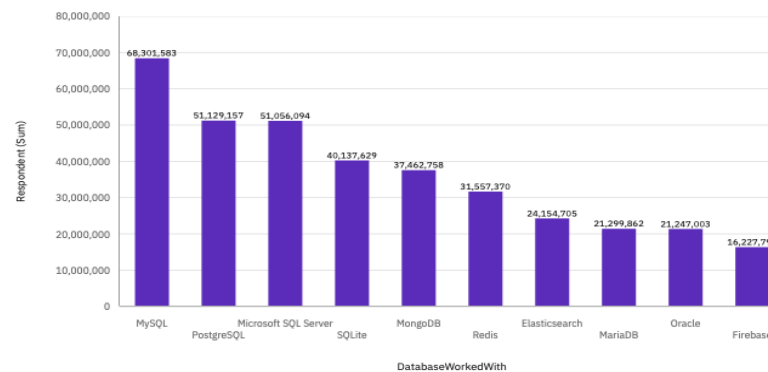
DASHBOARD TAB 1

Current technology Usage

Top 10 Languages used by respondents



Top 10 Databases used by respondents



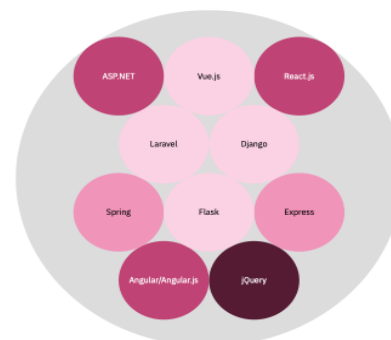
Platforms Worked With by Respondent

Respondent (Sum)
2,532,293 72,858,619



WebFrame Worked With hierarchy by Respondent

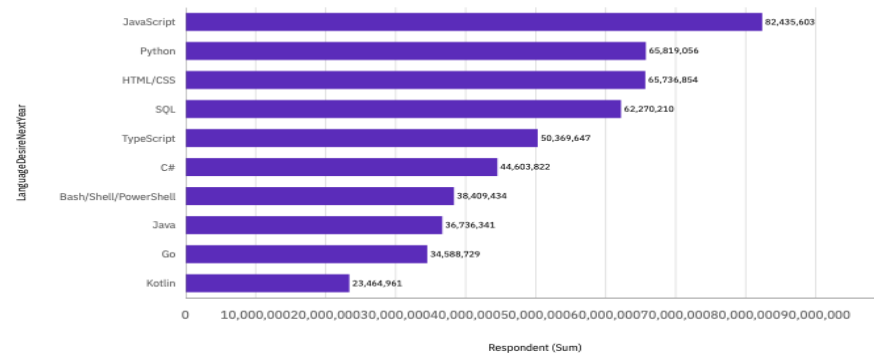
Respondent (Sum)
11,517,716 57,310,860



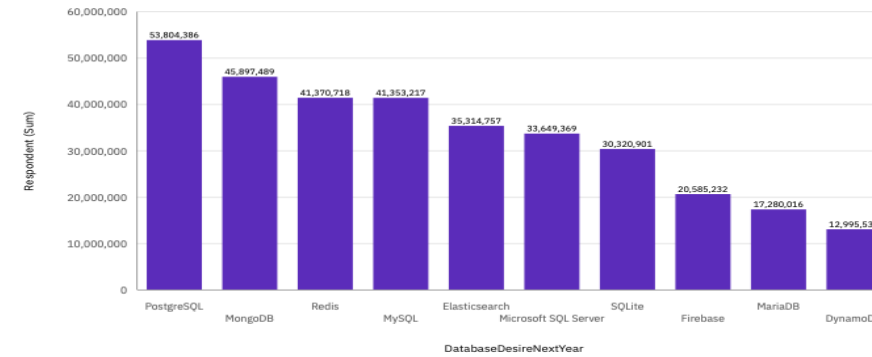
DASHBOARD TAB 2

Future Technology Trends

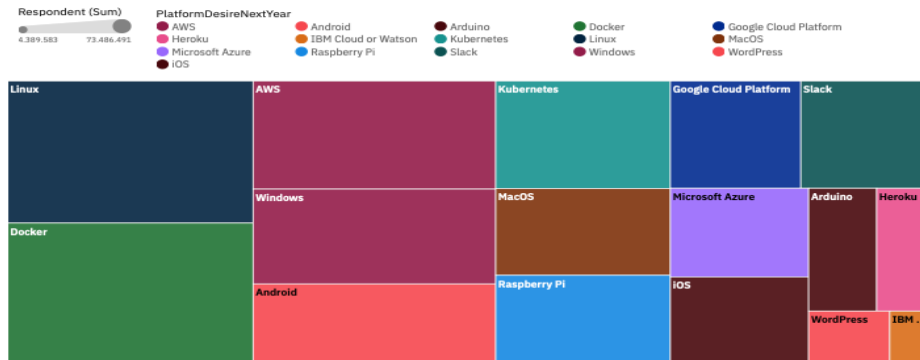
Top 10 Languages respondents desire to use in the future



Top 10 Databases respondents desire to use in the future



Platforms respondents desire to use in the future



Top 10 Web Frames respondents desire to use in the future

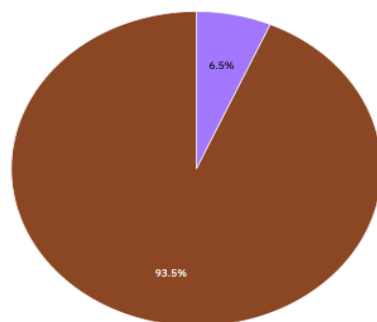


DASHBOARD TAB 3

Demographics

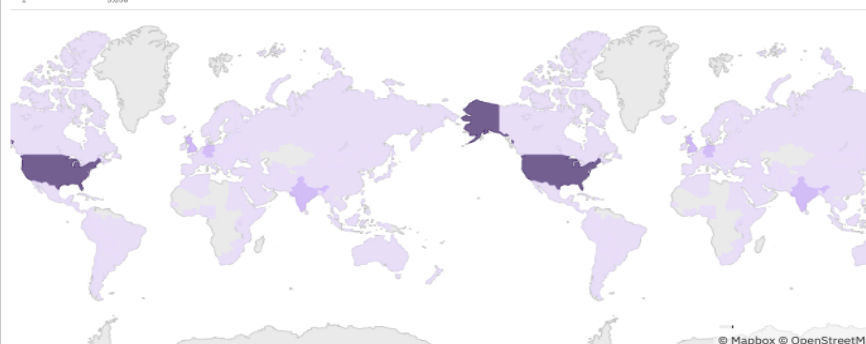
Respondent by Gender

Gender
Woman Man

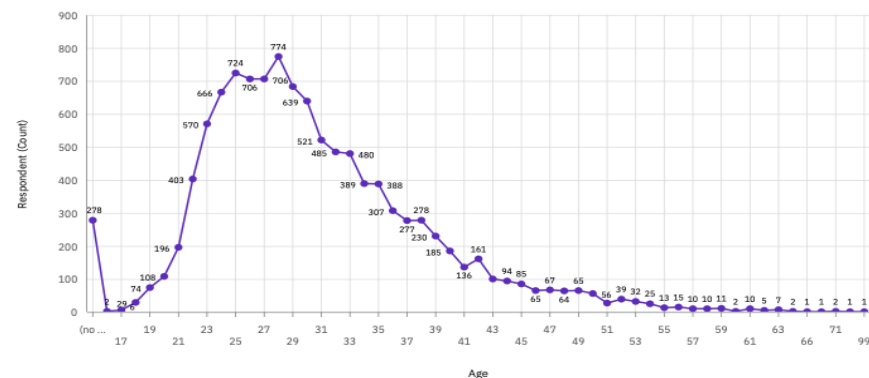


Respondent Count for Countries

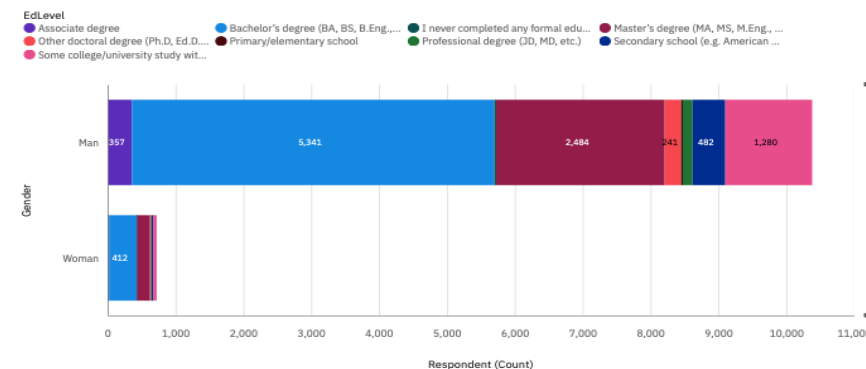
Respondent (Count)
1 8,088



Respondent Count by Age



Respondent Count by Gender classified by EdLevel



OVERALL FINDINGS & IMPLICATIONS

Findings:

- Programming languages evolve based on developers' needs and preferences.
- Popularity of languages, databases, web frameworks, and platforms fluctuates.
- Survey mostly represents males aged 21-41 with university-level education.

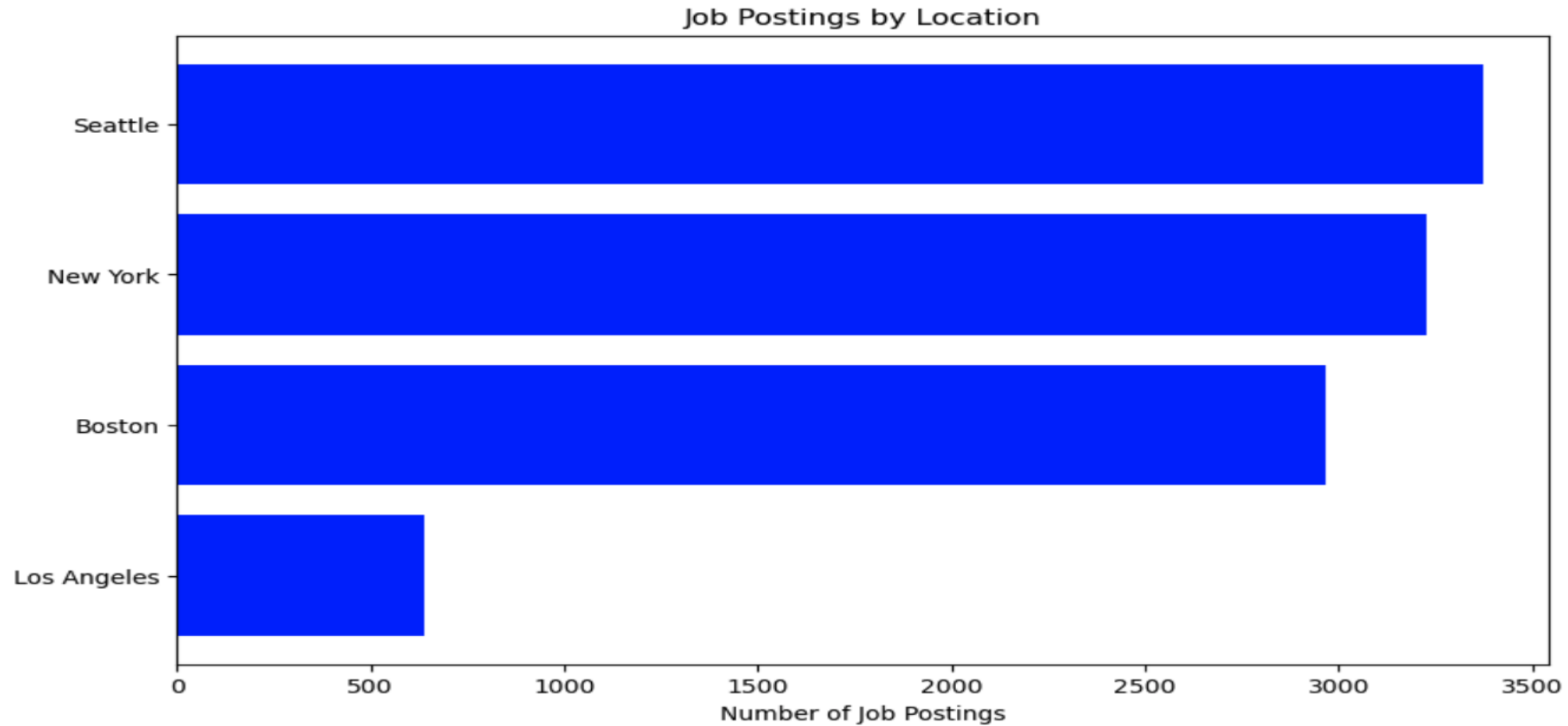
Implications:

- Companies and developers should stay updated on emerging trends.
- The survey may not capture diverse perspectives; future research could expand scope."

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- 
- Technology is ever-evolving, driven by the shifting wants and needs of developers.
 - Your annual salary is heavily influenced by your proficiency in in-demand skills.
 - Staying up-to-date with emerging trends is crucial for maintaining a competitive edge.
 - For both companies and individuals, adaptability and continuous learning are key to staying relevant in the market.

JOB POSTINGS



POPULAR LANGUAGES

