



Capstone Project

Final Assignment IBM

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01/03/2023

OUTLINE

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





EXECUTIVE SUMMARY

This report used data analysis to highlight current and projected trends in the need for:

- skills related to programming languages
 - Javascript, Python and others
- databases
 - MySQL, Postgre SQL and others
- other technologies



INTRODUCTION

Do you want to be competitive in the global IT sector?

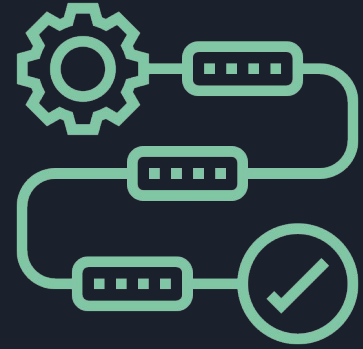
This report is based on the survey conducted by Stack, the largest and most comprehensive survey of programmers in the world. In order to highlight current and future trends in the IT world.

In this way, anyone who wants to start in the world of programming or is already a programmer, can see where the market is going and update themselves.



METHODOLOGY

- ➡ Collect survey data & explore its content
 - Web Scraping, APIs and Request library
- ➡ Data Wrangling
 - Clean, organize and prepare data for further analysis
- ➡ Exploratory data analysis
 - Analyzing data, Handling outliers and Correlations
- ➡ Data Visualization
 - Highlight distribution of data, relationships, the composition and comparison of data.

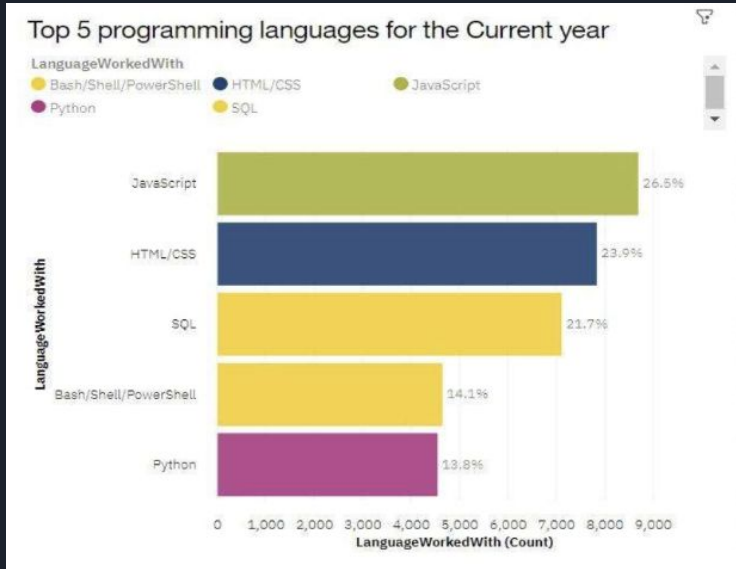


RESULTS

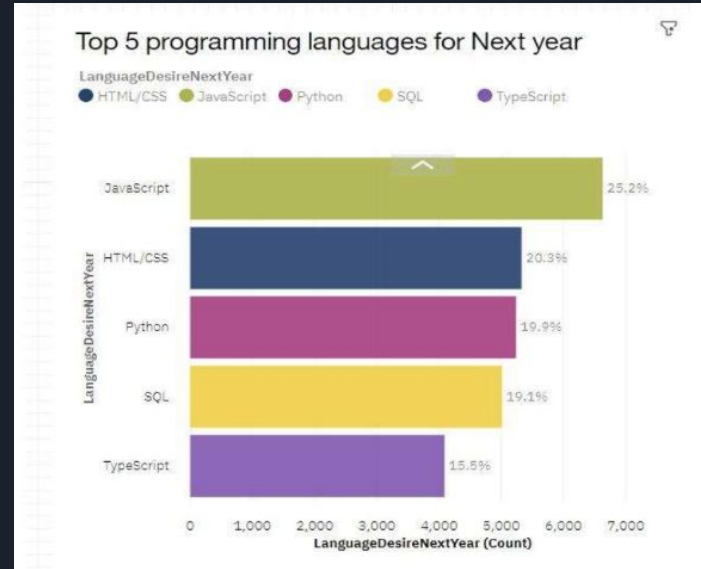


PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year





FINDINGS & IMPLICATIONS

Findings

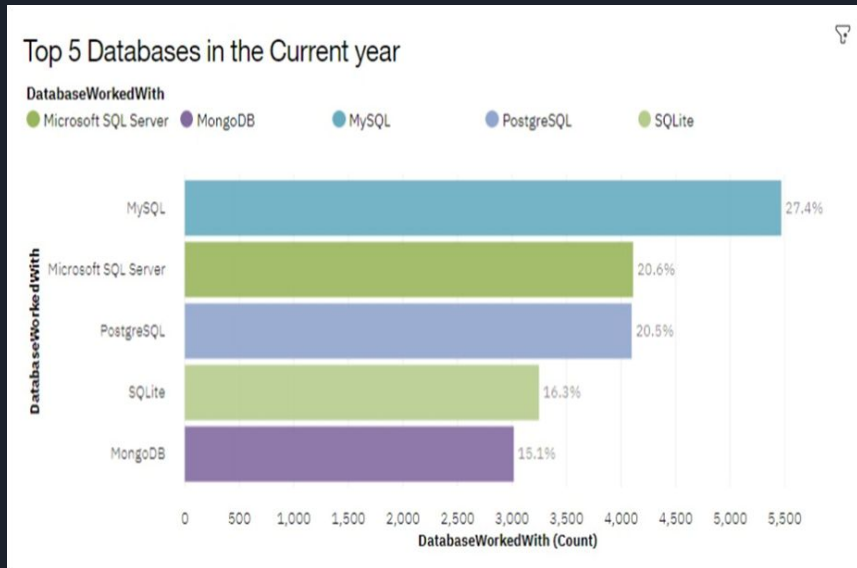
- Javascript, HTML/CSS, SQL, Shell languages and Python are the most used languages today.
- Javascript, HTML/CSS, Python, SQL and Typescript will be the most used languages next year and in future years.

Implications

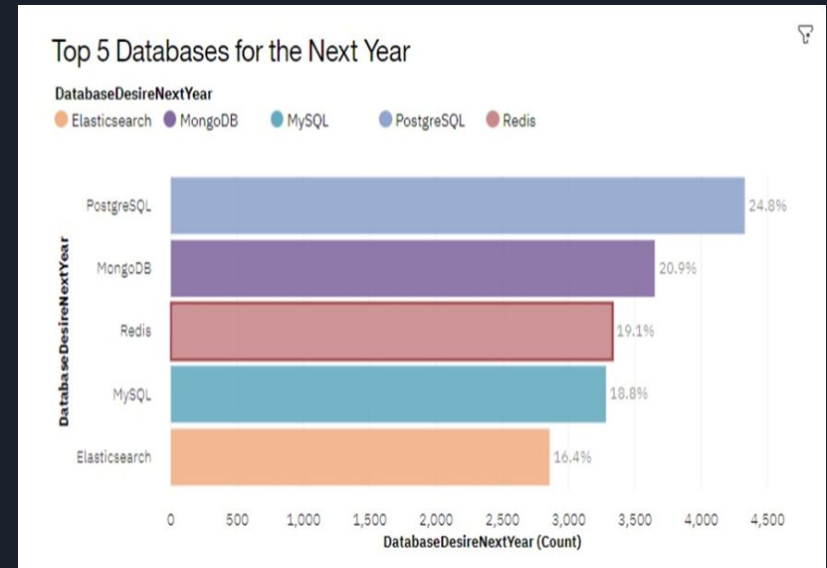
- JavaScript and HTML/CSS will be still in the trends
- People are more interested in Python

DATABASE TRENDS

Current Year



Next Year





FINDINGS & IMPLICATIONS

Findings

- MySQL, Microsoft SQL server, Postgre SQL, SQLite and MongoDB are the 5 most used databases at the moment.
- However, Postgre SQL, MongoDB, Redis, MySQL, and Elasticsearch are expected to become more popular in the future.

Implications

- Microsoft SQL Server and SQLite lose ground in the market.
- Establishment of PostgreSQL and MongoDB in the market.



DASHBOARD

→ See the dashbord for yourself:

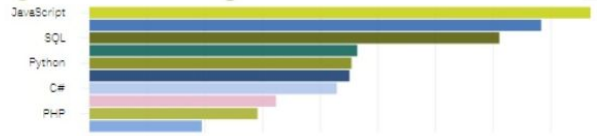
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DASHBOARD TAB 1

Top 10 LanguageWorkedWith

LanguageWorkedWith



Top 10 DatabaseWorkedWith

DatabaseWorkedWith



PlatformWorkedWith

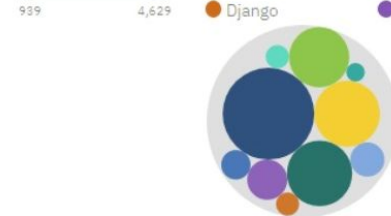
PlatformWorked... PlatformWorkedWith



Top 10 WebframeWorkedWith

WebFrameWorke...

WebFrameWorkedWith

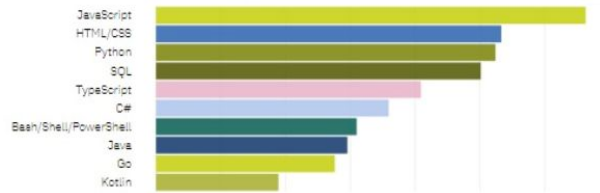


DASHBOARD TAB 2

Top 10 LanguageDesireNextYear

LanguageDesireNextYear

● Bash/Shell/PowerShell ● C#
● Go ● HTML/CSS



Most desired Platforms next year

PlatformDesireN... PlatformDesireN...
0 5,865 0 5,865



Top 10 Most Desired Databases

DatabaseDesireNextYear

● DynamoDB ● Elasticsearch
● Firebase ● MariaDB



Most Desired Web frames Next Year

WebFrameDesire... WebFrameDesireNextYear
0 4,724 ● (no value) ● ASP.NET



DASHBOARD TAB 3

Percentage of Respondents by gender

Gender
● Woman ● Man

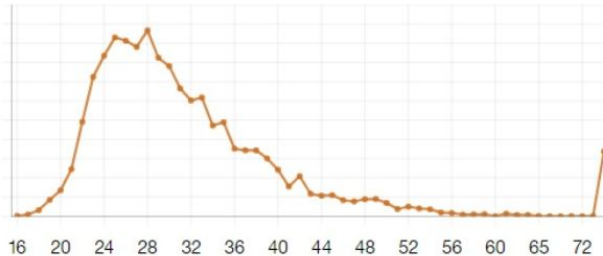


Respondents by Country

Respondent (Sum)

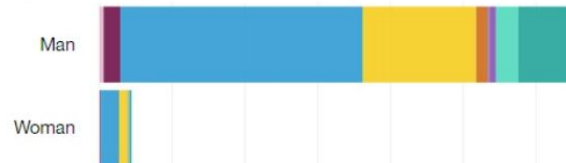


Respondents by Age



Respondents by Formal Education Level

Education level
● (no value)
● Associate degree





DISCUSSION





OVERALL FINDINGS & IMPLICATIONS

Findings

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

Implications

- JavaScript and TypeScript are web frames gaining followers.
- Global polarization of developers location and gender.
- The majority of young developers do not have postgrad studies.

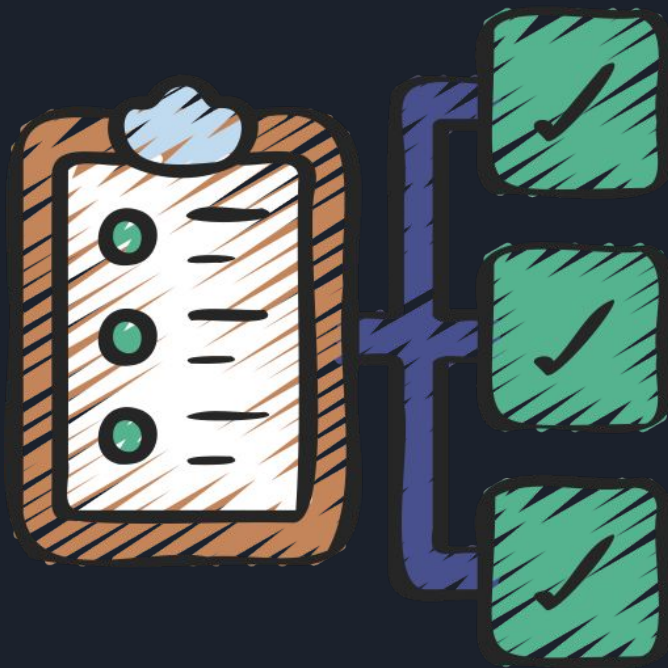


CONCLUSION

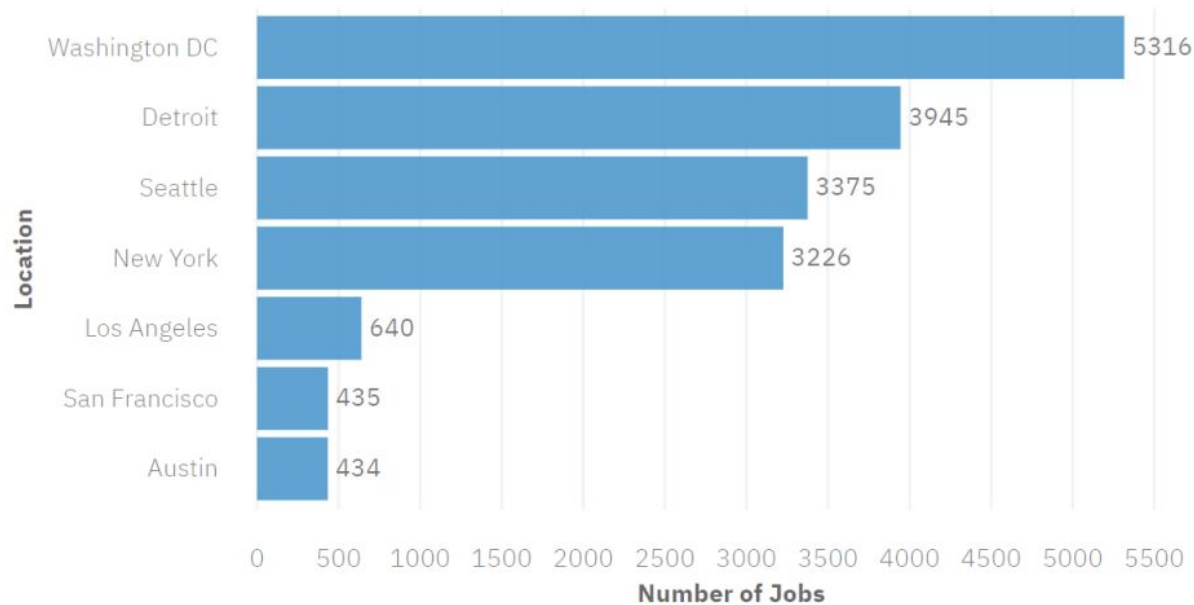
- ➡ HTML/CSS is expected to remain popular in the following year.
- ➡ PostgreSQL will be the most demanded database.
- ➡ Men have shown more interested in IT skills than women.
- ➡ It is highly important to stay updated within the tech sector since trends change constantly.



APPENDIX



JOB POSTINGS



POPULAR LANGUAGES

