Current and Future Trend of Programming

Hadi Heydarizadeh Shali

08/09/2024

OUTLINE

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

IBM Developer

SKILLS NETWORK

EXECUTIVE SUMMARY

Goals:

Determining the trend of programming languages, databases, and platforms worldwide
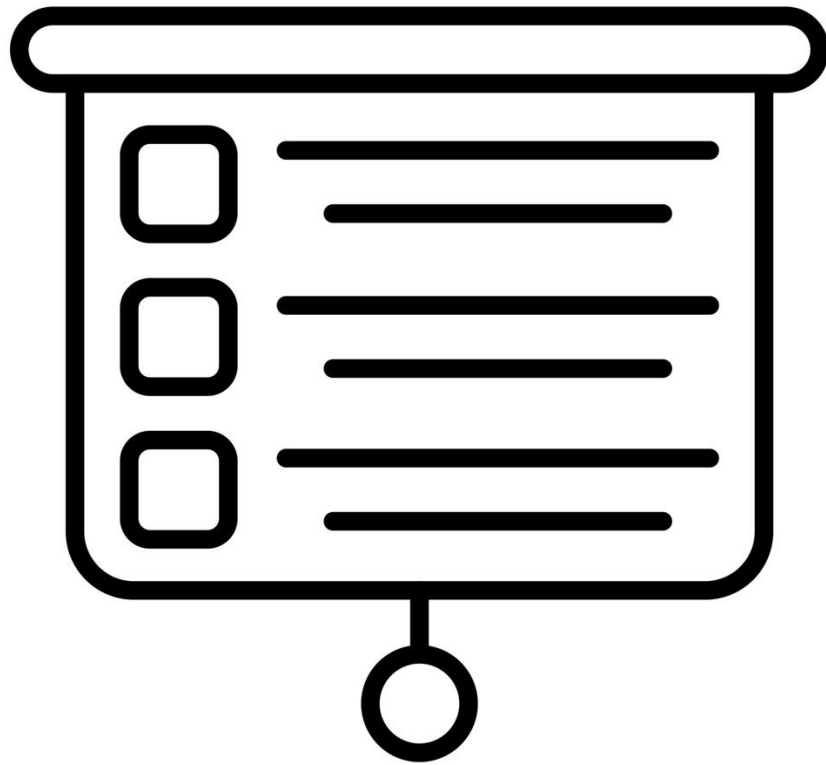
Dataset:

Subset of Stack Overflow survey in 2019

Areas:

- Current Technology Usage
- Future Technology Trends
- Demographics

shutterstock.com · 709248262

IBM Developer

SKILLS NETWORK

INTRODUCTION

- Skills needed and will be trend:
  - The most popular languages
  - Working with Data bases
  - And Platforms
- Sources of information and data:
  - Annual income of jobs posting
  - Surveys data
- Take away point:
  - Data analyst should be up to date and know what's going on based on the trends

METHODOLOGY

- **Data Sources:**
- **Stack Overflow**:
  - Survey data focusing on trends in technology usage and preferences.
- **Survey Data Technologies:**
- **Current Trends**:
  - Analyzing data on languages, databases, platforms, and web frameworks currently in use.
- **Future Trends**:
  - Examining interest in learning new technologies, including languages, databases, platforms, and web frameworks.
- **Demographics Data:**
- **Attributes**:
  - Gender (Man and Woman), Age, Formal Education Level, and Country of Residence.
- **Data Filtering:**
- **Cleaning Process**:
  - Removal of empty or null entries.
- **Filtering Criteria**:
  - Data filtered to include only responses from individuals identifying as either Man or Woman.

Results :

Trends in Programming Language

• Python language is growing so fast and is the leading language for the future

Trends in Databases

• PostgreSQL is the leading and trend data base for the future

Platforms and Web frames

• Windows was the most usage platform but nowadays Linux is the leading platform

Age and Education

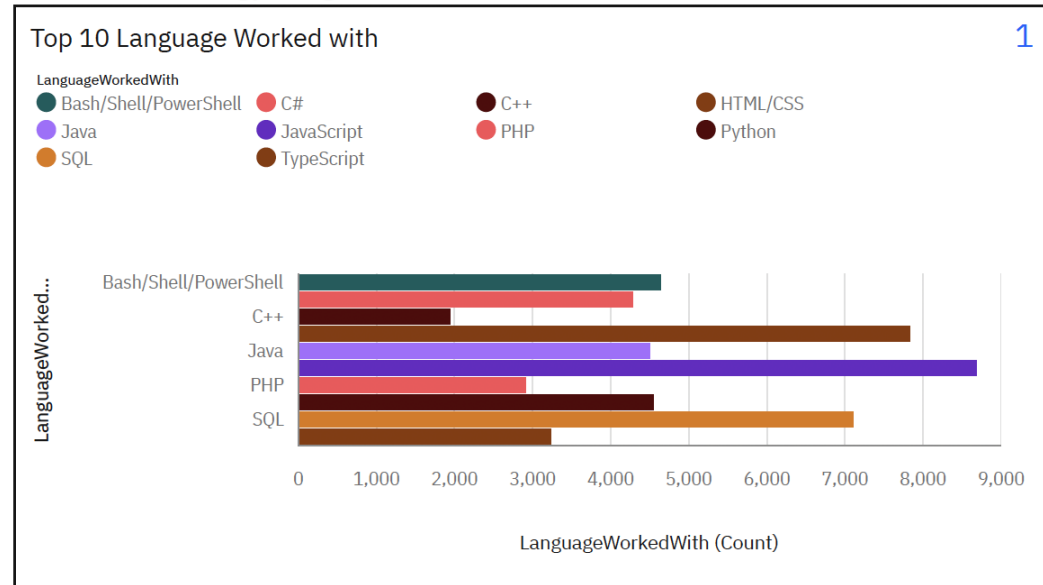• Age limits of 25-40 years and college students are the most users

Location

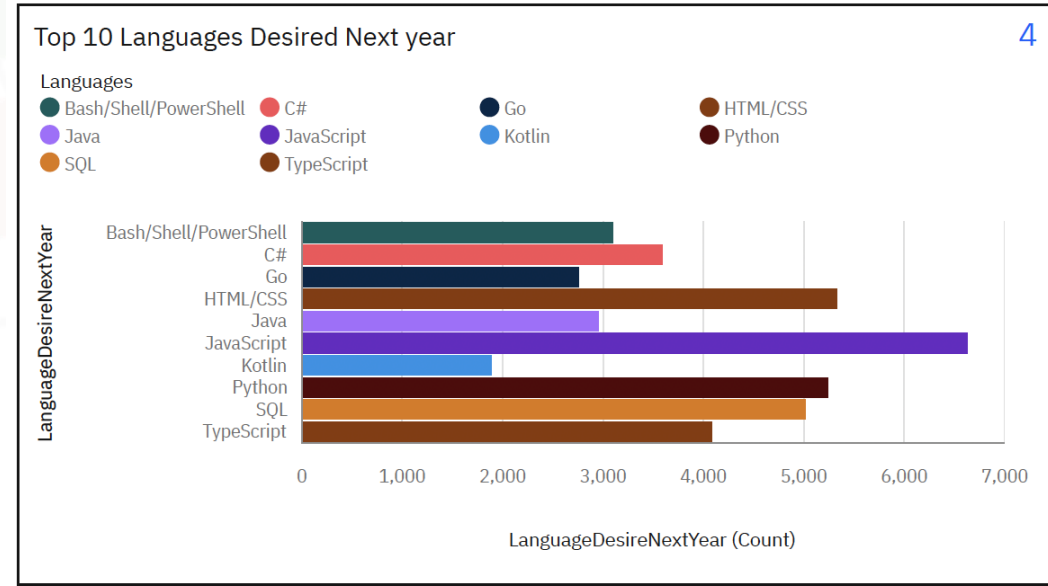• China is the leading country

PROGRAMMING LANGUAGE TRENDS

Current Year

Next Year

PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- By the year of this survey, JavaScript was the leading language used by the user
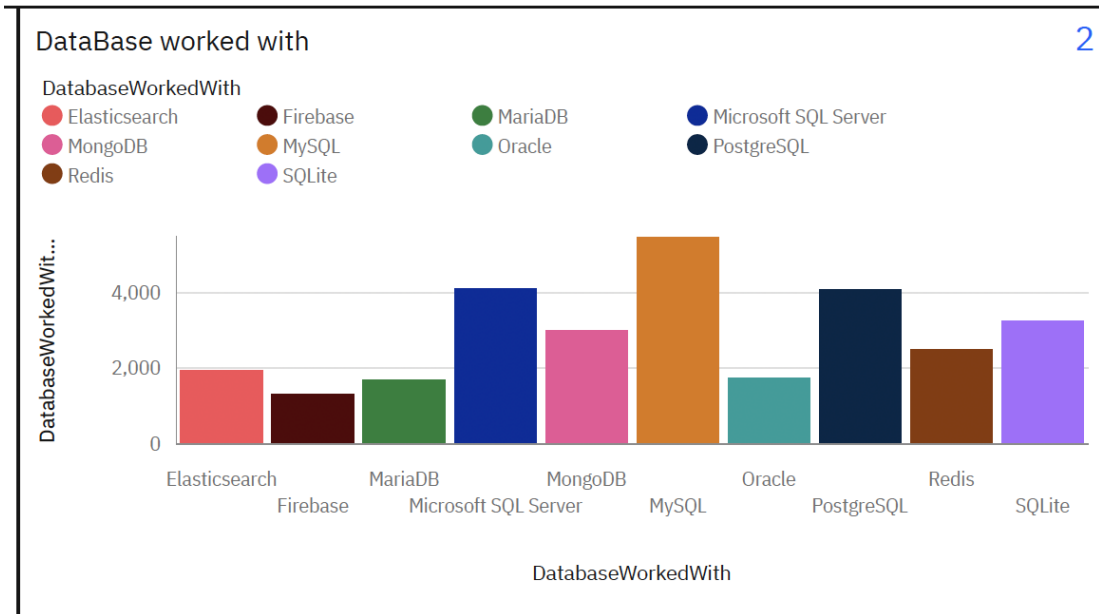
- HTML/CSS and SQL were the next two in a row

Implications

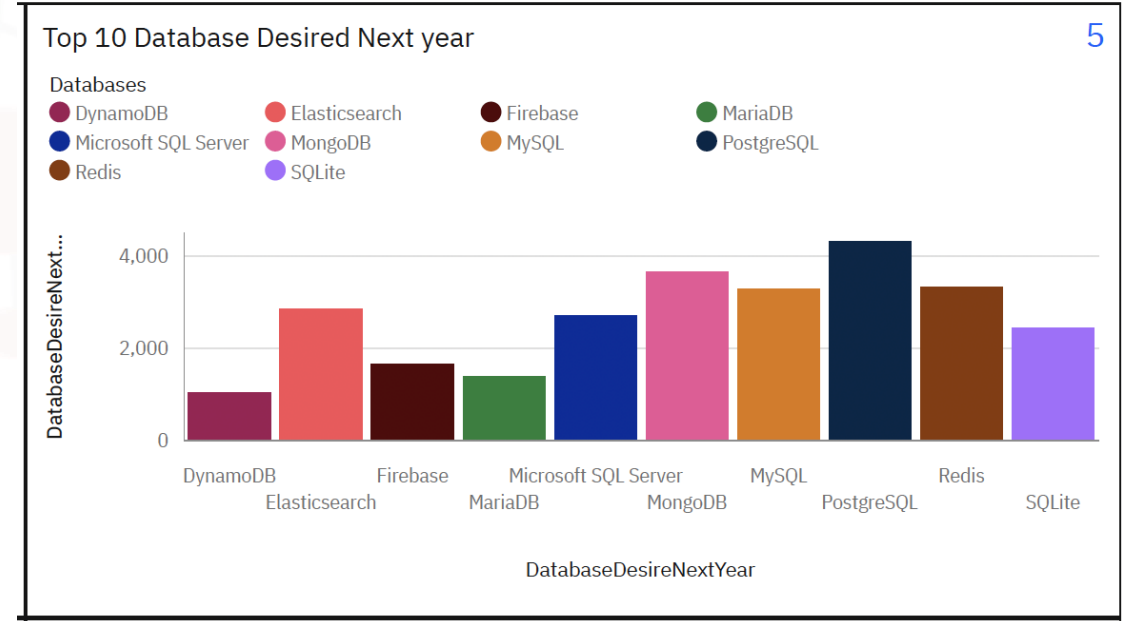- Python which was not in the top 3 list, would be the leading language in the next year.

DATABASE TRENDS

Current Year

Next Year

DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL and Microsoft SQL Server were the leading database by 2019

- Oracle is not in the top 10 databases anymore

- DynamoDB is a new to dartabases

Implications

- PostgreSQL is going to be the next leader in databases by the next year

IBM Developer

SKILLS NETWORK

DASHBOARD

You can see the report webpage on github using:

https://github.com/HadiShali/Final-Project Coursera/blob/main/Final%20Project.pdf

IBM Developer

SKILLS NETWORK

DASHBOARD Current Technology Usage
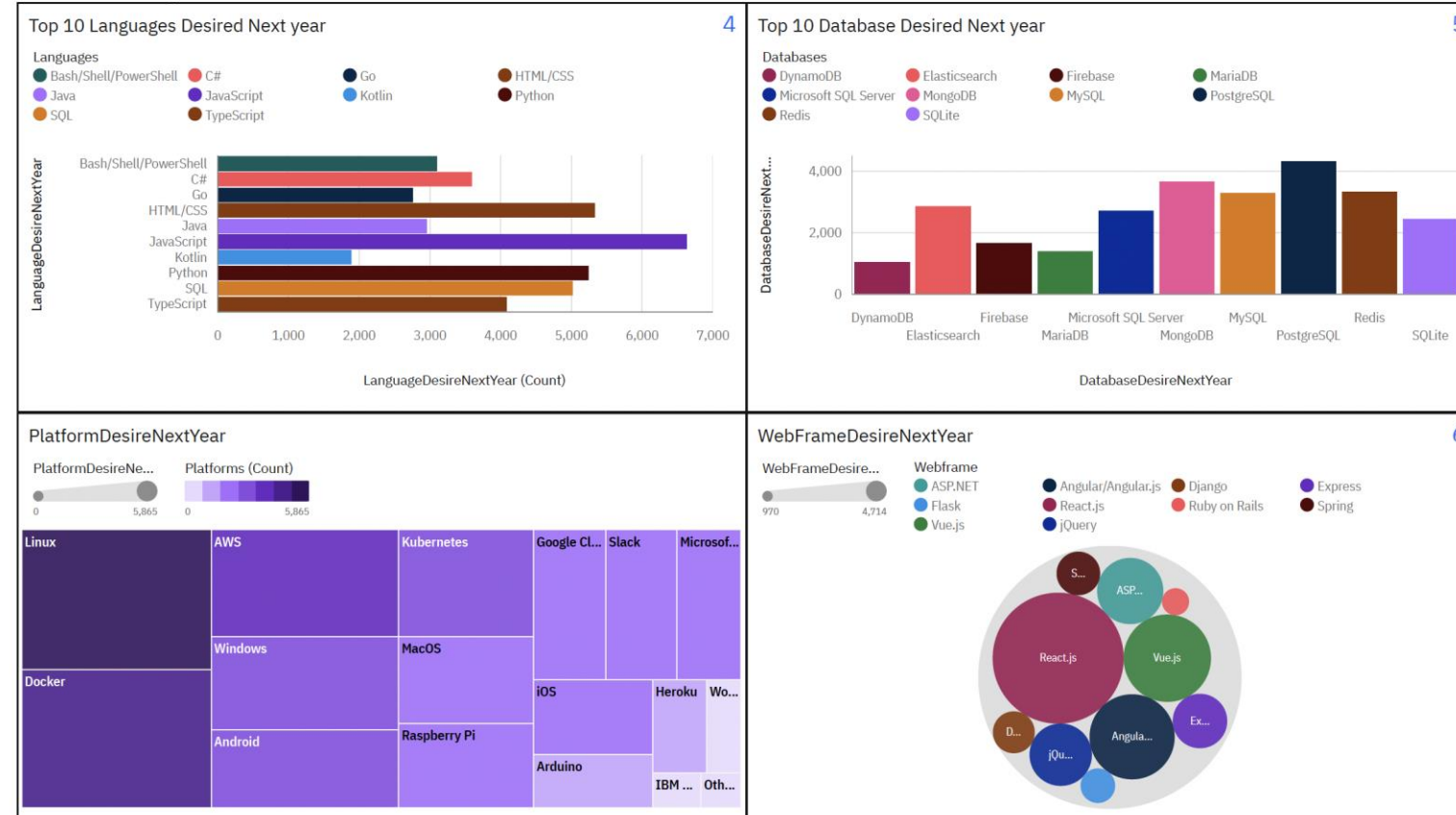
DASHBOARD Future Technology Trend

Final Project   8/8/24, 10:42 AM
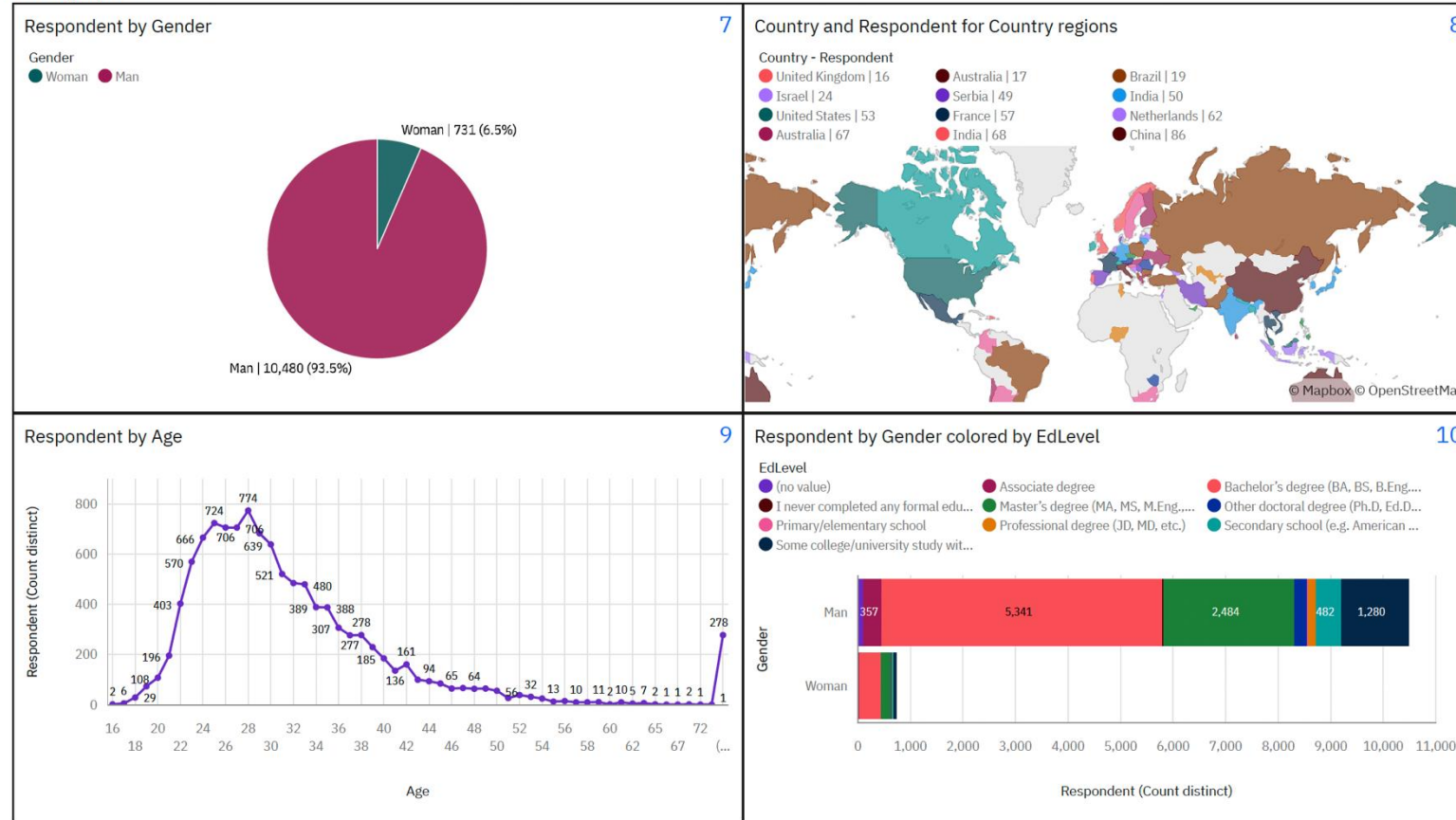
Future Technology Trend

DASHBOARD Demographic

DISCUSSION

- All the languages, platforms, and databases are growing
- Most of the users are with the gender of man or woman in the range of 25-45 years
- China is the leading country in this survey.
- Most of the respondents are men (around 94%)

OVERALL FINDINGS & IMPLICATIONS

Findings

- New programming languages are growing

- Also new web frames are becoming more privileges

- Students are the most users of guiding websites

Implications

- Any data analyst should be update and be aware

- Needing to coding is growing up

IBM **Dev**oper

SKILLS NETWORK

CONCLUSION

- Python's Continued Rise: Python solidifies its position as a top programming language, reflecting ongoing trends in developer preferences.

- Early Engagement: A significant portion of developers start coding early, indicating the importance of early education and access to coding resources.

- Varied Global Perspectives: Optimism about the future varies significantly by region, with Chinese developers being the most hopeful and Western Europeans more cautious.

- Impact of Stack Overflow: The platform continues to be a valuable resource, saving developers considerable time in their workflows.
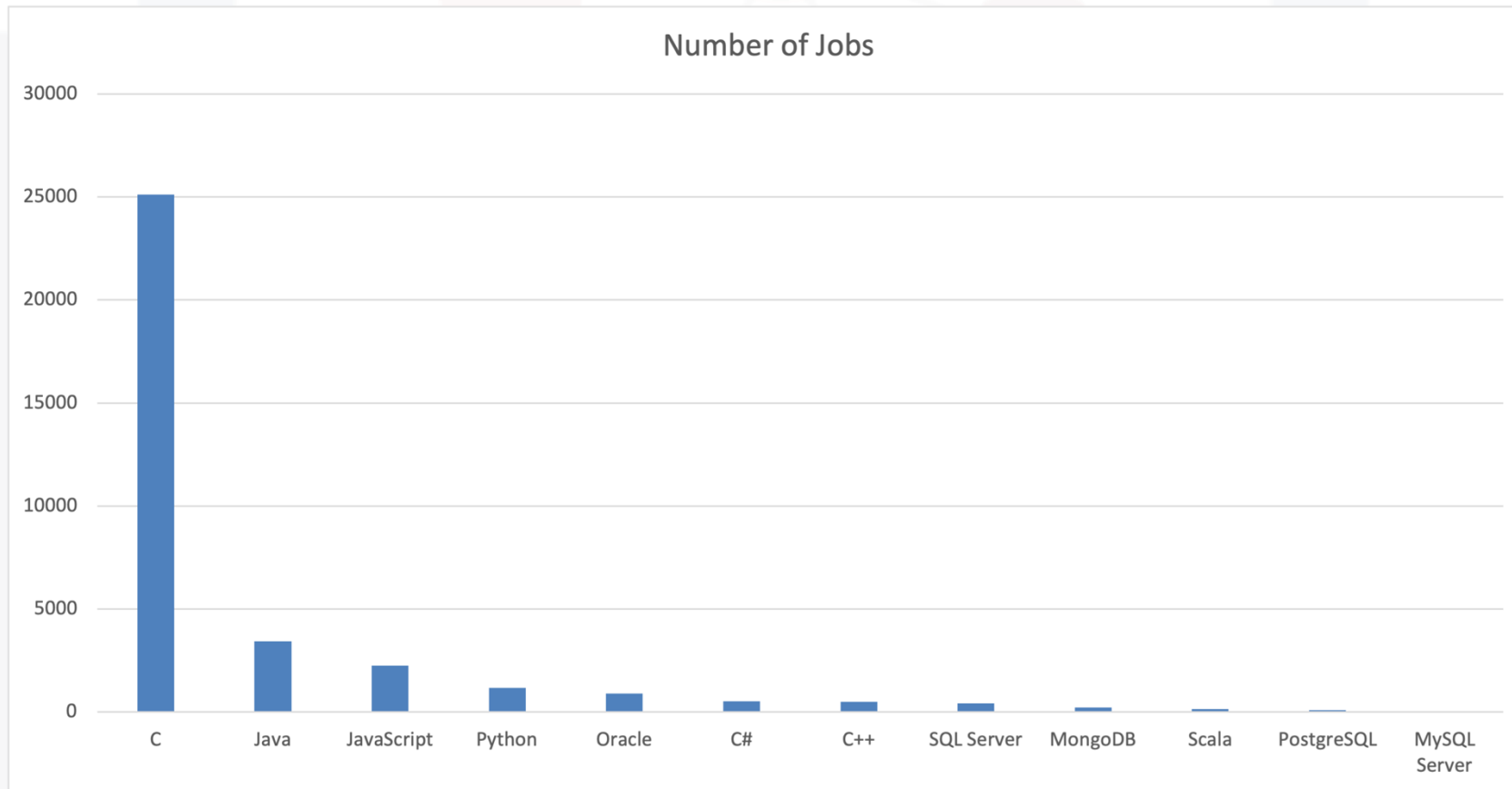
APPENDIX
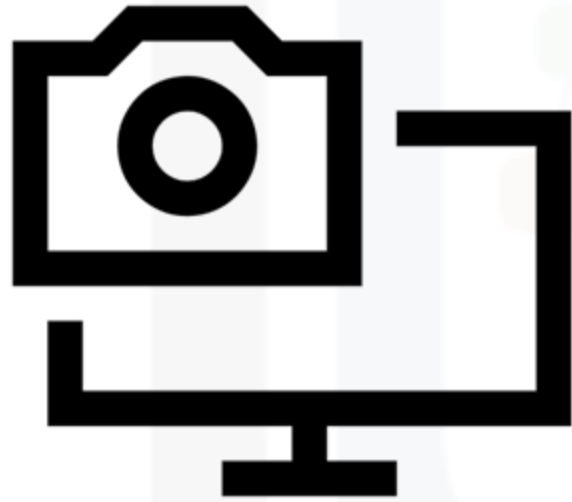
- additional charts, or tables that we created during the analysis phase:

JOB POSTINGS

Number of Jobs

POPULAR LANGUAGES

POPULAR LANGUAGES