Global IT and business consulting services

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Data Analyst

OUTLINE

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- Methodology
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- Discussion
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- Conclusion
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EXECUTIVE SUMMARY

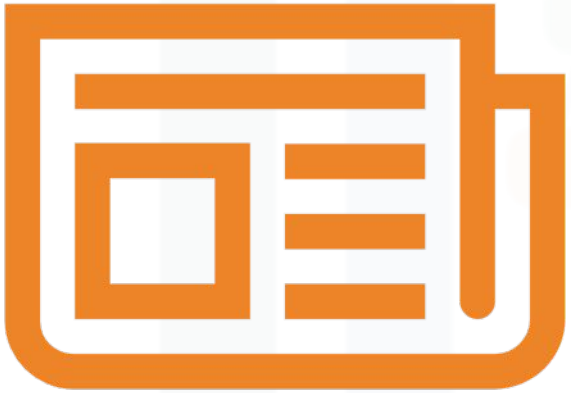
- This summary provides a comprehensive overview of the objectives, methodologies, key findings, and recommendations derived from the data analysis conducted by our team of experts.
- We believe that the insights generated from this analysis will empower the company to make informed decisions and drive strategic initiatives effectively.
- Objectives: To keep pace with changing technologies and remain competitive, IT consulting analysed data to help identify future skills requirements.

INTRODUCTION

The project will deliver the following key deliverables:

- **Comprehensive Data Analysis Report**: This report will provide a detailed analysis of the data collected, including trends, patterns, and correlations identified.
- **Actionable Insights**: Our analysis will uncover actionable insights and recommendations to guide strategic decision-making and optimize business processes.
- **Data Visualization**: Visual representations of key findings will be provided to enhance understanding and facilitate communication of complex data insights.

METHODOLOGY



1: Data Collection

- Collecting and exploring Data Using APIs and web scraping.

2: Data Wrangling

- Finding and determining missing values
- Finding and removing duplicates
- Normalizing Data

3: Exploratory Data Analysis

- Distribution, Outliers, Correlation

4: Data Visualization

- Visualizing Distribution of Data

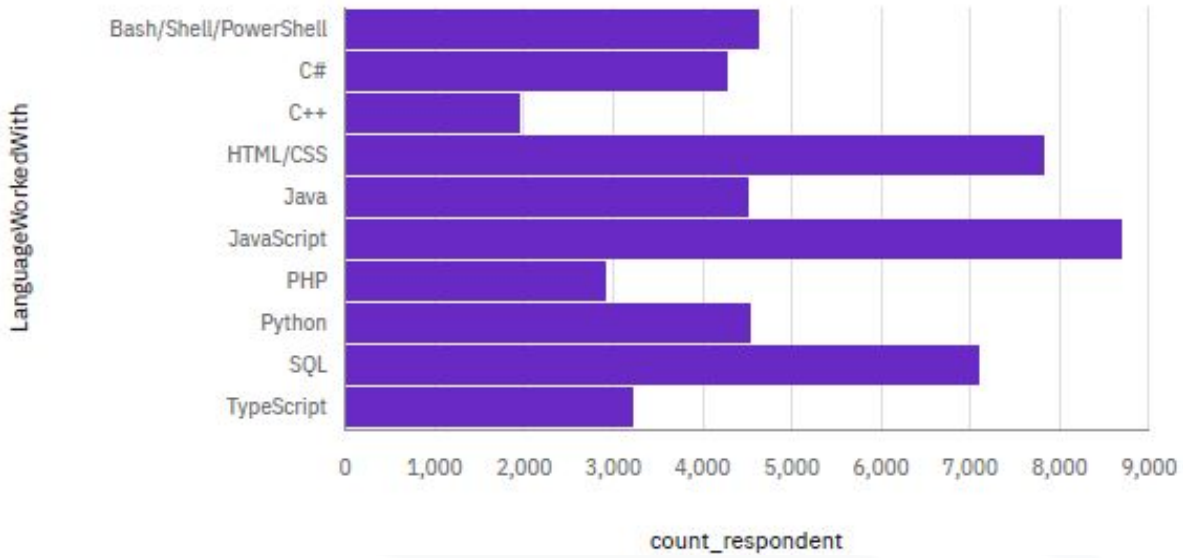
RESULTS

PROGRAMMING LANGUAGE TRENDS

Current Year

A. Current Technology Usage

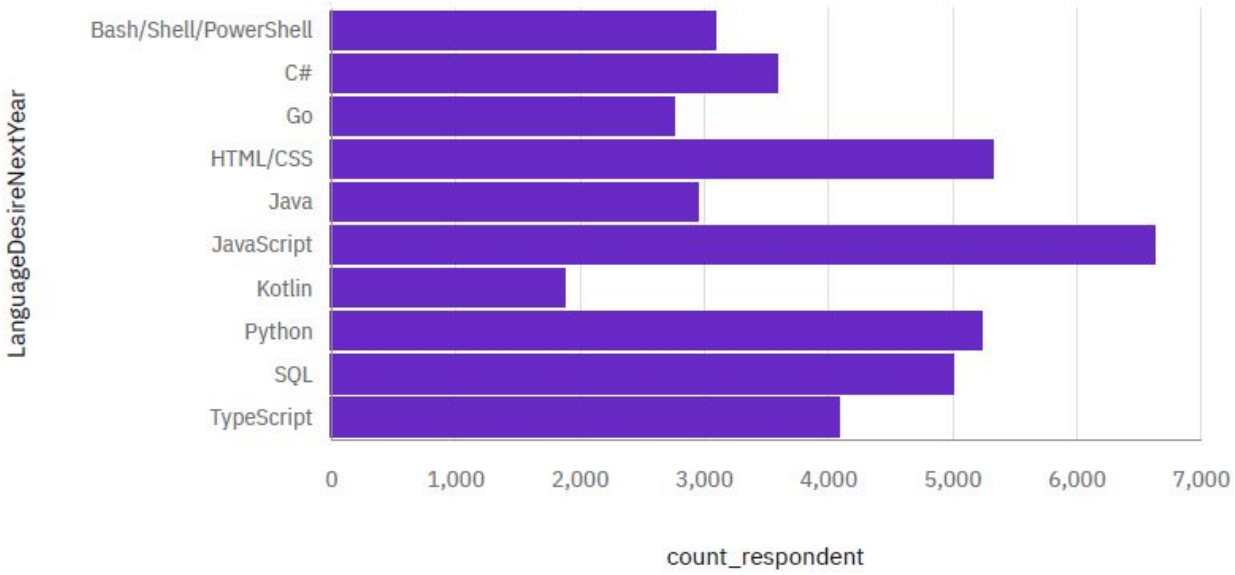
Top 10 languages people have worked with



Next Year

B. Future Technology Trends

Top 10 Languages Desired for the Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

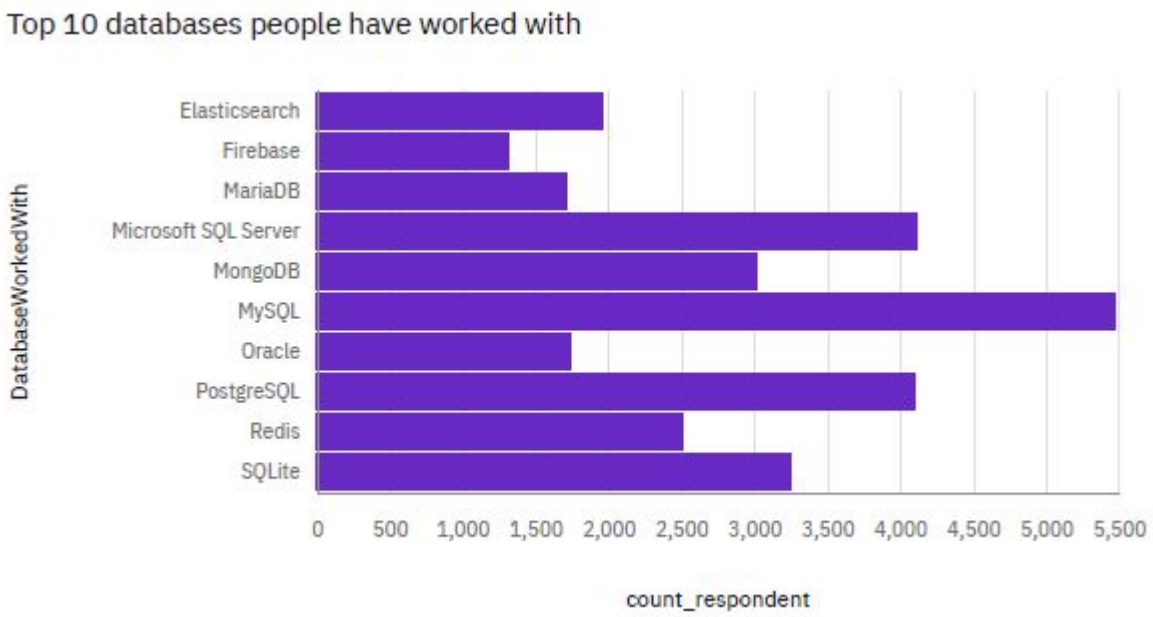
- Go will be a trend next year instead of C++.
- PHP on the 7 position will change to Kotlin in the following year.
- The numbers of users of HTML, Java, JavaScript, SQL will decrease next year.
- Python and TypeScript languages will increase.

Implications

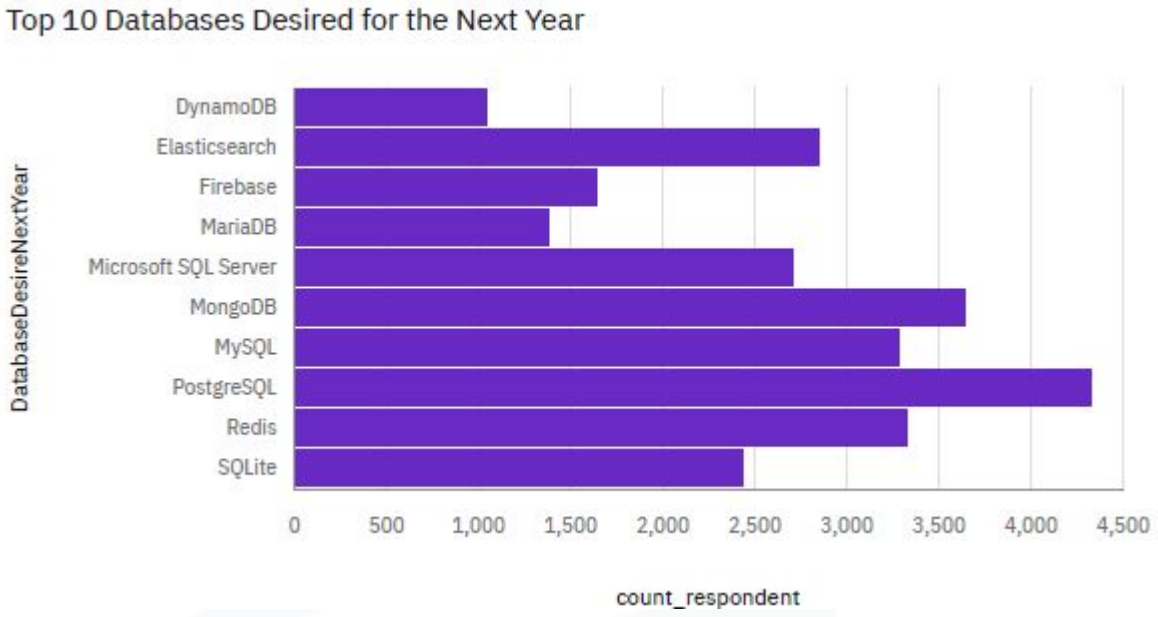
- GO is a simple language for learning programming, easier than C++.
- PHP, more complex and requires extra care to avoid null-related issues. Kotlin's null safeties Make it easier for developers to write safer code.
- Is possible to do same things based on HTML, Java, SQL utilizing different libraries in Python.

DATABASE TRENDS

Current Year



Next Year



DATABASE TRENDS-FINDINGS & IMPLICATIONS

Findings

- Elasticsearch move to 2 places and DynamoDB going to 1.
- Firebased is going to cover the MariaDB place.
- Oracle is going to over in the next year.

Implications

- You can use DynamoDB as a durable store, Elasticsearch to extend its search capabilities, and Dynamo Streams to join them together.
- Oracle cons: Potential integration challenges with existing IT infrastructure, Dependence on two different platforms' operational standards, Possible hidden costs and complex pricing structures.

DASHBOARD

https://github.com/legaiotte/IBM_Data_Analyst

DASHBOARD TAB 1

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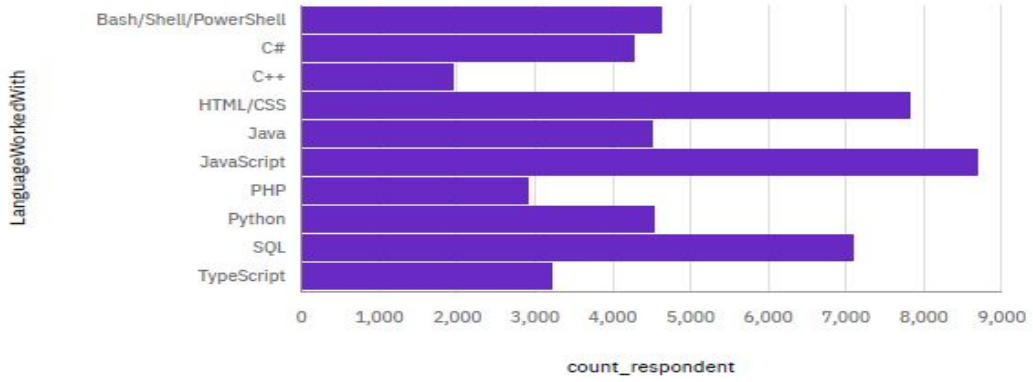
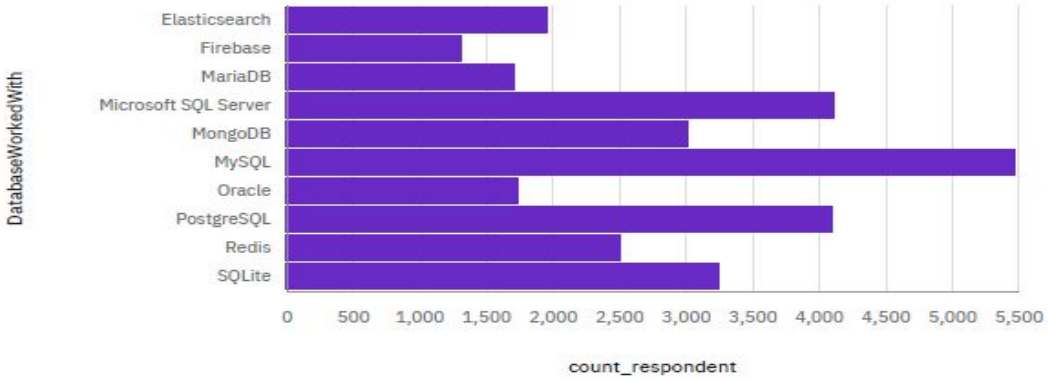
A. Current Technology Usage_cognosAnalysis

A. Current Technology Usage

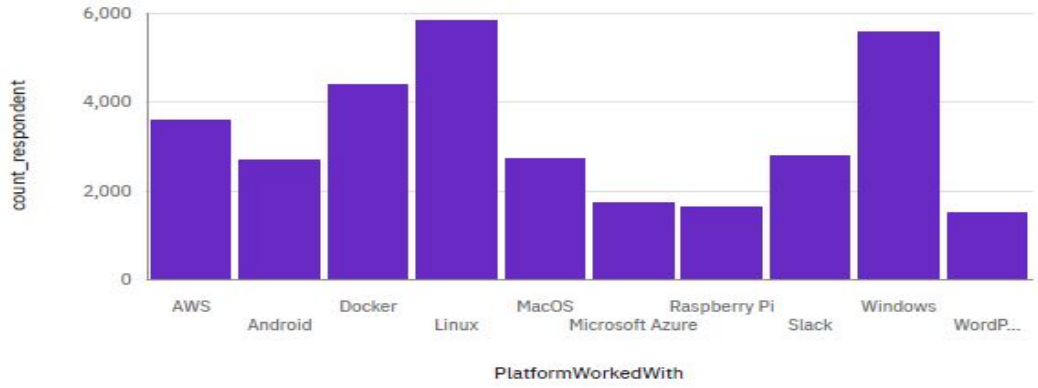
Top 10 languages people have worked with



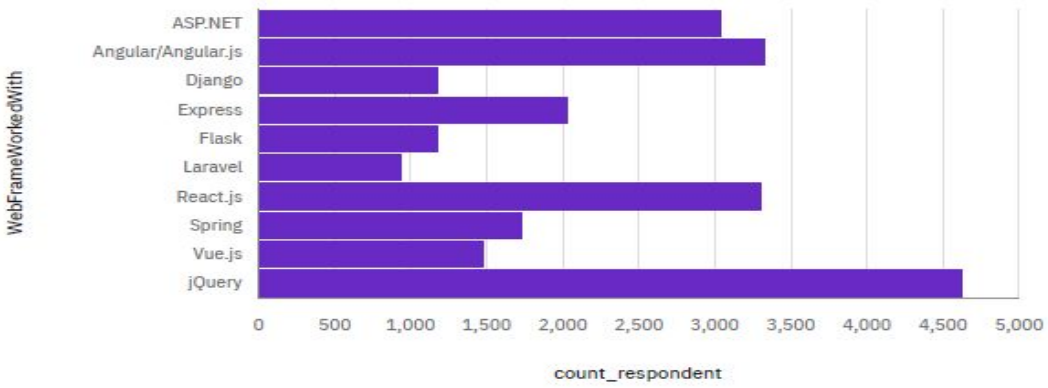
Top 10 databases people have worked with



Different platforms people have worked



Top 10 web frameworks people have worked with



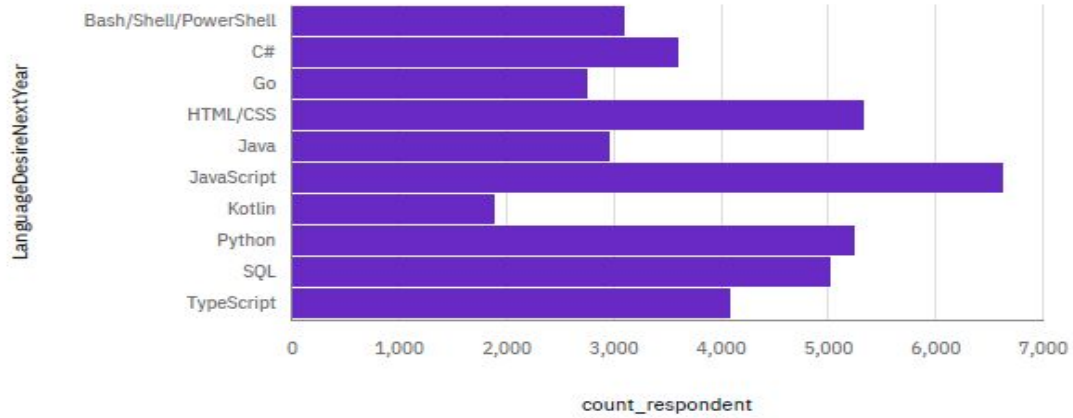
IBM Developer

SKILLS NETWORK

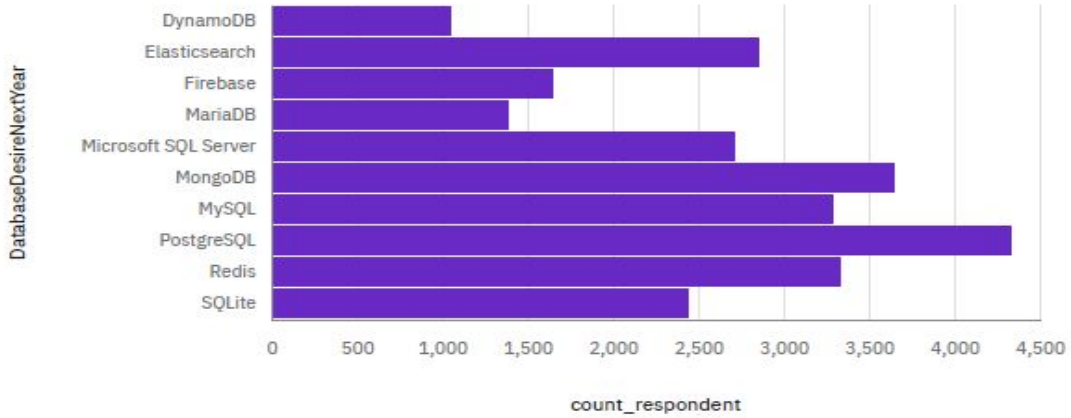
DASHBOARD TAB 2

B. Future Technology Trends

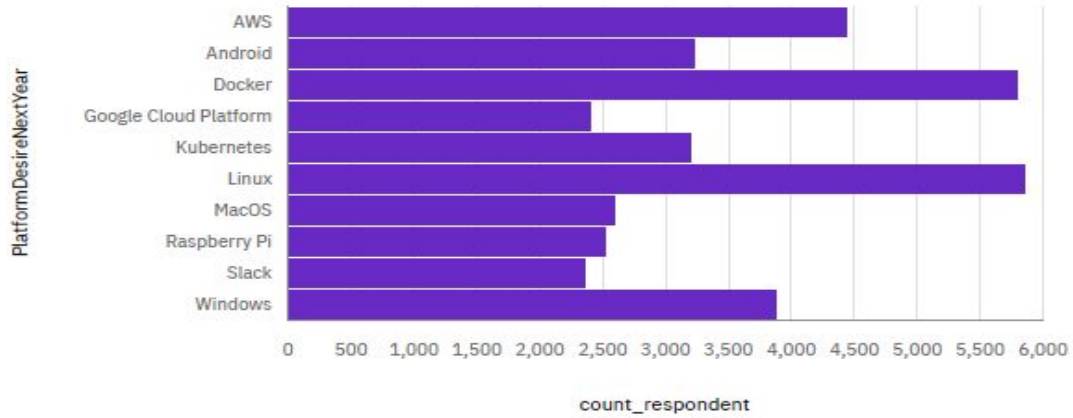
Top 10 Languages Desired for the Next Year



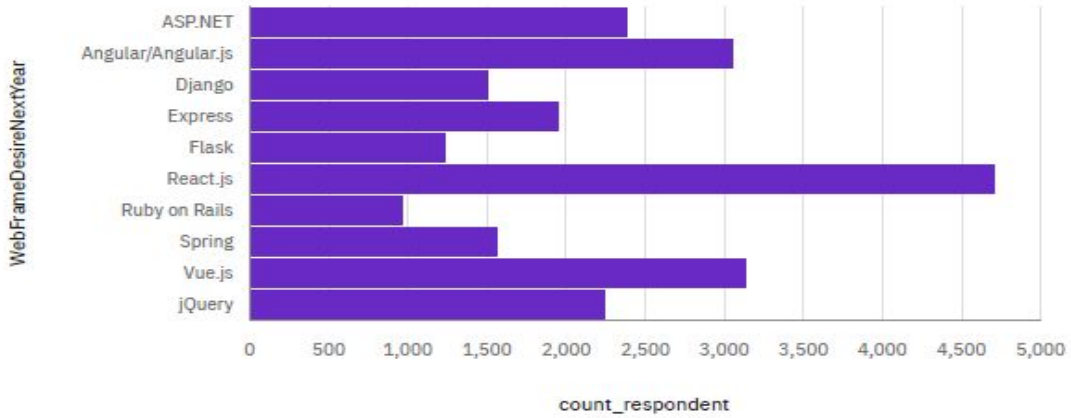
Top 10 Databases Desired for the Next Year



Desired Platforms for the Next Year



Top 10 Web Frameworks Desired for the Next Year



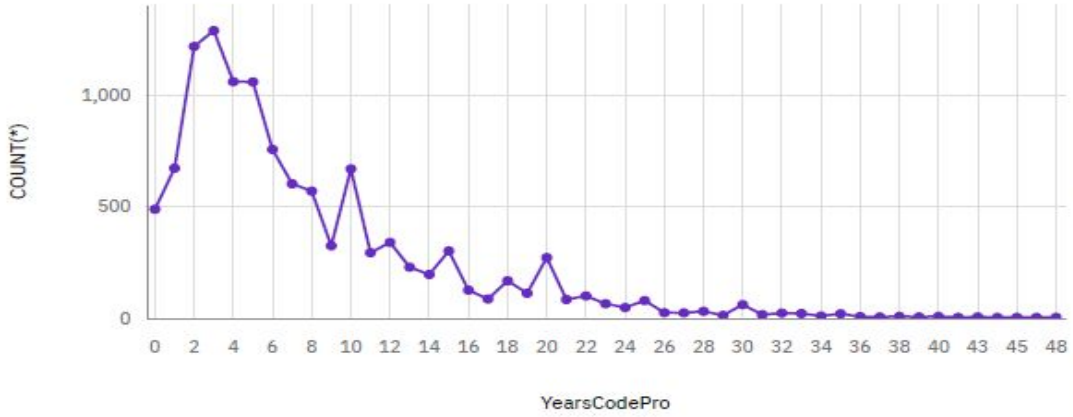
IBM Developer

SKILLS NETWORK

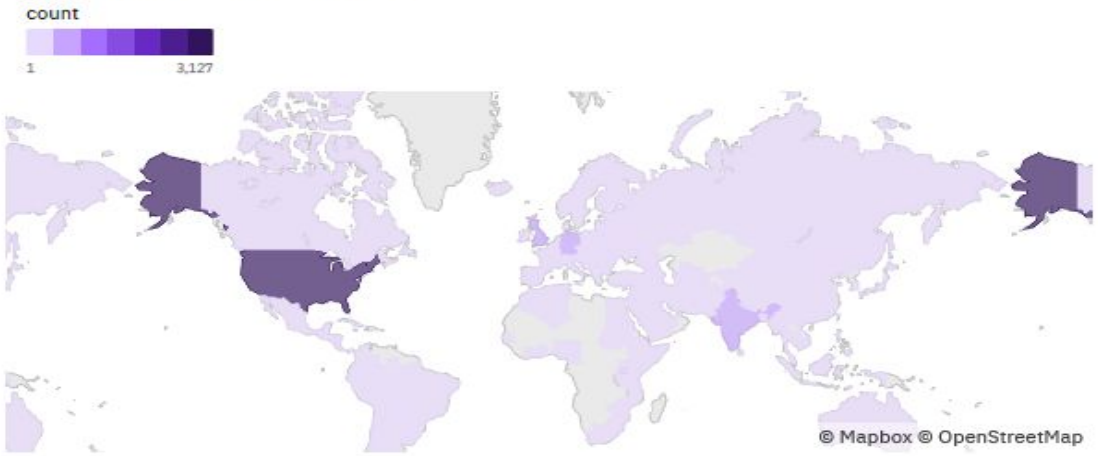
DASHBOARD TAB 3

C. Demographics

Respondent Classified by Work Experience

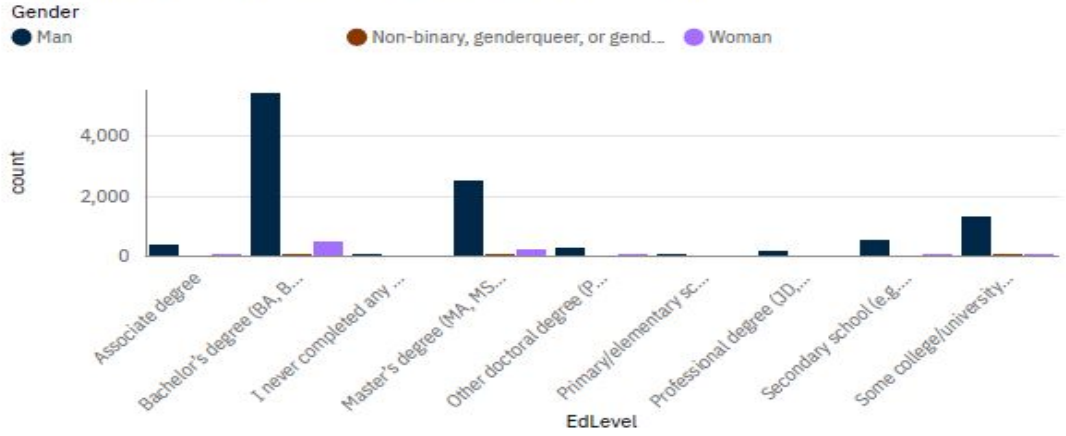


Respondent Count for Countries



Respondent Count by Age

Respondent Count by Gender and Classified by Education Level



DISCUSSION

What are the top programming languages in demand?

PowerShell, C#, C++, HTML, Java, JavaScript, PHP, Python, SQL, TypeScript.

What are the top database skills in demand?

Elasticsearch, Firebase, MariaDB, Microsoft SQL Server, MangoDB, MySQL, Oracle, PostgreeSQL, Redis, SQLite.

What are the popular IDEs?

Visual Studio Code, Visual Studio, Notepad++, Intelij, Vim

OVERALL FINDINGS & IMPLICATIONS

Findings

The most part of the correspondents are men, having between 2–4 years of experience and with age between 22–30 years old.

For the current technologies, the most usage between Top10 are:

- Language: JavaScript
- Database: MySQL
- Framework: jQuery

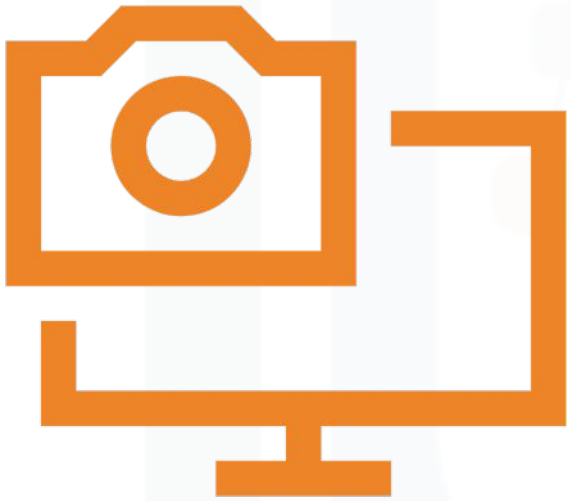
For the next year, the most desired technology between the Top10 will be:

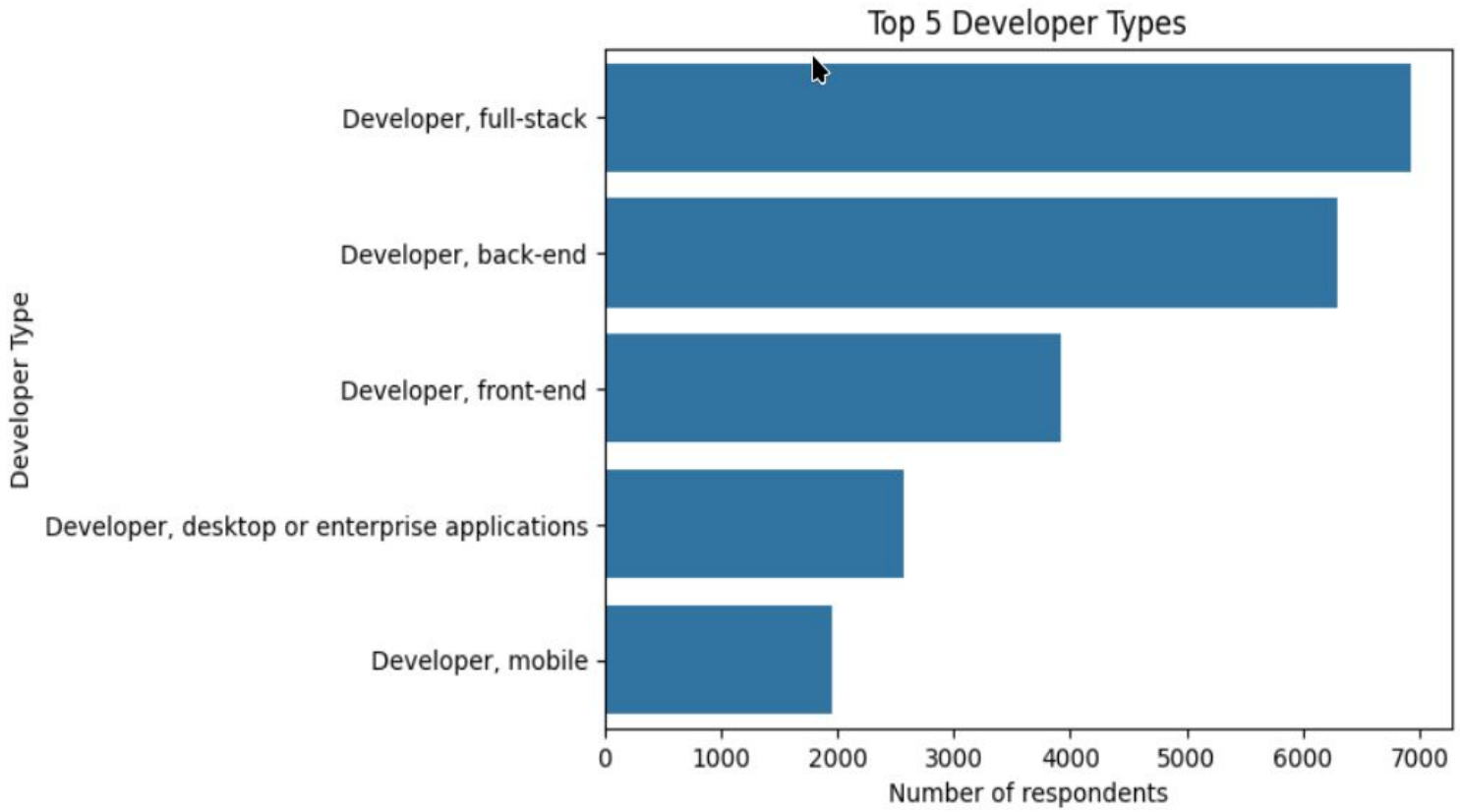
- Language: JavaScript.
- Database: PostgreSQL.
- Platform: Linux.
- Framework: React js.

CONCLUSION

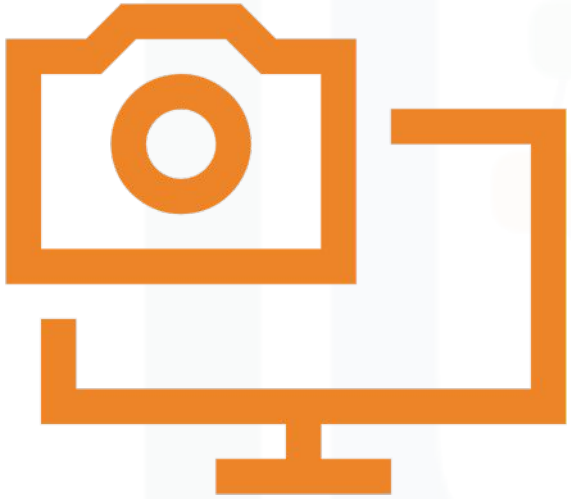
- Despite JavaScript being the most language people worked with more than 8000 people, in the following year JavaScript will decrease to 6500 and other languages will prosper.
- Something similar happens with MySQL database and jQuery framework.

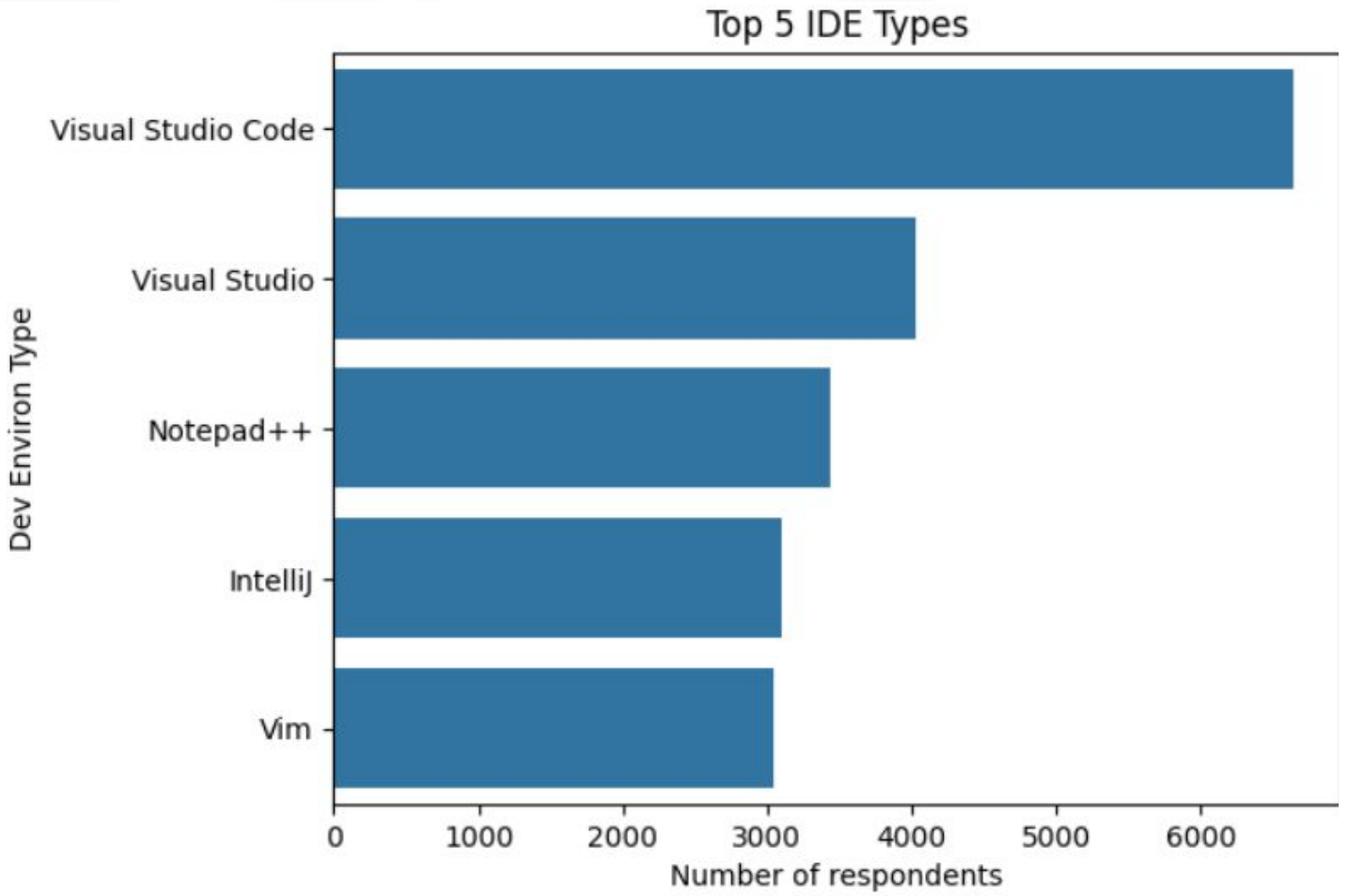
APPENDIX



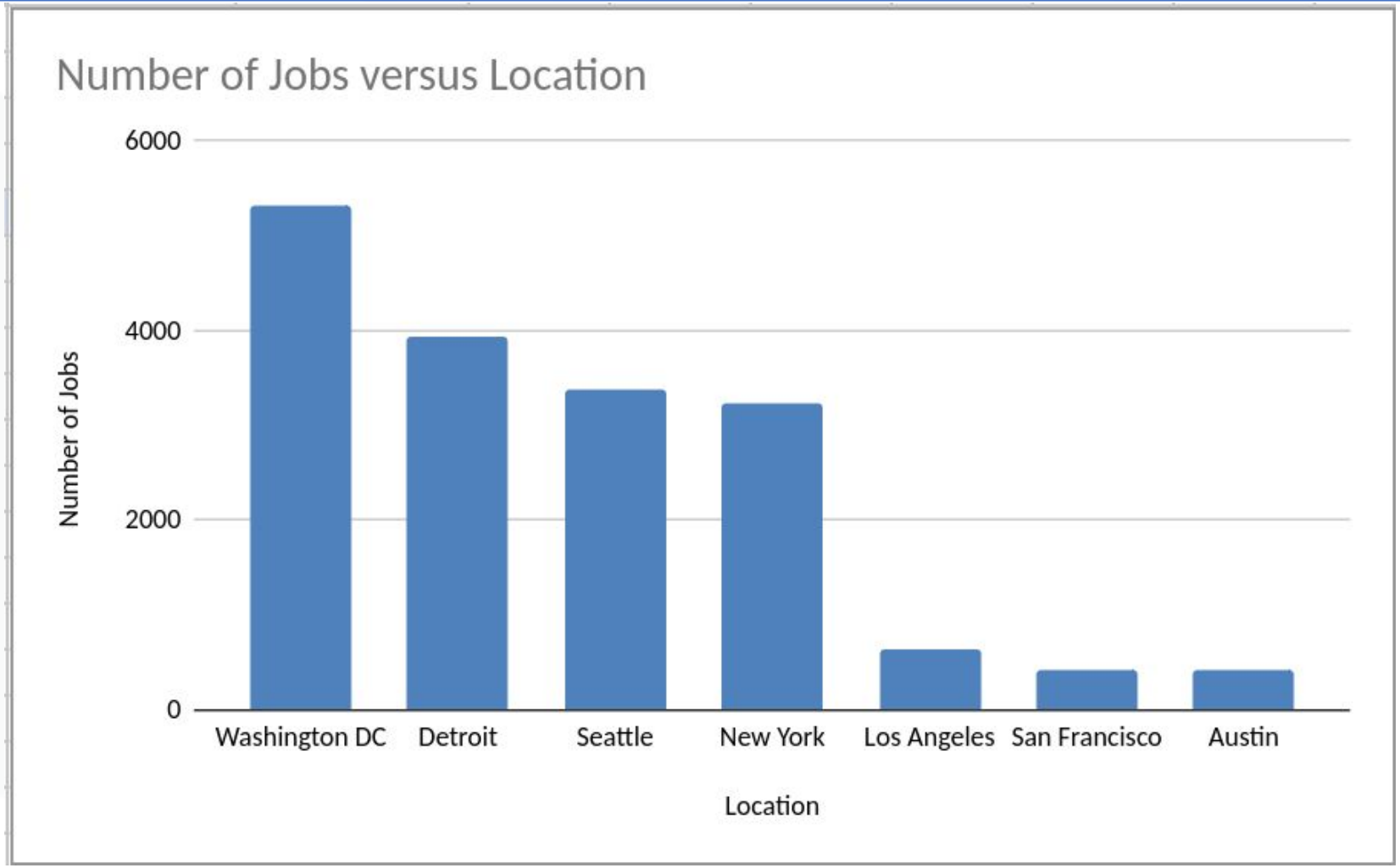
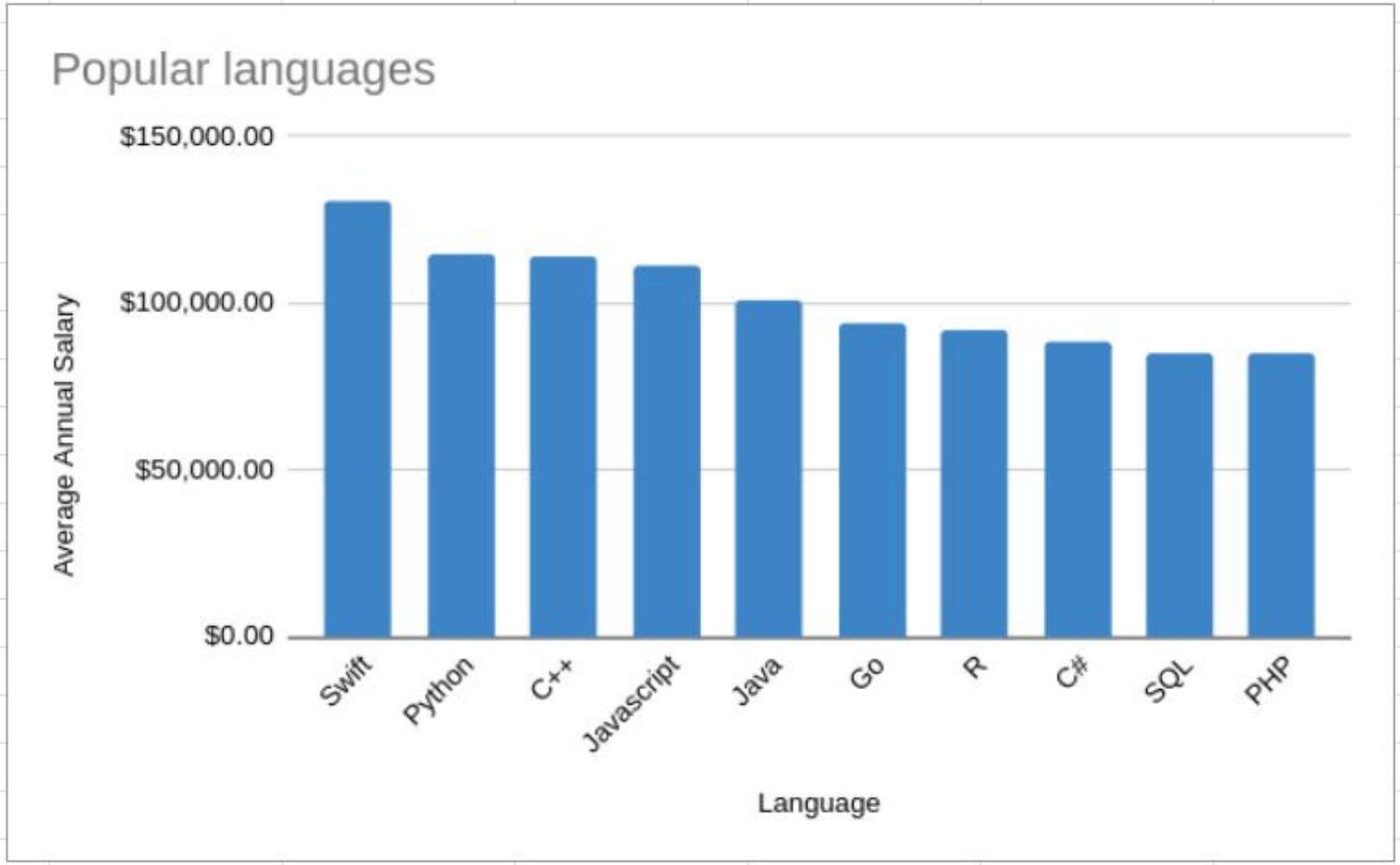

Top 5 Developer Types
Developer Type
Developer, full-stack
Developer, back-end
Developer, front-end
Developer, desktop or enterprise applications
Developer, mobile
0
1000
2000
3000
4000
5000
6000
7000
Number of respondents

APPENDIX




Top 5 IDE Types
Visual Studio Code
Visual Studio
Notepad++
IntelliJ
Vim
Dev Environ Type
0
1000
2000
3000
4000
5000
6000
Number of respondents

JOB POSTINGS



POPULAR LANGUAGES