



Research on Data Technologies

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OUTLINE



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- Discussion
 - Findings & Implications
- Conclusion
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EXECUTIVE SUMMARY



- Current Technology Usage
 - Top languages worked with:
 - HTML/CSS
 - Bash/Shell/PowerShell
 - C#
 - Top database worked with:
 - Microsoft SQL Service
 - MySQL
 - MongoDB
- Future Technology Trends
 - Desired Languages
 - JavaScript
 - HTML/CSS
 - Desired Databases
 - PostgreSQL
 - MongoDB

INTRODUCTION



- The research question was what are the current and future technology trends in the IT industry
- The answer to the research question may help to adjust products and services to the market needs, as well as help future programmers get a job.
- A survey was conducted to help answer the research question

METHODOLOGY



- A survey was conducted to obtain the data
- The data was cleaned and prepared for analysis
 - Duplicates were removed
 - Missing values were replaced by the average value or most frequency
- The data was then analyzed, and conclusions were drawn
- The visualizations of the data support the main findings

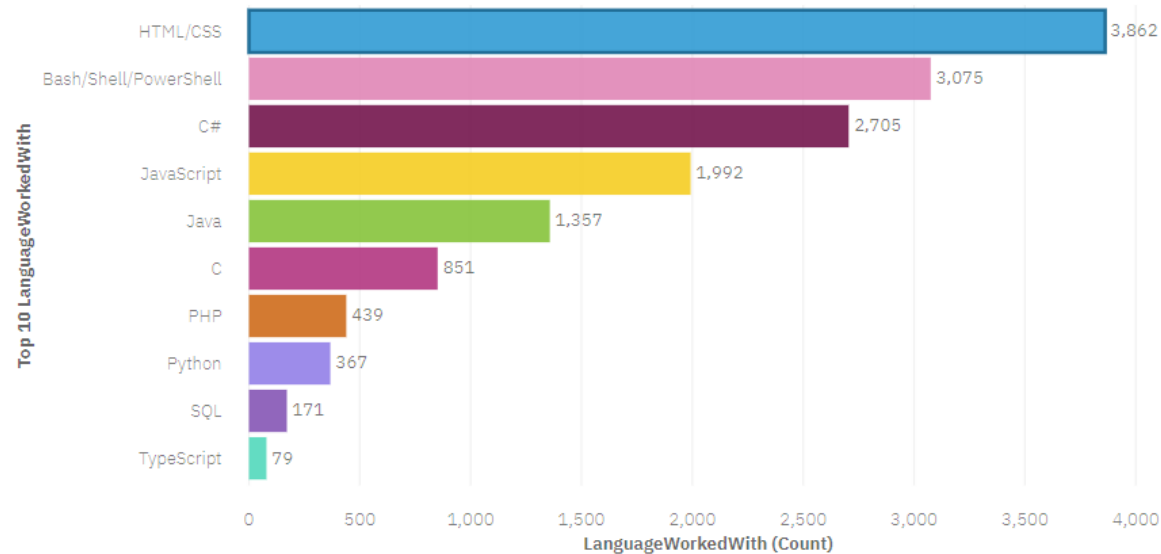
RESULTS



PROGRAMMING LANGUAGE TRENDS

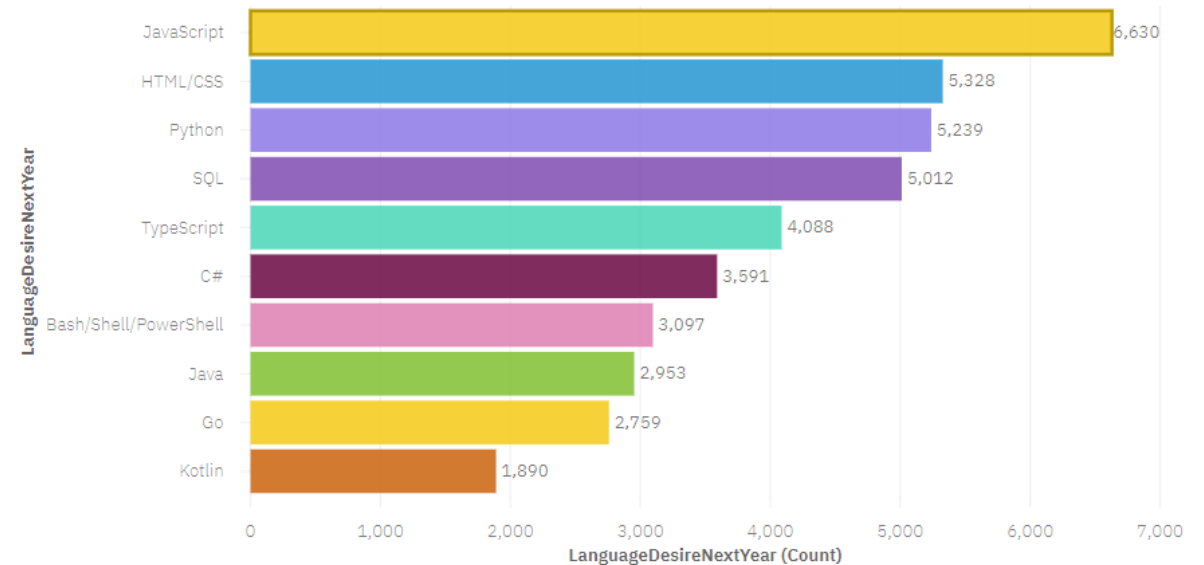
Current Year

Top 10 Language Worked With



Next Year

Top 10 Language Desired Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- Current most popular languages are HTML/CSS, Bash/Shell/PowerShell and C#
- Future most popular languages are JavaScript, HTML/CSS and Python

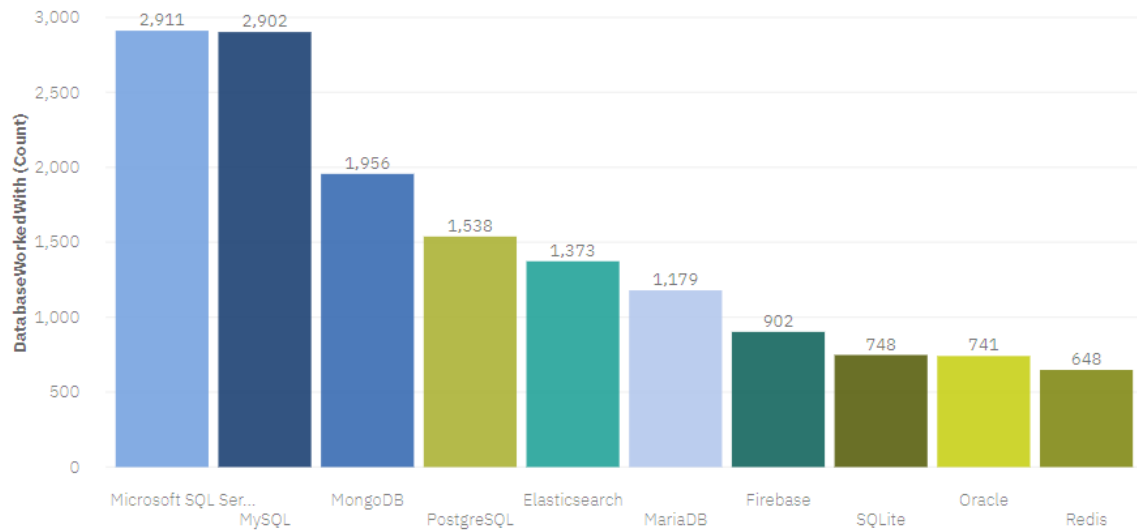
Implications

- HTML/CSS remain important languages in the programming industry
- Python and JavaScript are becoming more important

DATABASE TRENDS

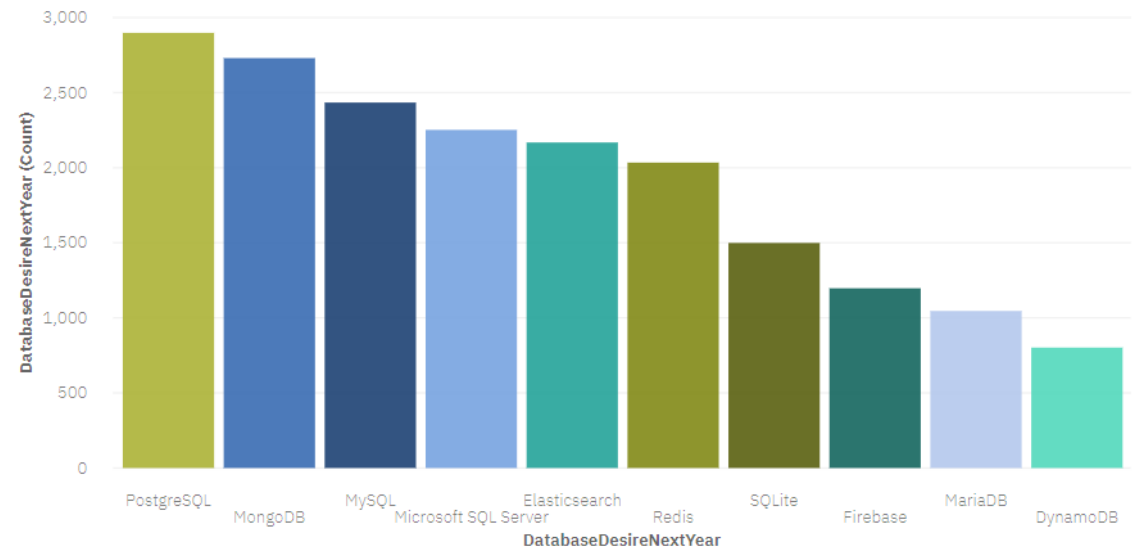
Current Year

Database Worked With



Next Year

Top 10 Database Desired NeYear



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- Currently most popular Databases are Microsoft SQL Server, MySQL and MongoDB
- Future most popular Databases are PostgreSQL, MongoDB and MySQL

Implications

- PostgreSQL is becoming more popular
- MySQL and MongoDB remain important in the IT industry

RESPONDENTS – FINDINGS

Findings

- Majority of the respondents were men
- Most of the responses were from United States
- Most of the respondents were in the age 22 – 35
- Most of the respondents have Bachelor's degree

DASHBOARD

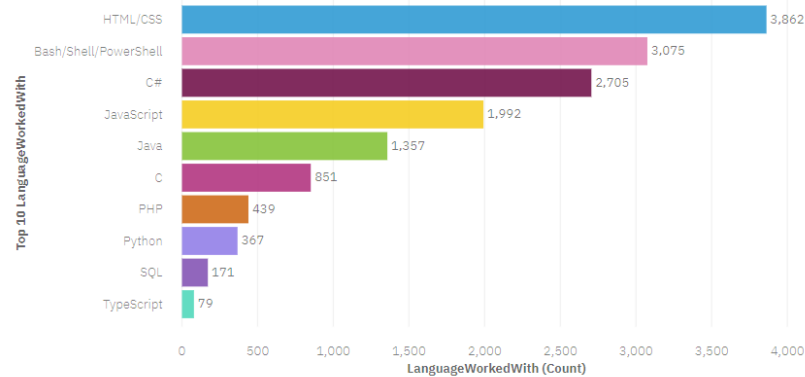


The dashboard is available at:

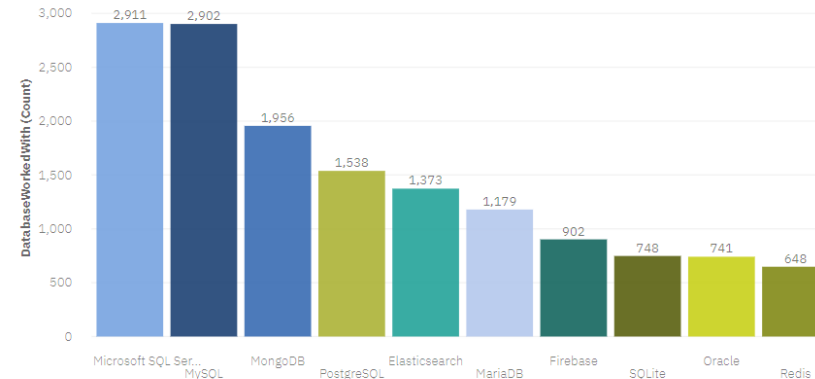
<https://eu-de.datapatform.cloud.ibm.com/dashboards/f39cea65-6c09-40f3-9eb8-e4dc114e721e/view/7829c00a32ac68e276fcbde407ca2f007433275ebabbd20683d37b490d657197f33f1a99c82d4358de420130a7be1b59c8>

Current Technology Usage

Top 10 Language Worked With



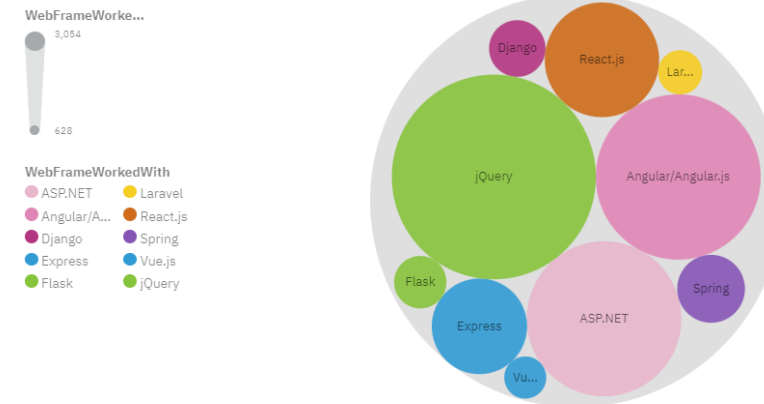
Database Worked With



Platform Worked With

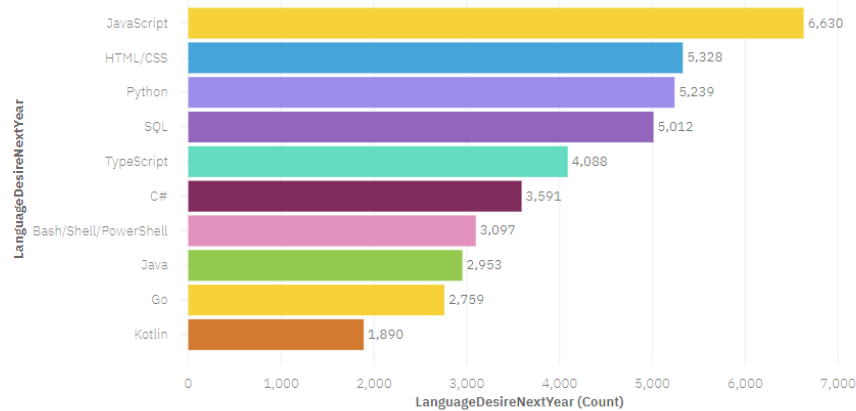


Top 10 Web Frame Worked With

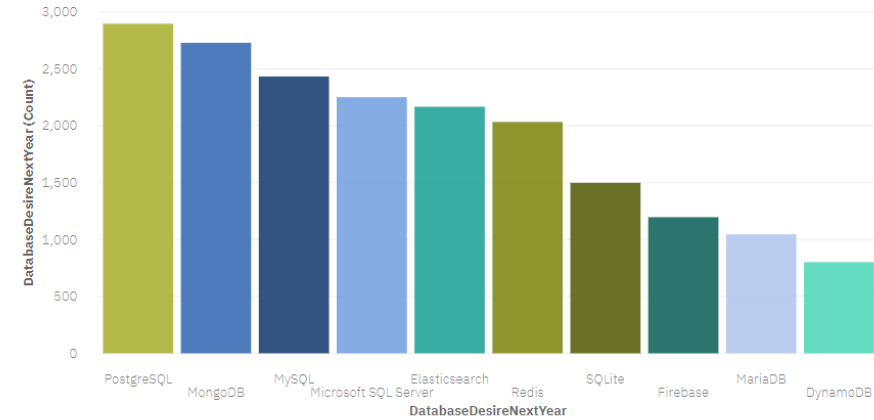


Future Technology Trend

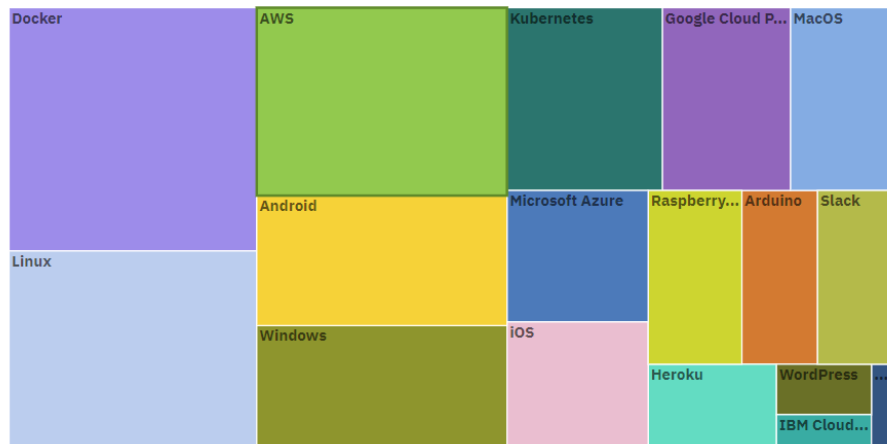
Top 10 Language Desired Next Year



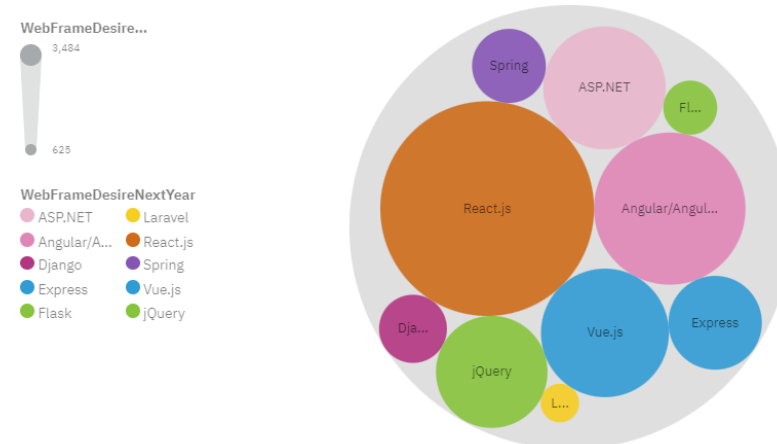
Top 10 Database Desired NeYear



Platform Desired Next Year



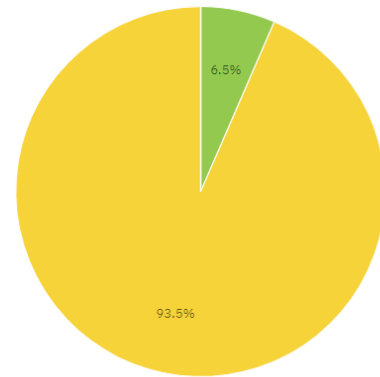
Top 10 Web Frame Desired Next Year



Demographics

Respondent classified by Gender

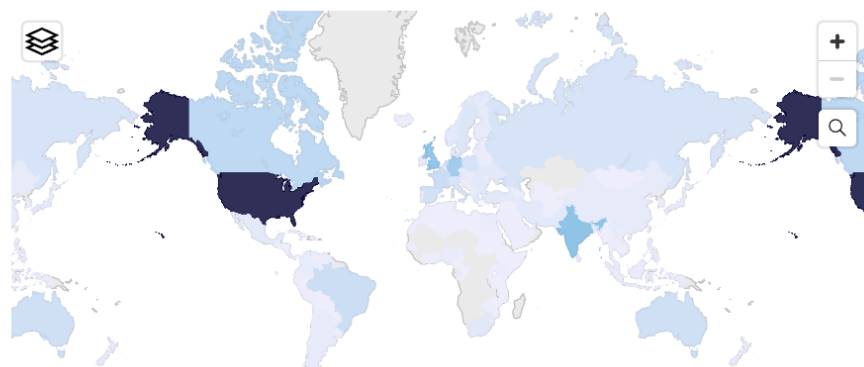
Gender
● Woman ● Man



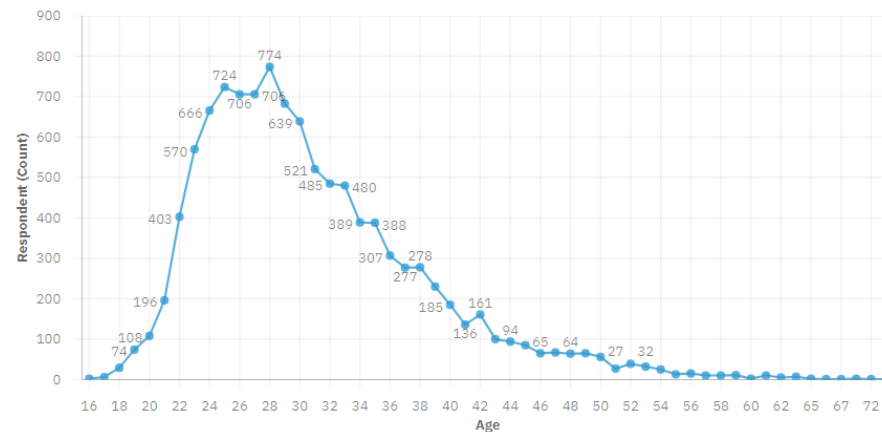
Respondent Count for Countries

Country (Count)

1 3,058



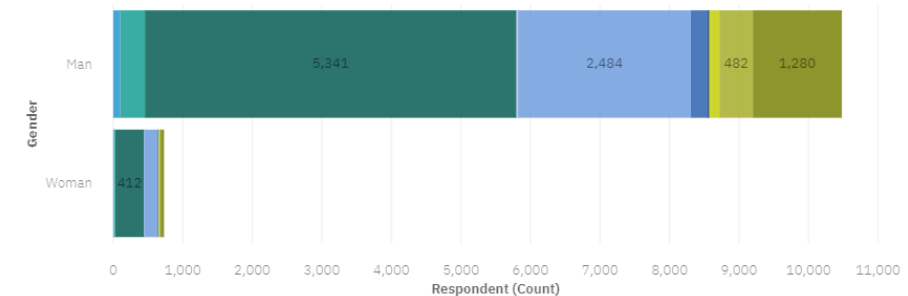
Respondent Count by Age



Respondent Count by Gender, classified by Formal Education Level

Education Level

● (no value) ● Associate degree ● Bachelor's degree (BA, BS, B.E...
● I never completed any formal ... ● Master's degree (MA, MS, M.E... ● Other doctoral degree (Ph.D, E...
● Primary/elementary school ● Professional degree (JD, MD, e... ● Secondary school (e.g. Americ...
● Some college/university study ...



DISCUSSION



- How can we improve our products based on our findings?
- How can we predict future salaries of programmers?
- How does emerging technologies influence current and future trends?

Overall Finding and Implications

Findings

- Current most popular languages are HTML/CSS, Bash/Shell/PowerShell and C#
- Currently most popular Databases are Microsoft SQL Server, MySQL and MongoDB
- Majority of the respondents were men

Implications

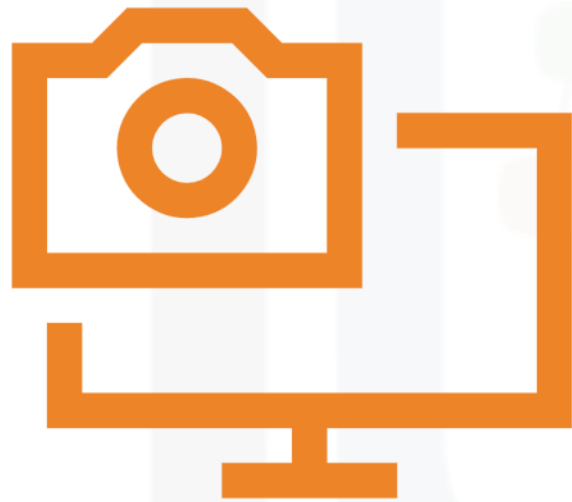
- HTML/CSS remain important languages in the programming industry
- PostgreSQL is becoming more popular
- The problem of inequality is still unsolved in the IT industry

CONCLUSION



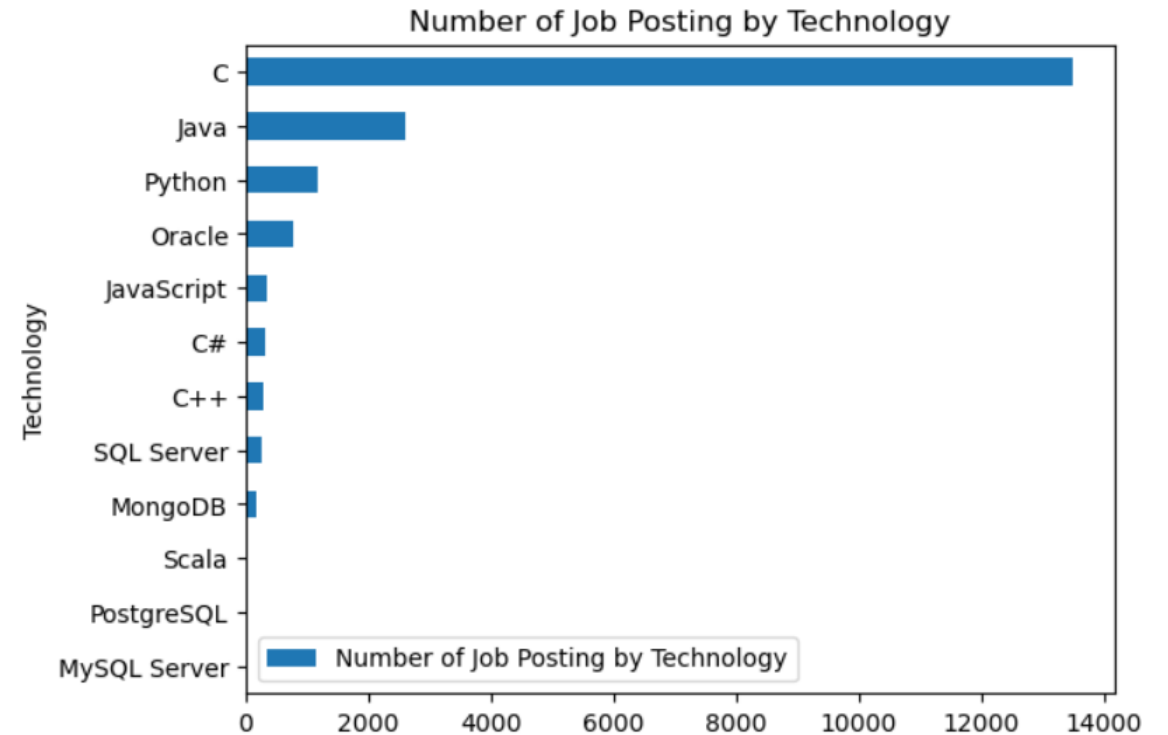
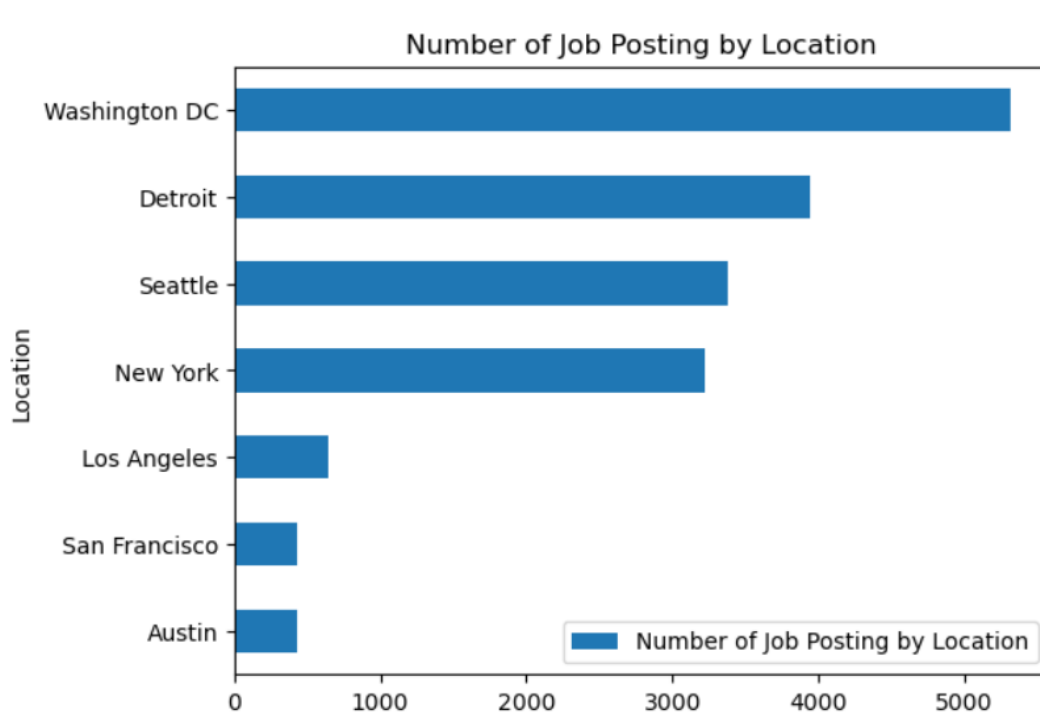
- Some programming languages remain important, such as HTML/CSS and JavaScript, while others gain popularity, such as Python and SQL
- In case of Databases, MongoDB and MySQL remain popular, while PostgreSQL is becoming more important
- Among important platforms there is Docker, Linux, and AWS
- Popular Web Frameworks include Query.js and React.js

APPENDIX



- <https://cf-courses-data.s3.us.cloud-object-storage.appdomain.cloud/IBM-DA0321EN-SkillsNetwork/labs/datasets/Programming Languages.html>
- <https://cf-courses-data.s3.us.cloud-object-storage.appdomain.cloud/IBM-DA0321EN-SkillsNetwork/labs/module%201/Accessing%20Data%20Using%20APIs/jobs.json>

JOB POSTINGS



POPULAR LANGUAGES

