Analysis of technologies among developers

Dariia Sira

12/06/2024

IBM Developer

SKILLS NETWORK

OUTLINE

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

EXECUTIVE SUMMARY

The goal is to identify current and preferred technologies used by developers.

Data source is survey of developers on the use of programming languages, databases, platforms, frameworks, development environments and operating systems.

INTRODUCTION

The introduction of modern technologies in software engineering plays a key role in improving software development processes and optimizing the functioning of information systems.

The purpose of this presentation is to analyze current trends in the use of technologies among developers, as well as to identify their advantages and limitations.

Through a survey of software engineering professionals, we will explore the current landscape of technologies and draw conclusions about their potential for future development.

This presentation is aimed at identifying promising areas for further research and implementation of the latest innovations in software engineering.

METHODOLOGY

- The data was collected through an online survey among developers.
- Questions included current and desired technologies in various categories (programming languages, databases, platforms, etc.).
- The data was analyzed to identify popular technologies and predict trends for the next year.

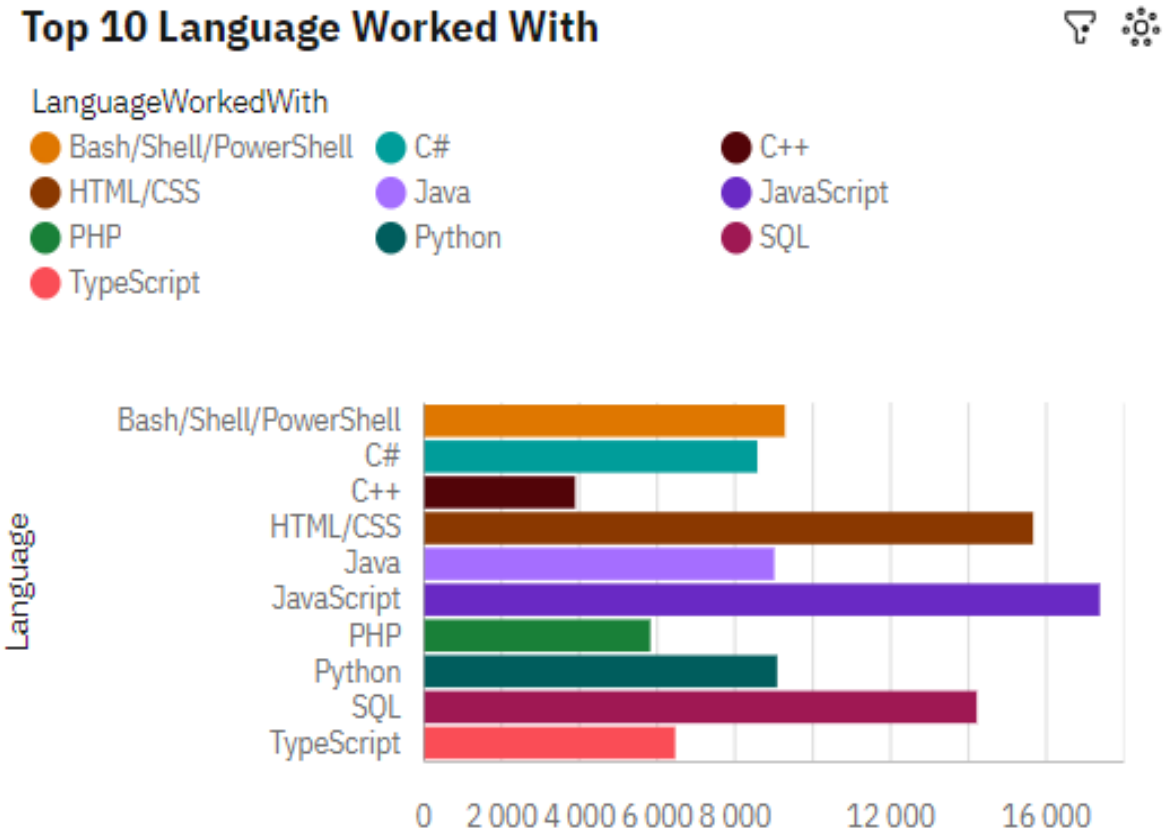
RESULTS

To achieve a competitive advantage in the IT industry, you should combine deep knowledge in current leaders - JavaScript, Python, MySQL, PostgreSQL - with mastery of modern tools such as TypeScript, Go, MongoDB and Elasticsearch.

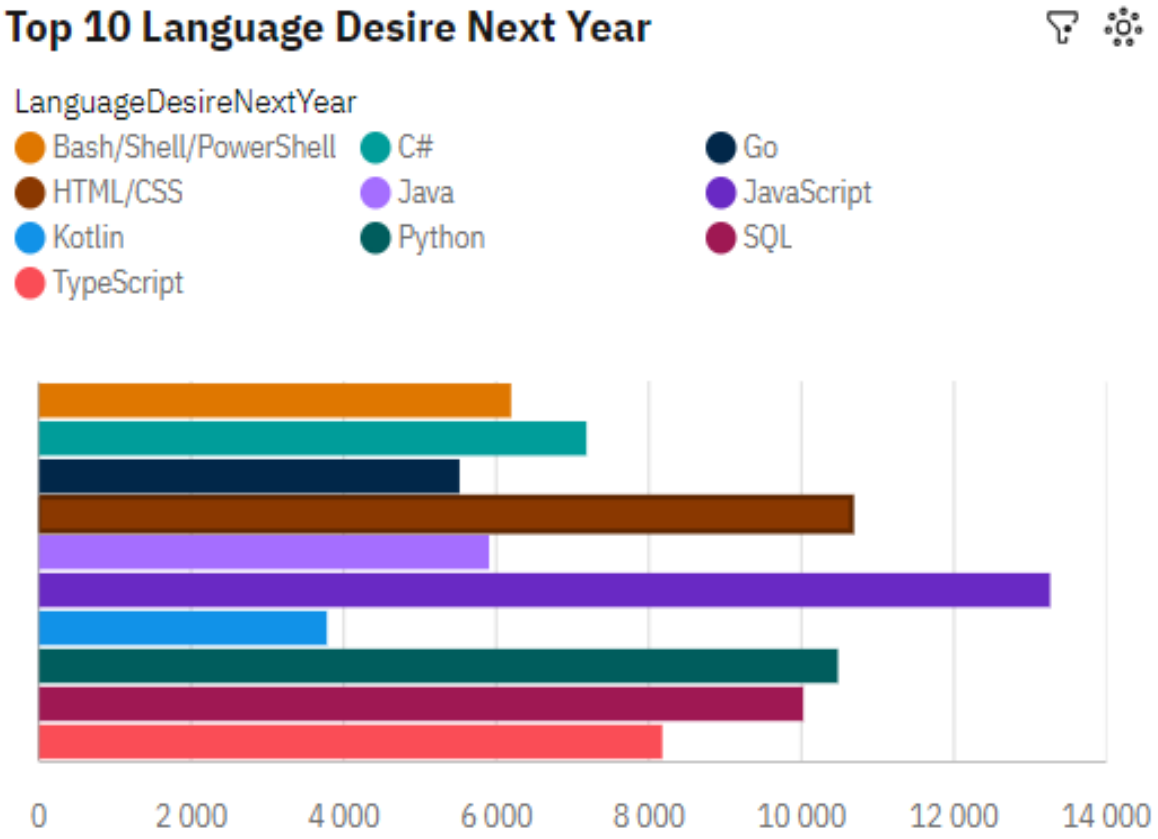
This will ensure alignment with current market needs where web development and data management are important, and readiness for future technology trends including modern web technologies, NoSQL databases and search engines. This approach ensures that professionals are in steady demand and able to adapt to the evolution of the IT landscape.

PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

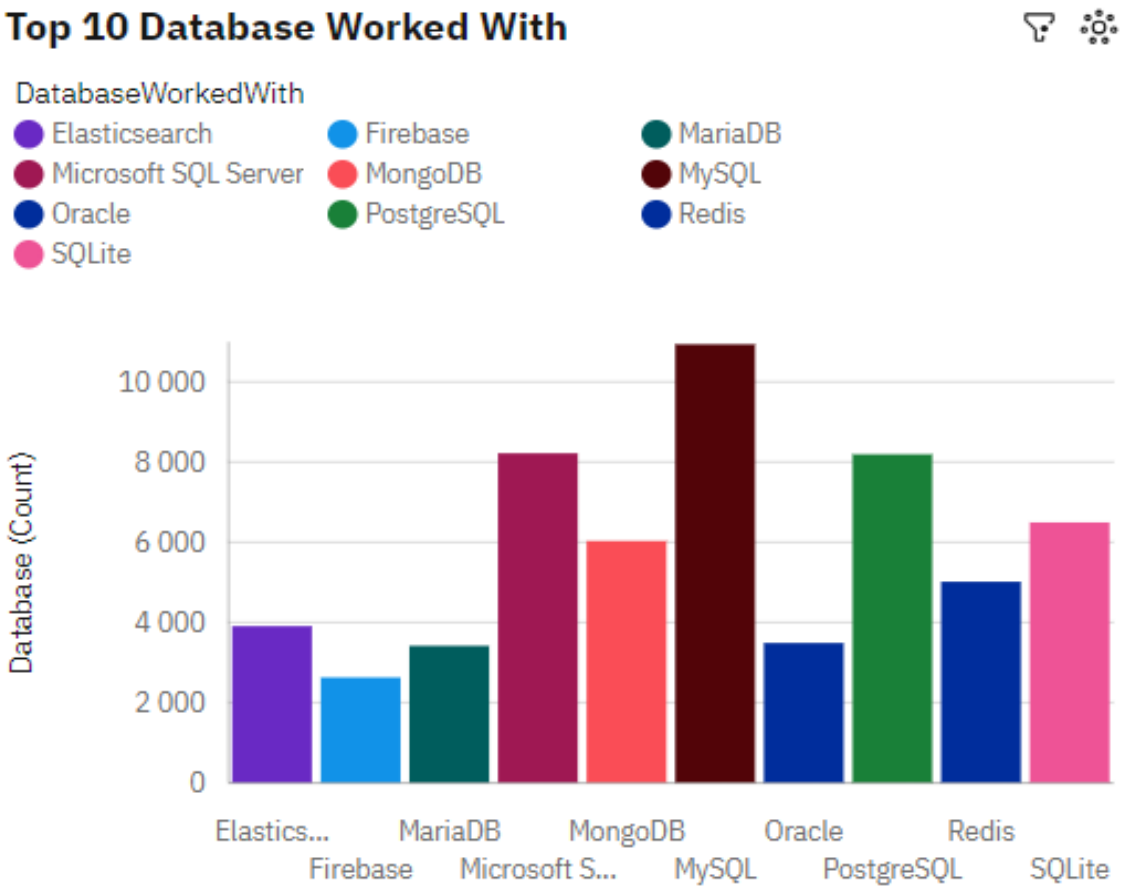
- **Top Languages**: JavaScript, HTML/CSS, and SQL are the most commonly used languages, followed by Python and Java.
- **High Interest**: Python, JavaScript, and TypeScript are most desired for future learning.
- **Emerging Technologies**: Languages like TypeScript and Go show significant interest for the future, offering opportunities in modern app development.

Implications

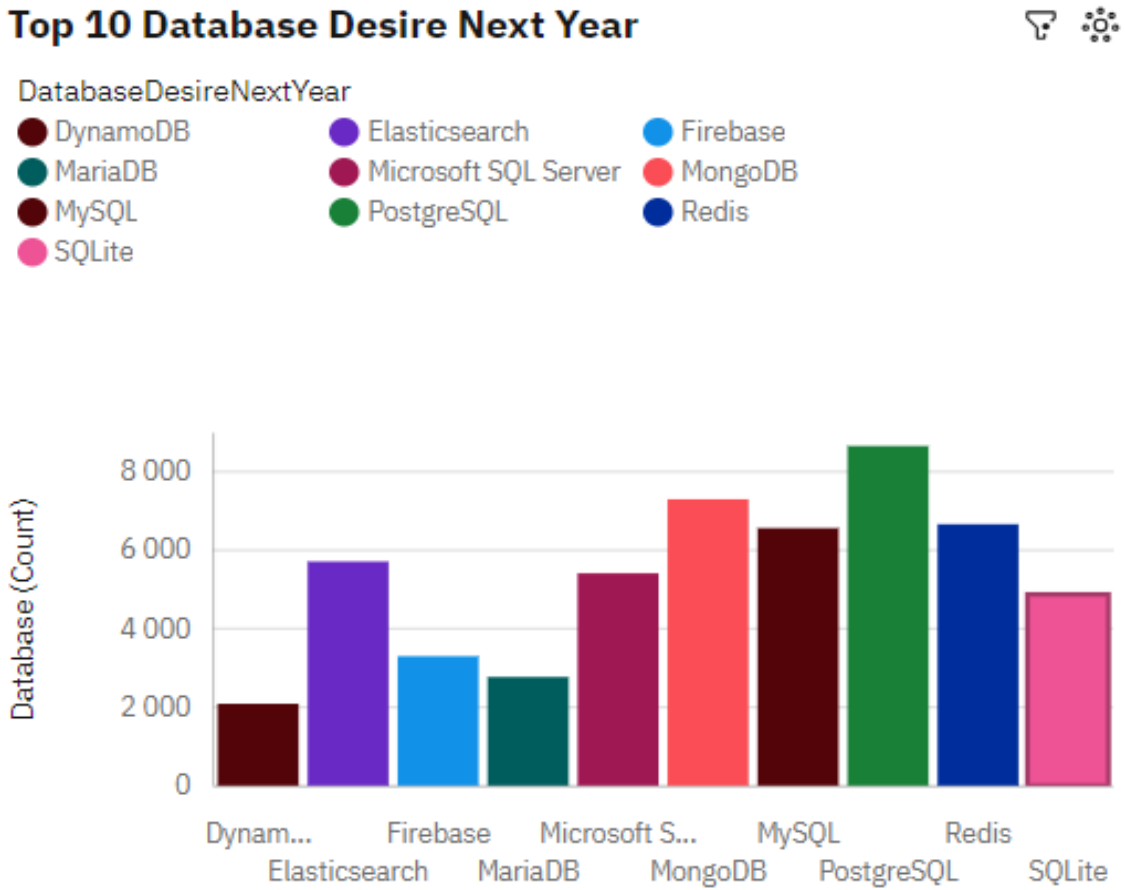
- **JavaScript Dominance**: JavaScript remains crucial for web development and front-end tasks.
- **Python's Rise**: Interest in Python indicates growing focus on data science, machine learning, and automation.
- **Skill Development**: Focusing on Python, TypeScript, and Go can enhance job prospects and align with future trends.

DATABASE TRENDS

Current Year



Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- **Top Databases**: MySQL, PostgreSQL, and Microsoft SQL Server are the most used databases.
- **Emerging Interest**: Elasticsearch, Redis, and Firebase are gaining attention.
- **Declining Interest**: Oracle and MariaDB show less interest for the future, suggesting a possible decline or shift to specialized roles.

Implications

- **Relational Database Dominance**: MySQL and PostgreSQL's popularity highlights the importance of relational databases for transactional applications.
- **Versatile Data Handling**: Redis and Firebase's rising interest indicate a shift towards databases that support real-time data processing and flexible data models.
- **Skill Development**: Focusing on PostgreSQL and MongoDB will align with both current and future trends.

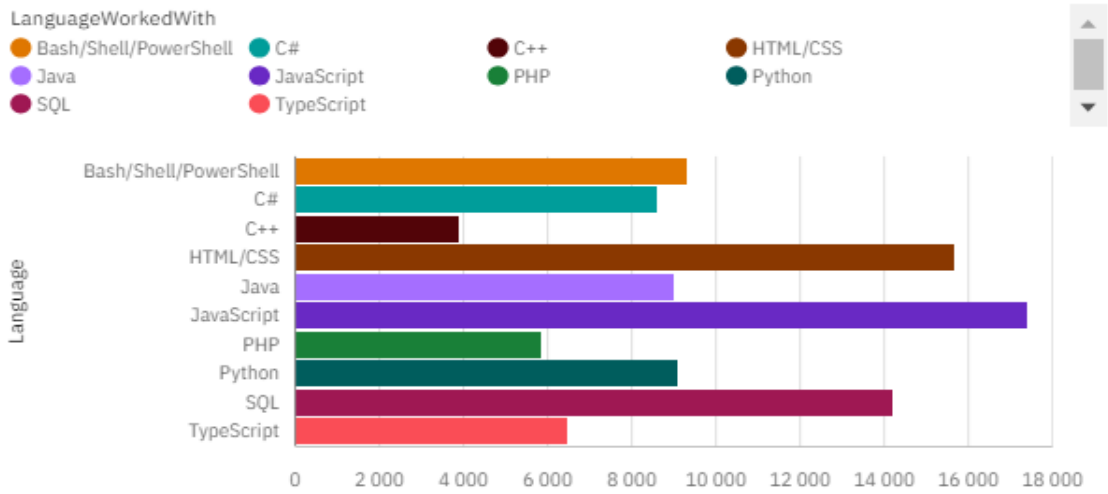
DASHBOARD

https://github.com/DariiaSira/IBM-Data-Analyst-Capstone-Project

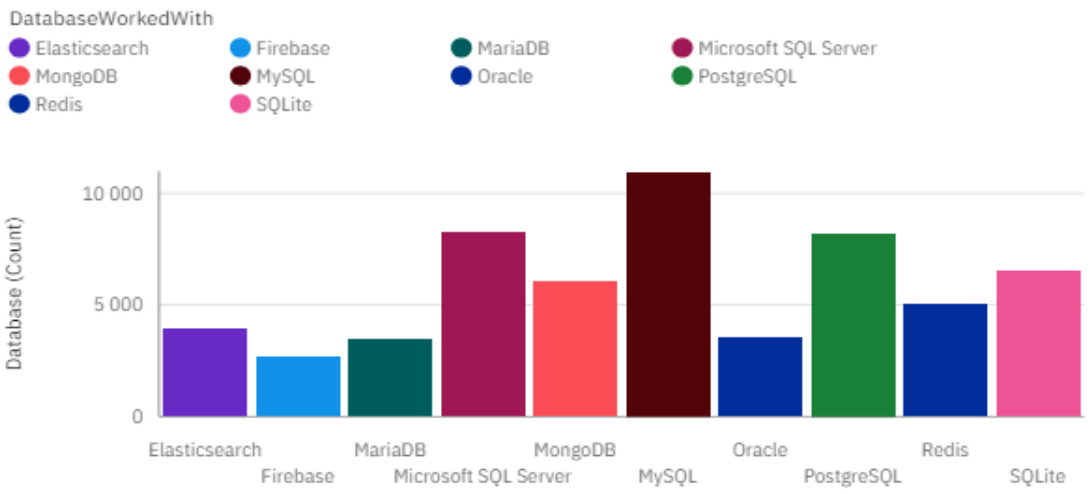
DASHBOARD TAB 1

Current Technology Usage

Top 10 Language Worked With



Top 10 Database Worked With



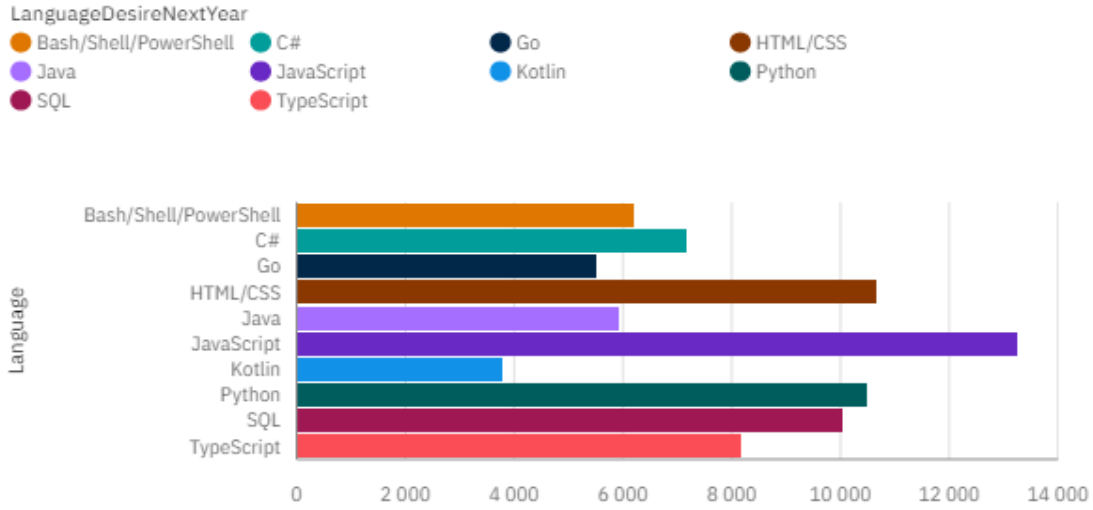
Platforms Worked With

Top 10 WebFrame Worked With

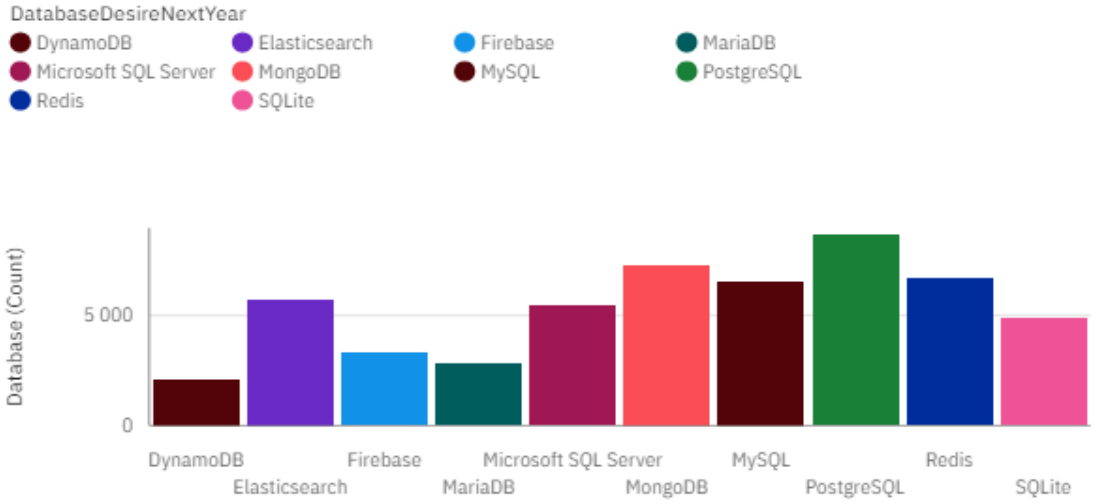
DASHBOARD TAB 2

Future Technology Trend

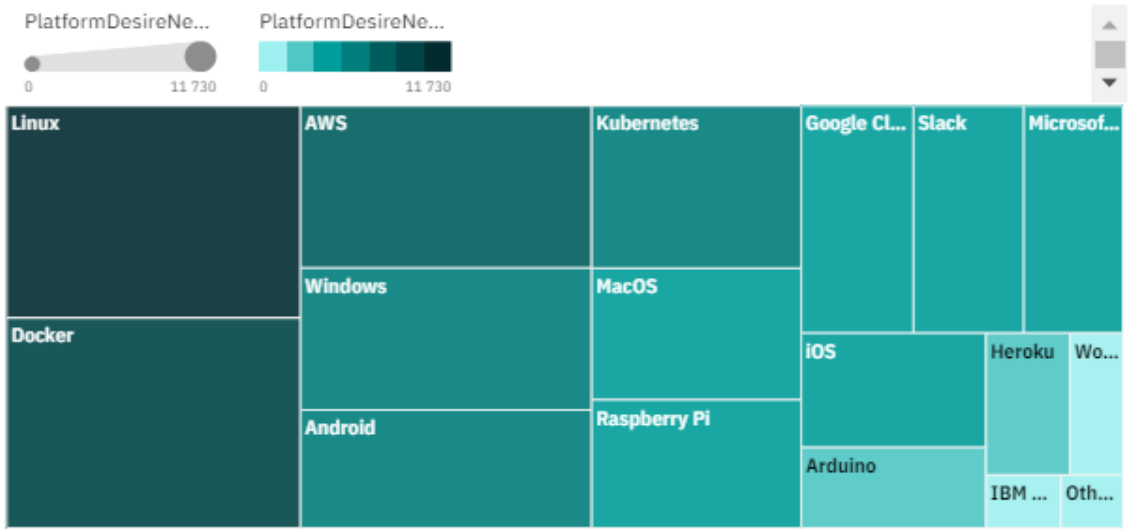
Top 10 Language Desire Next Year



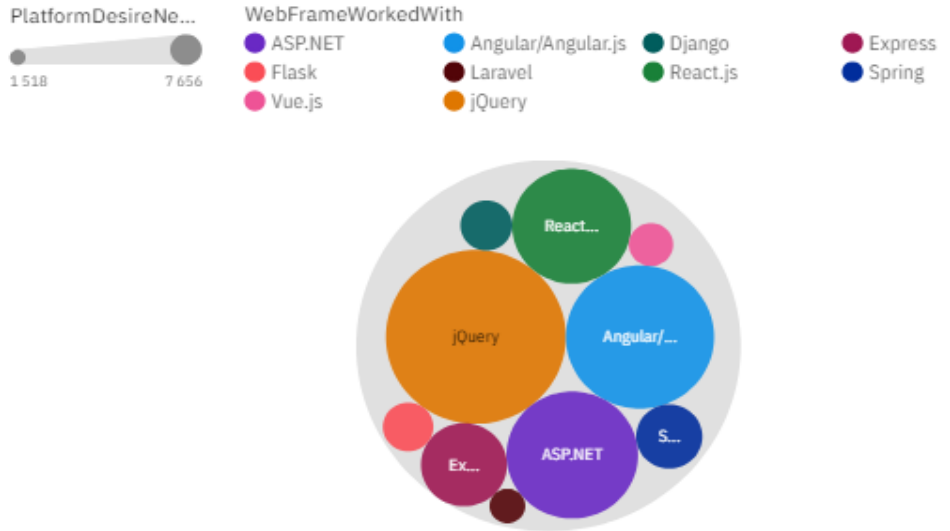
Top 10 Database Desire Next Year



Platforms Desire Next Year



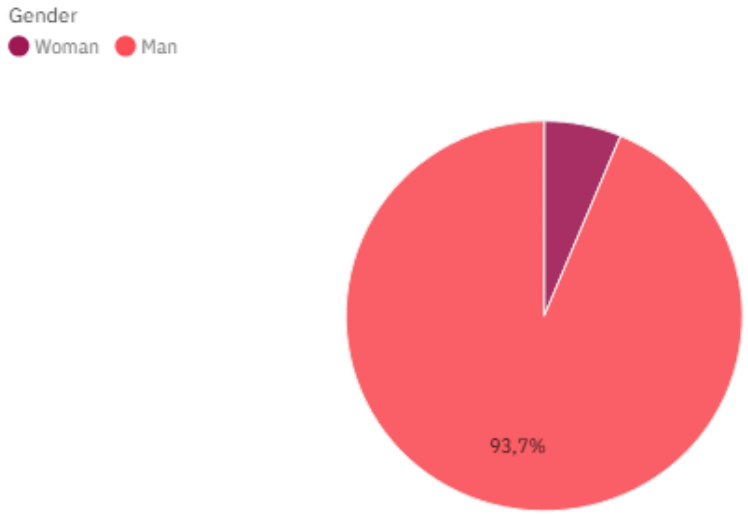
Top 10 WebFrame Desire Next Year



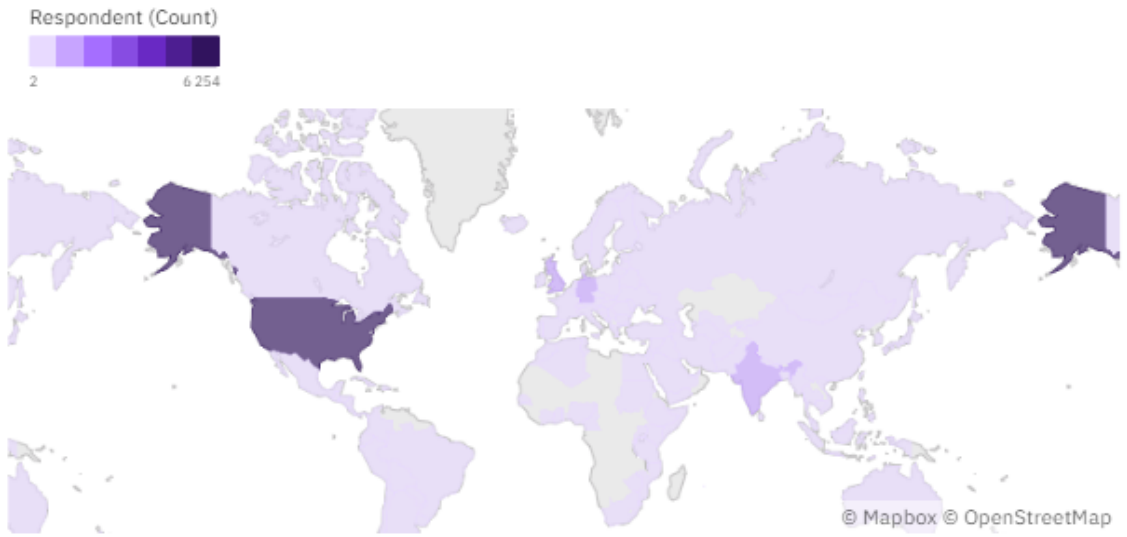
DASHBOARD TAB 3

Demographics

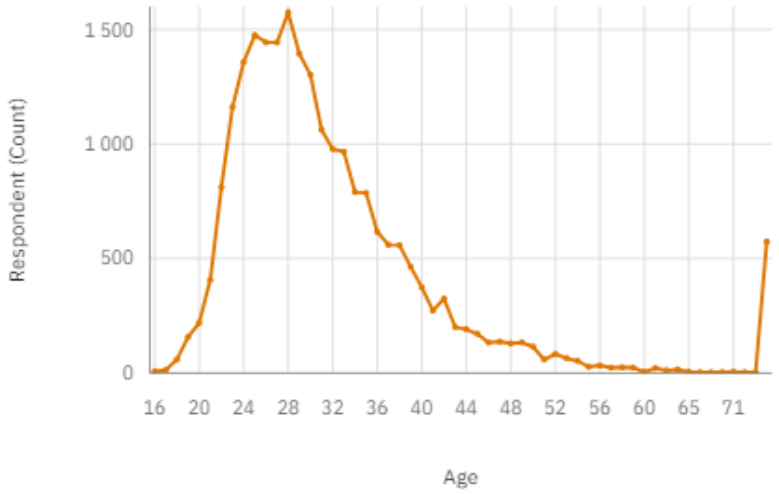
Respondent by Gender



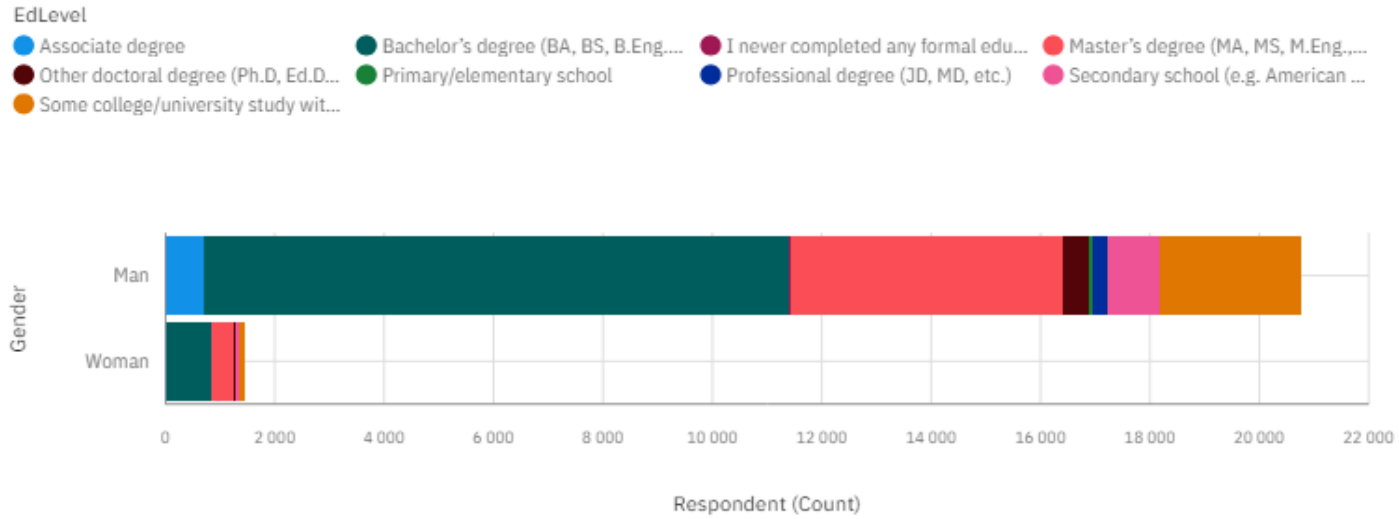
Respondent Count for Countries



Respondent Count by Age



Respondent Count by Gender



DISCUSSION

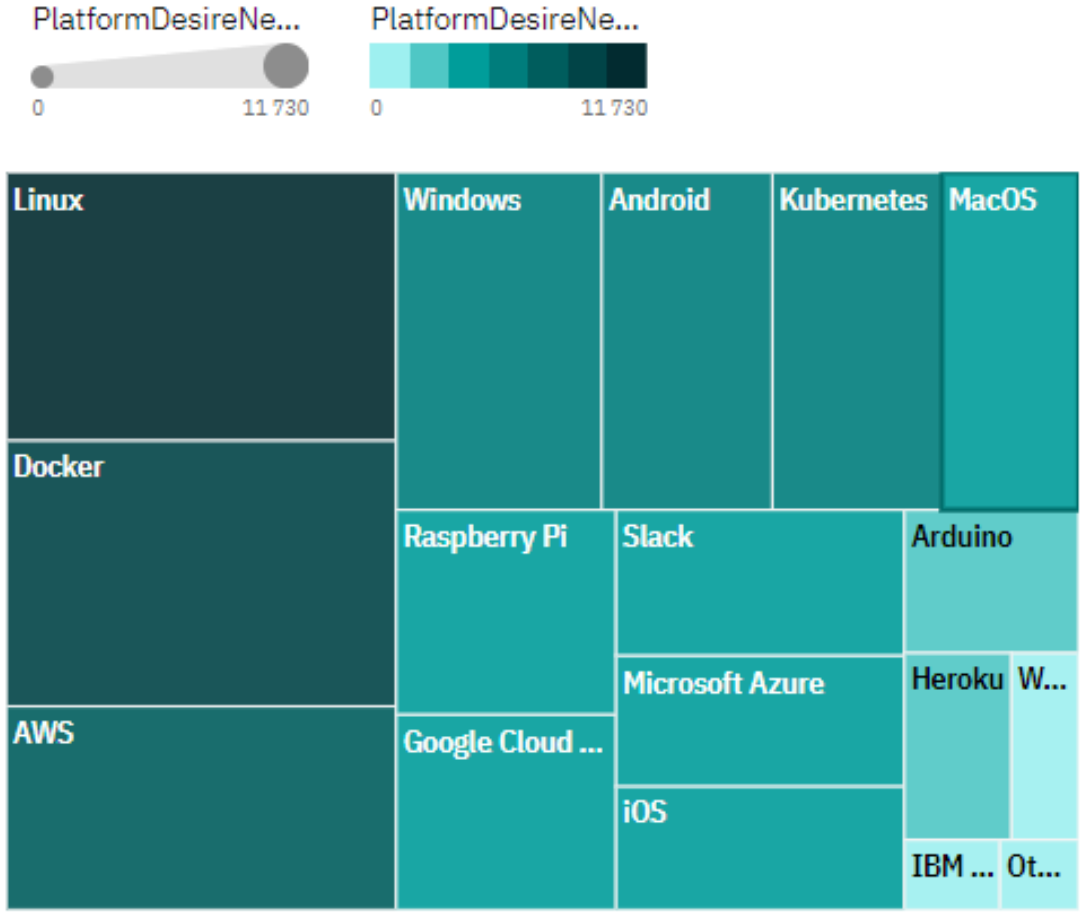
CONCLUSION

- Mastering key languages and tools (JavaScript, Python, MySQL, PostgreSQL) remains the foundation of a successful career in IT.
- Acquiring new competencies (TypeScript, Go, MongoDB, Elasticsearch) helps you adapt to current market requirements and prepare for future changes in the technological landscape.
- It is important not only to follow current trends, but also to actively explore potential technological shifts to remain competitive and relevant in the IT field.

APPENDIX

Platforms Worked With

Platforms Desire Next Year

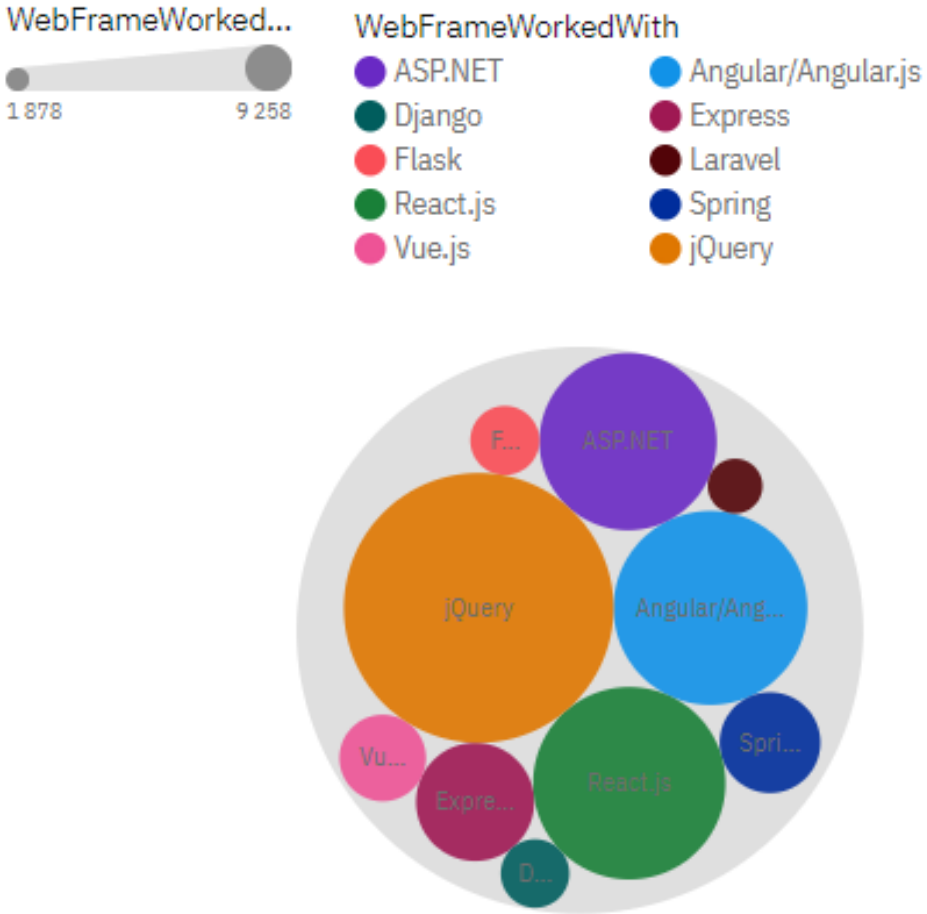


IBM Developer

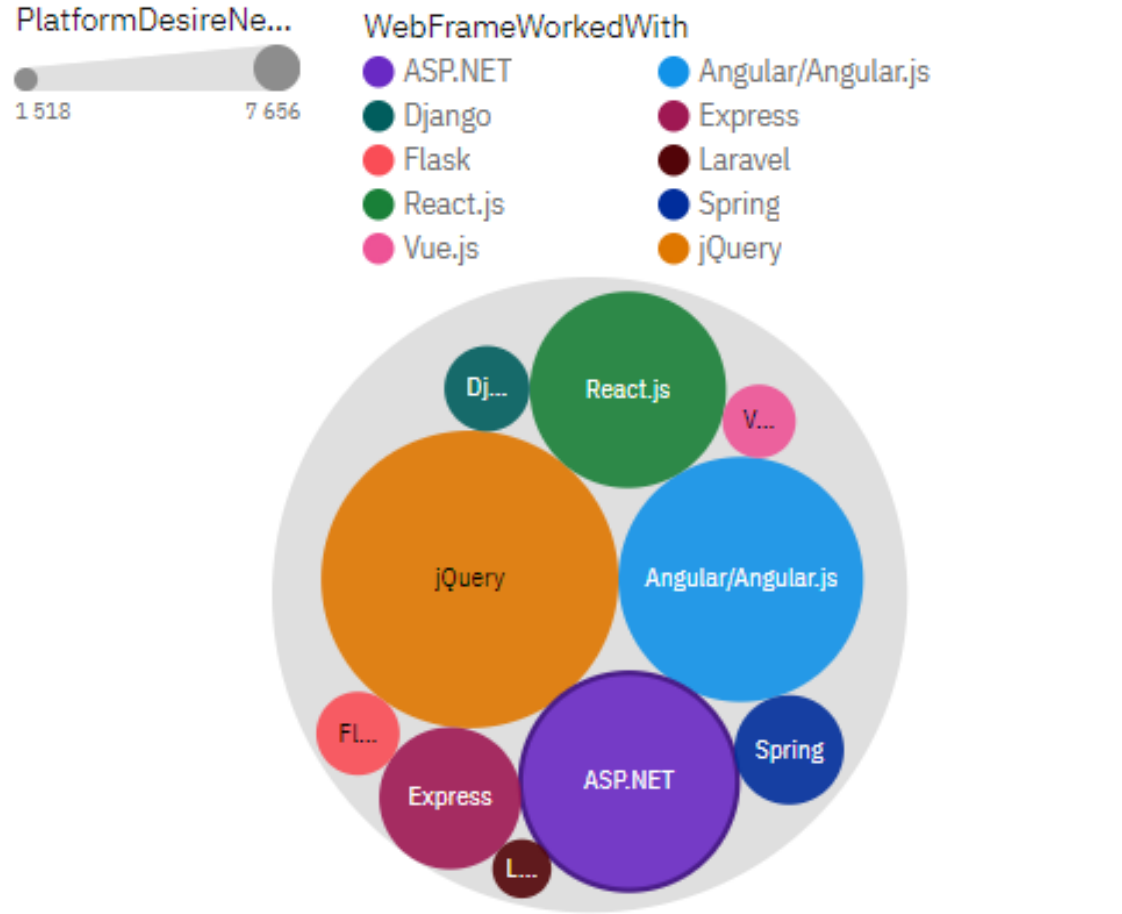
SKILLS NETWORK

APPENDIX

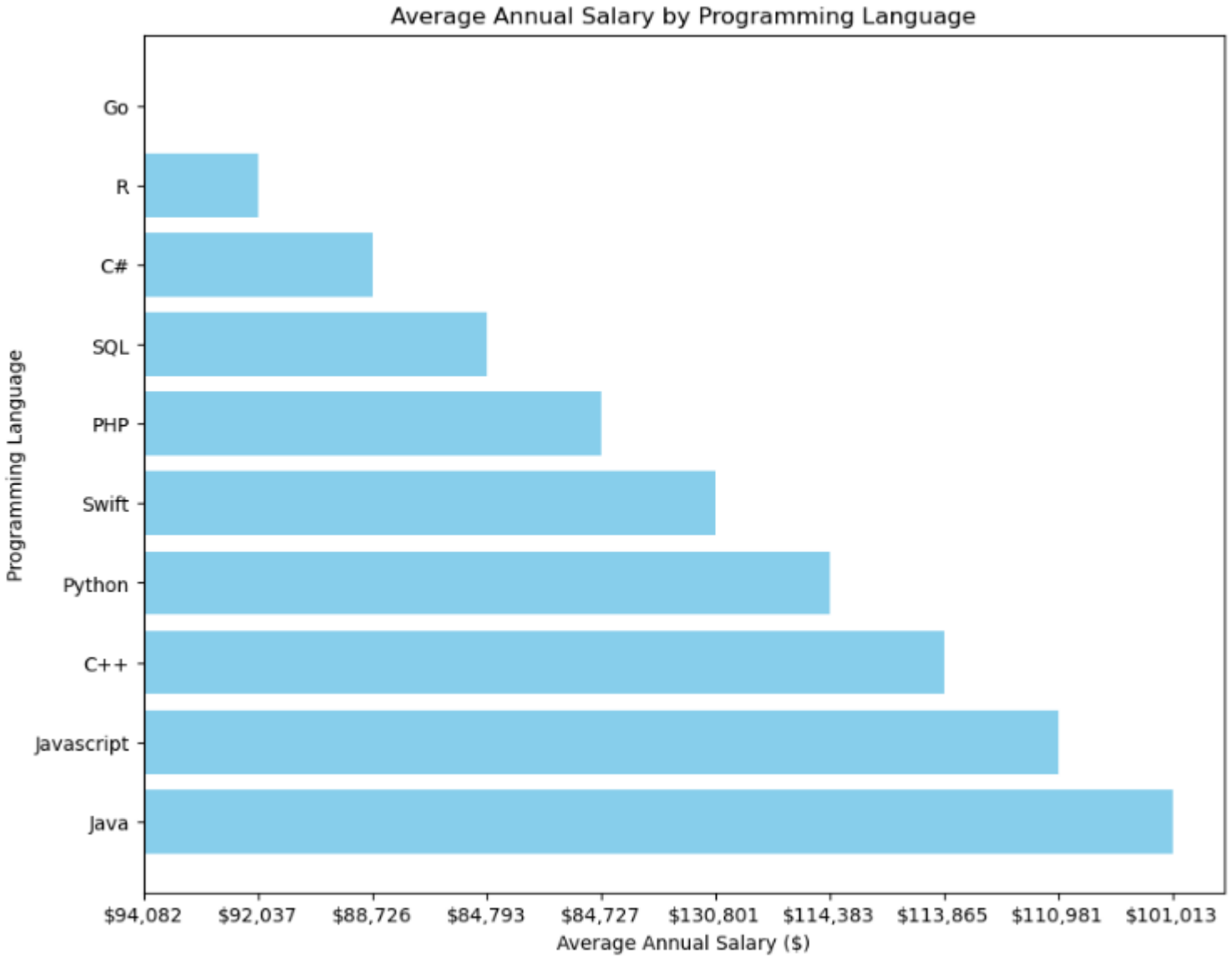
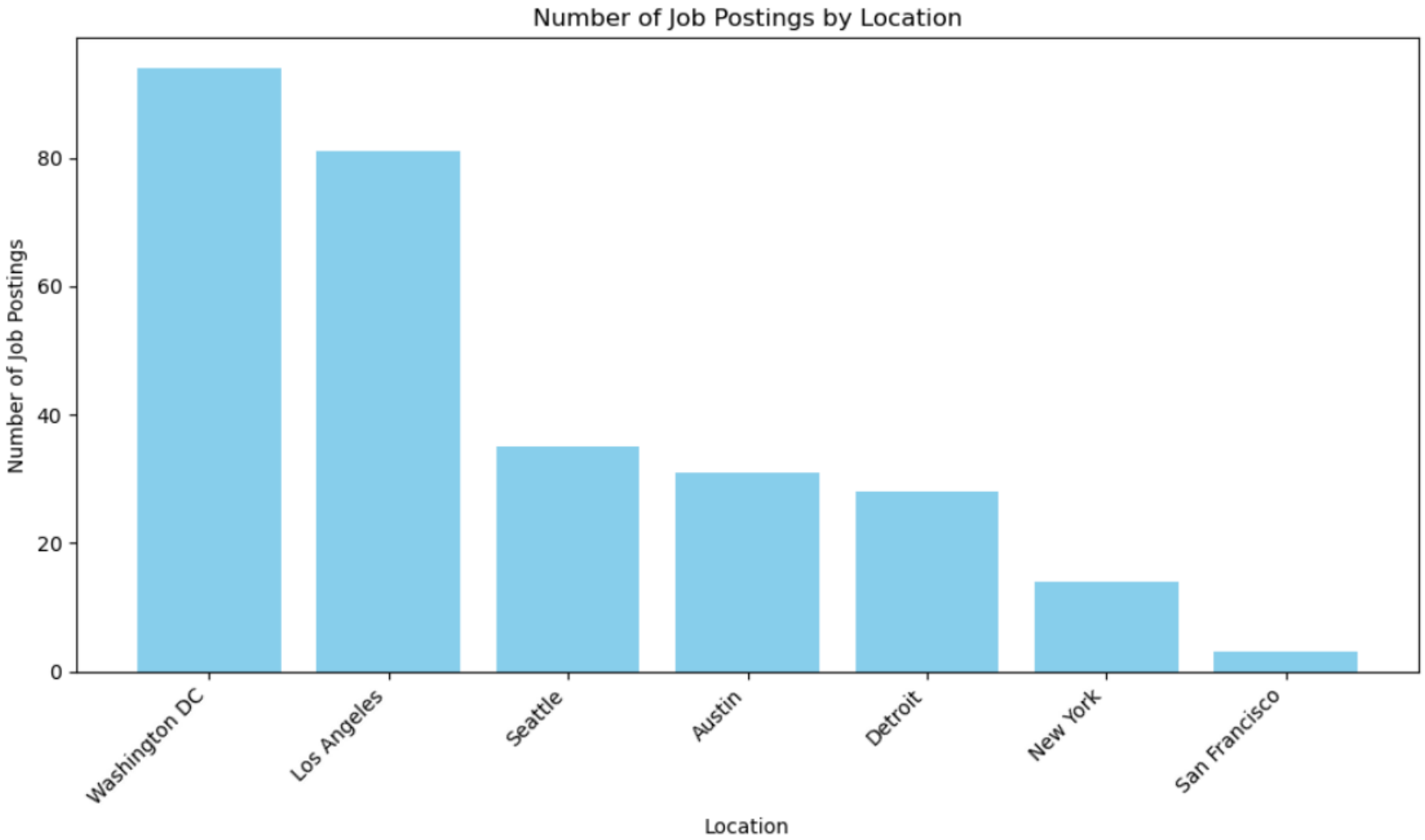
Top 10 WebFrame Worked With



Top 10 WebFrame Desire Next Year



JOB POSTINGS



POPULAR LANGUAGES