Tech Trends Analysis

Dheeraj

27-07-2024

OUTLINE

- Executive Summary

- Introduction

- Methodology

- Results
  - Visualization – Charts
  - Dashboard

- Discussion
  - Findings & Implications

- Conclusion

- Appendix

EXECUTIVE SUMMARY

- This report consists of findings and analysis of latest tech trends

- Analysed latest programming language and database trends.

- Multiple dashboards for understanding the trends

- Analysis of tech trends based on demographics has also been performed.

INTRODUCTION

- The Tech Landscape is Constantly evolving. Lets uncover the trends.

- The rapid pace of technological advancement is reshaping industries and job markets alike. Today, I'll delve into the heart of this transformation by presenting insights derived from an analysis of the latest programming languages and database trends

METHODOLOGY

- Data Sources: SQLit3 db and github jobs API
- Data Cleaning: Handled missing values and standardized the data
- Data Analysis Techniques
  - Descriptive Statistics
  - Data Visualization using scatter plots, bar graphs, histograms
  - Using pivot tables to get a concise summary of the data
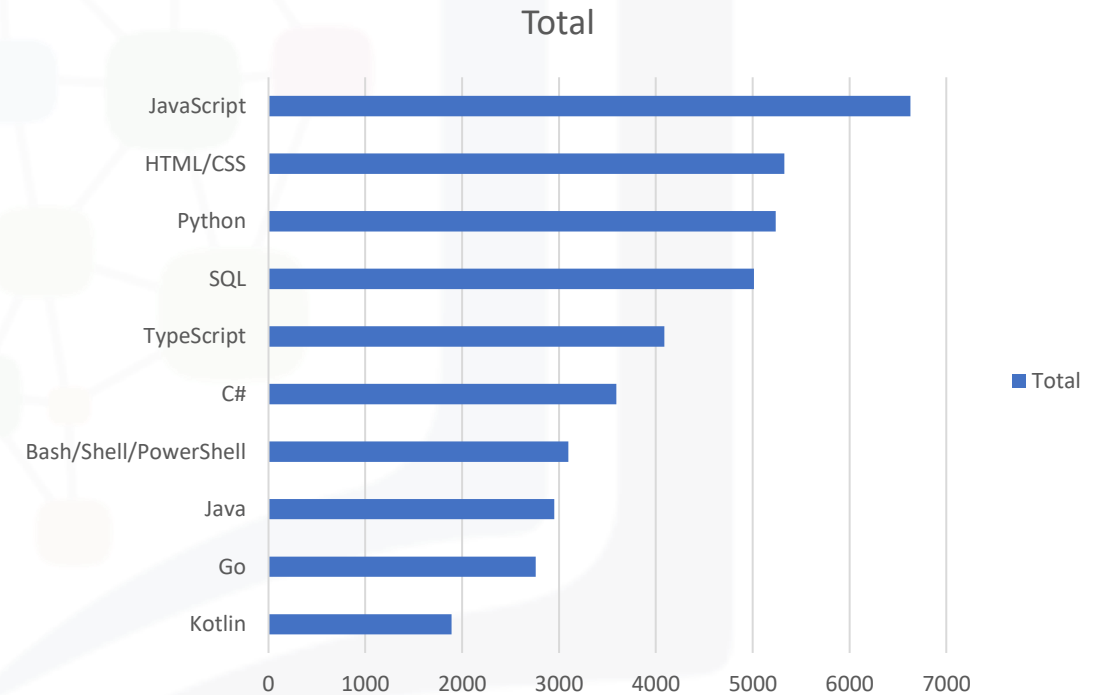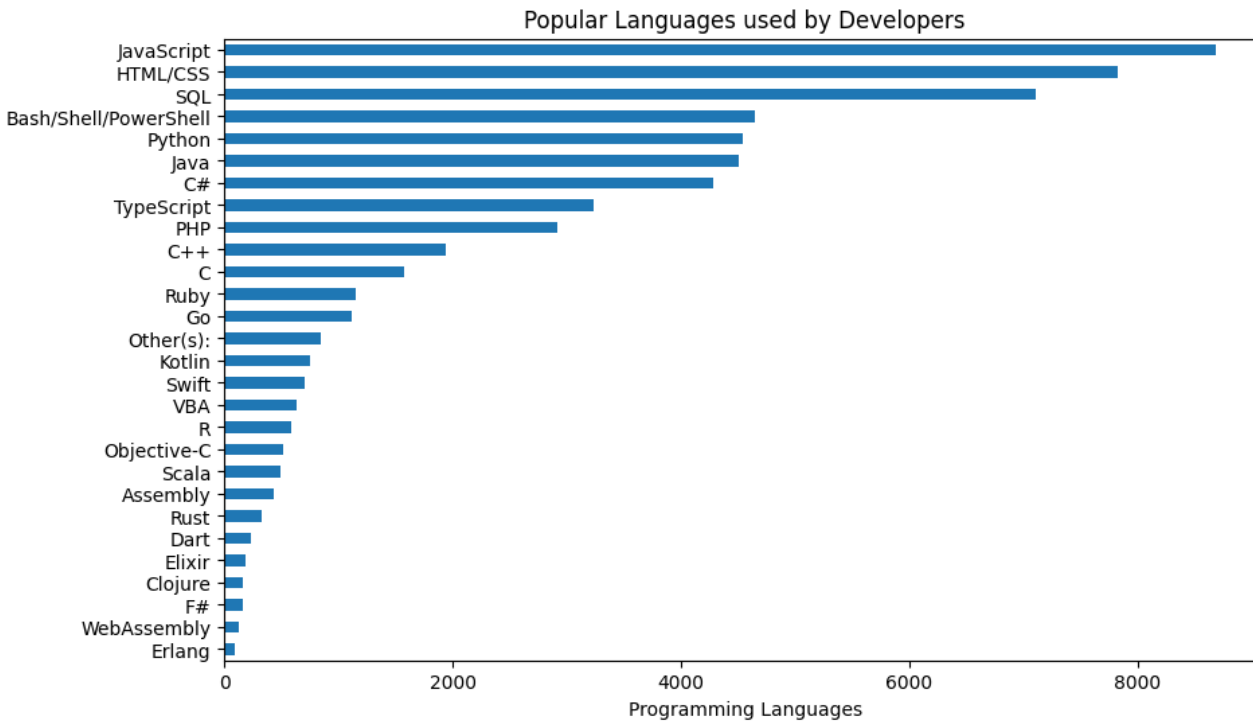- Tools Used: Python, Excel, SQL

IBM Developer

SKILLS NETWORK

RESULTS

PROGRAMMING LANGUAGE TRENDS

Current Year

Next Year

Popular Languages used by Developers

Total

# PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- Javascript remains to be the top programming language at present and in the future

- Python's demand is expected to increase in the future as data related jobs are booming
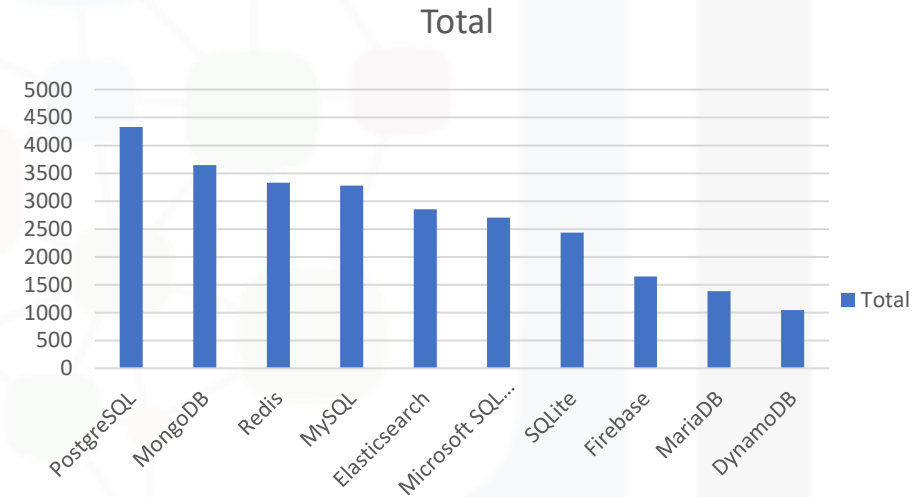
Implications

- Increase in demand for Full stack developers

- Growing demand for Data Science and AI professionals

IBM **Developer**

SKILLS NETWORK

DATABASE TRENDS

Current Year

Popular Databases used by Developers
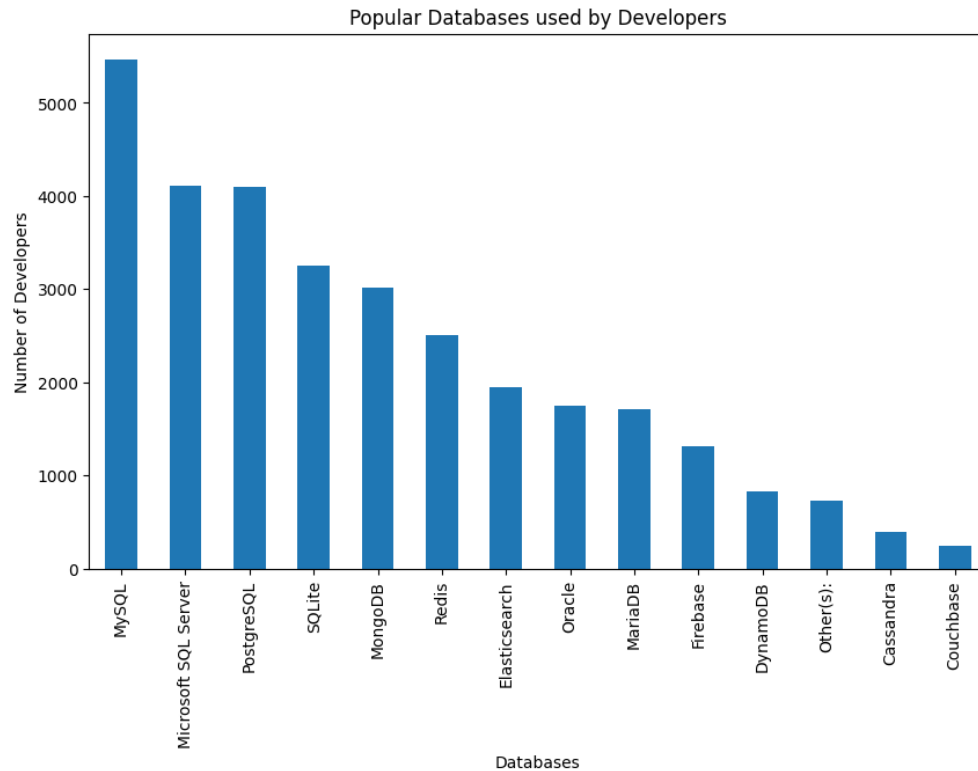
Next Year

DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- Currently MySQL is in high demand
- In the future PostgresSQL and MongoDB will gain more prominence

Implications

- MySQL is an established system with rich ecosystem. It's open source and cost effective
- Postgres handles complex queries and acid compliant
- MongoDB handles large volumes of unstructured data and offers high scalability and performance
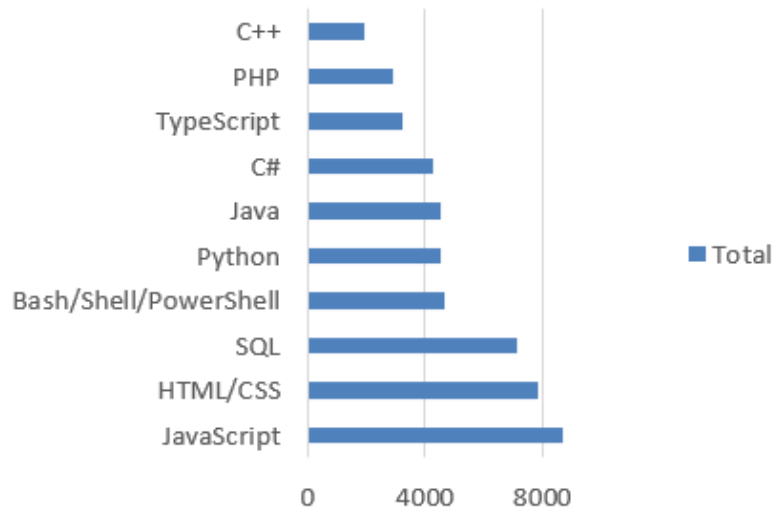
IBM Developer

SKILLS NETWORK

DASHBOARD

https://github.com/Dheeraj6778/Tech-Trends-Data-Analysis/blob/master/excel_sheets/Dashboards.pdf

IBM **Developer**

SKILLS NETWORK

Count of Respondent — Total (LanguageWorkedWith)

Language	Total
JavaScript	~8500
HTML/CSS	~7900
SQL	~7200
Bash/Shell/PowerShell	~4600
Python	~4500
Java	~4500
C#	~4200
TypeScript	~3300
PHP	~3000
C++	~2000

Count of Respondent — Total (DatabaseWorkedWith)

Database	Total
MySQL	~5500
Microsoft SQL Server	~4100
PostgreSQL	~4100
SQLite	~3200
MongoDB	~3000
Redis	~2500
Elasticsearch	~2000
Oracle	~1800
MariaDB	~1750
Firebase	~1300
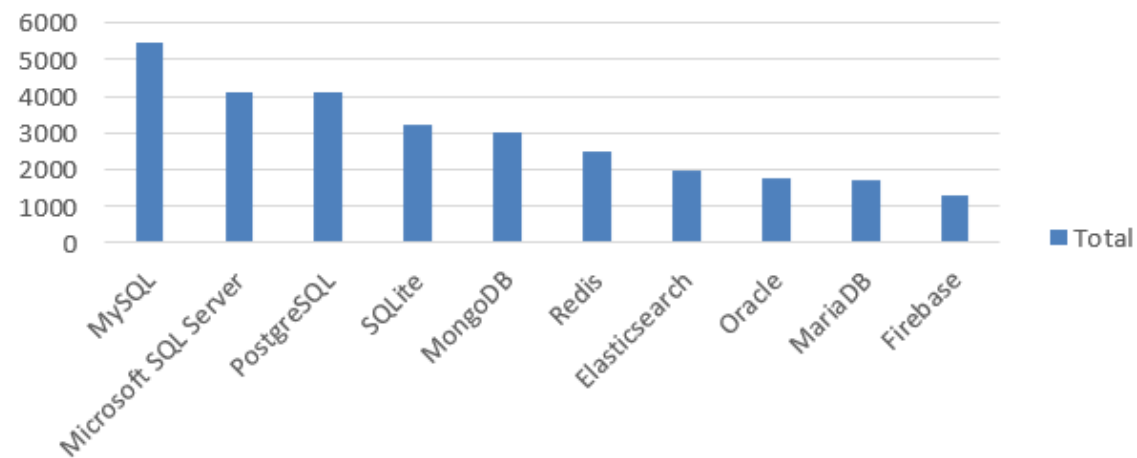
Count of Respondent — Total (WebFrameWorkedWith)

WebFrame	Total
jQuery	~4600
Angular/Angular.js	~3300
React.js	~3300
ASP.NET	~3000
Express	~2050
Spring	~1750
Vue.js	~1500
Flask	~1150
Django	~1150
Laravel	~950
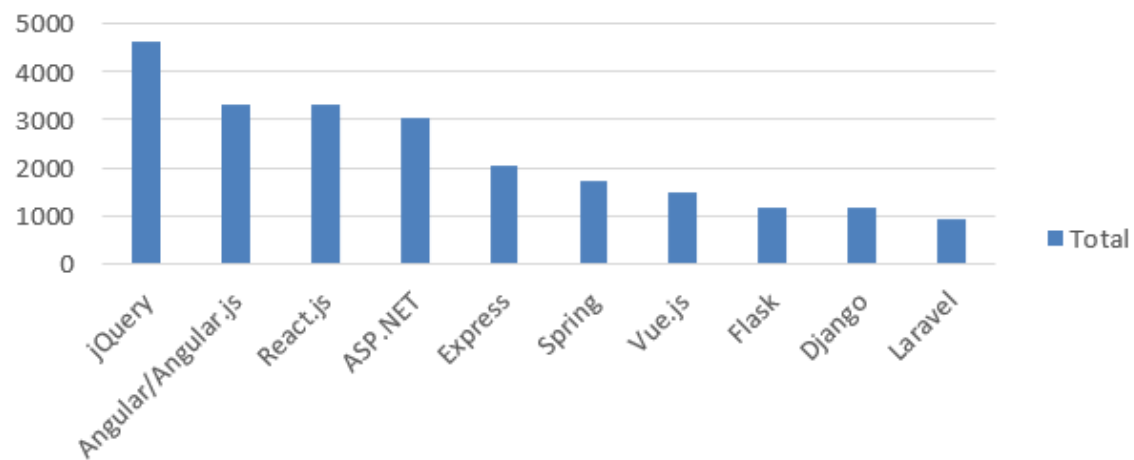
Count of Respondent — Total (PlatformWorkedWith)

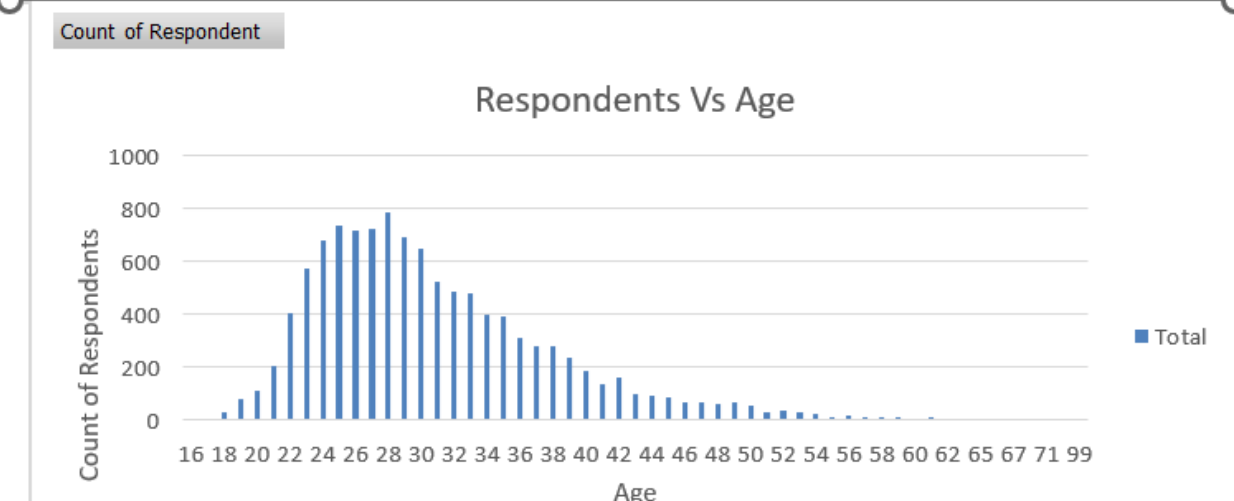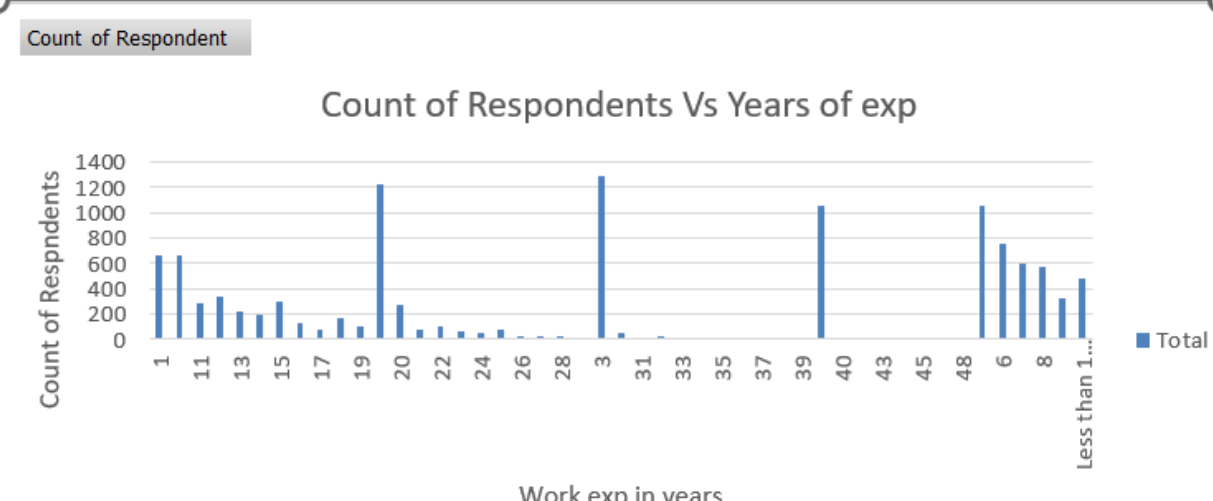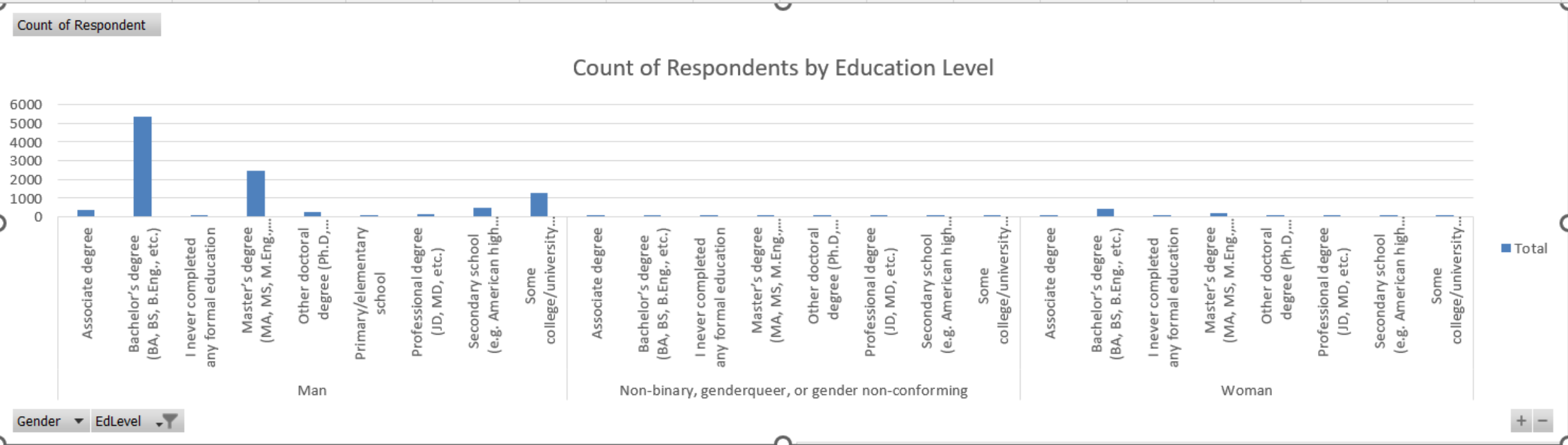| Platform	Total
Linux	~5800
Windows	~5600
Docker	~4400
AWS	~3600
Slack	~2800
MacOS	~2750
Android	~2700
Microsoft Azure	~1800
Raspberry Pi	~1700
WordPress	~1600
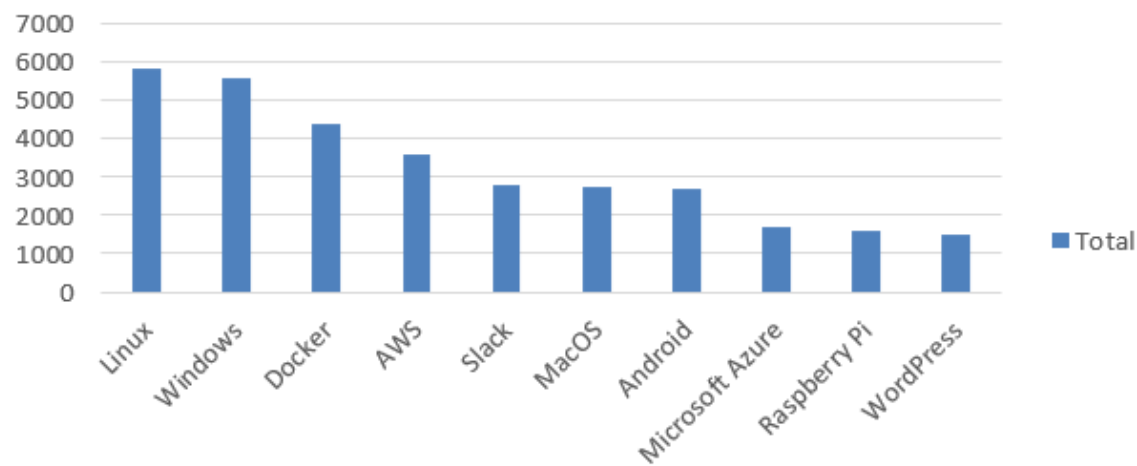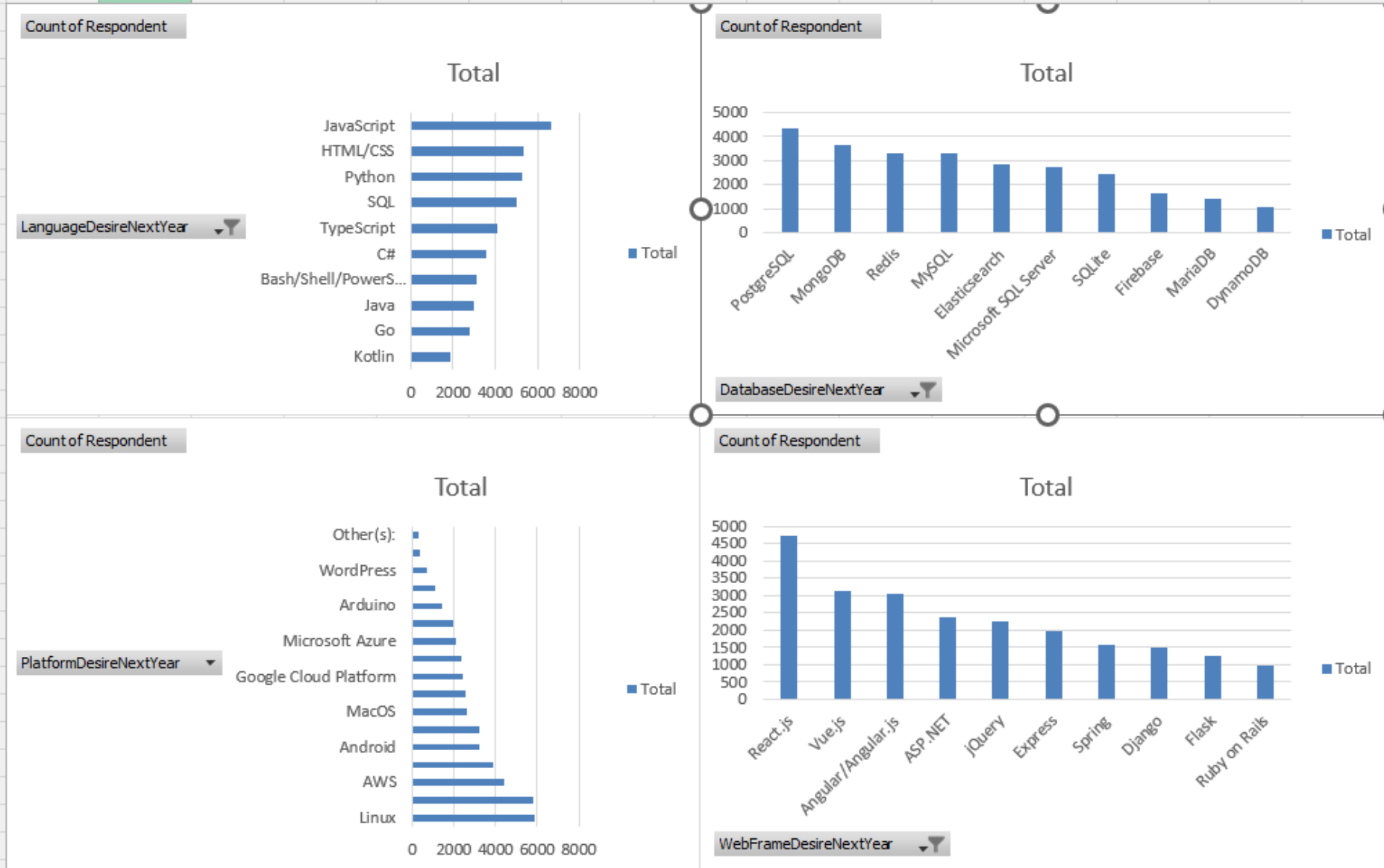
DASHBOARD TAB 2

DASHBOARD TAB 3

DISCUSSION

- The above dashboards provide a lot of information regarding the tech trends that are currently present and provides great insight about future trends also

OVERALL FINDINGS & IMPLICATIONS

Findings

- Top Programming Language is Javascript and is expected to retain the top spot in the future
- Top DBMS is MySQL and postgres is expected to take over the top spot in the future

Implications

- Full Stack development roles to remain in strong demand
- Growing demand for Data Science and AI professionals

IBM Developer

SKILLS NETWORK

CONCLUSION

- The tech industry is undergoing rapid evolution, characterized by the rise and fall of programming languages and databases. JavaScript's enduring dominance in web development and Python's growing prominence in data science and AI are reshaping the developer landscape

- The increasing complexity of data necessitates a diverse database ecosystem. While MySQL remains a popular choice, PostgreSQL and MongoDB are gaining traction due to their advanced features and scalability, respectively.Point 3

- To thrive in this dynamic environment, developers and organizations must prioritize continuous learning and skill development. Proficiency in multiple programming languages and database technologies is becoming essential.
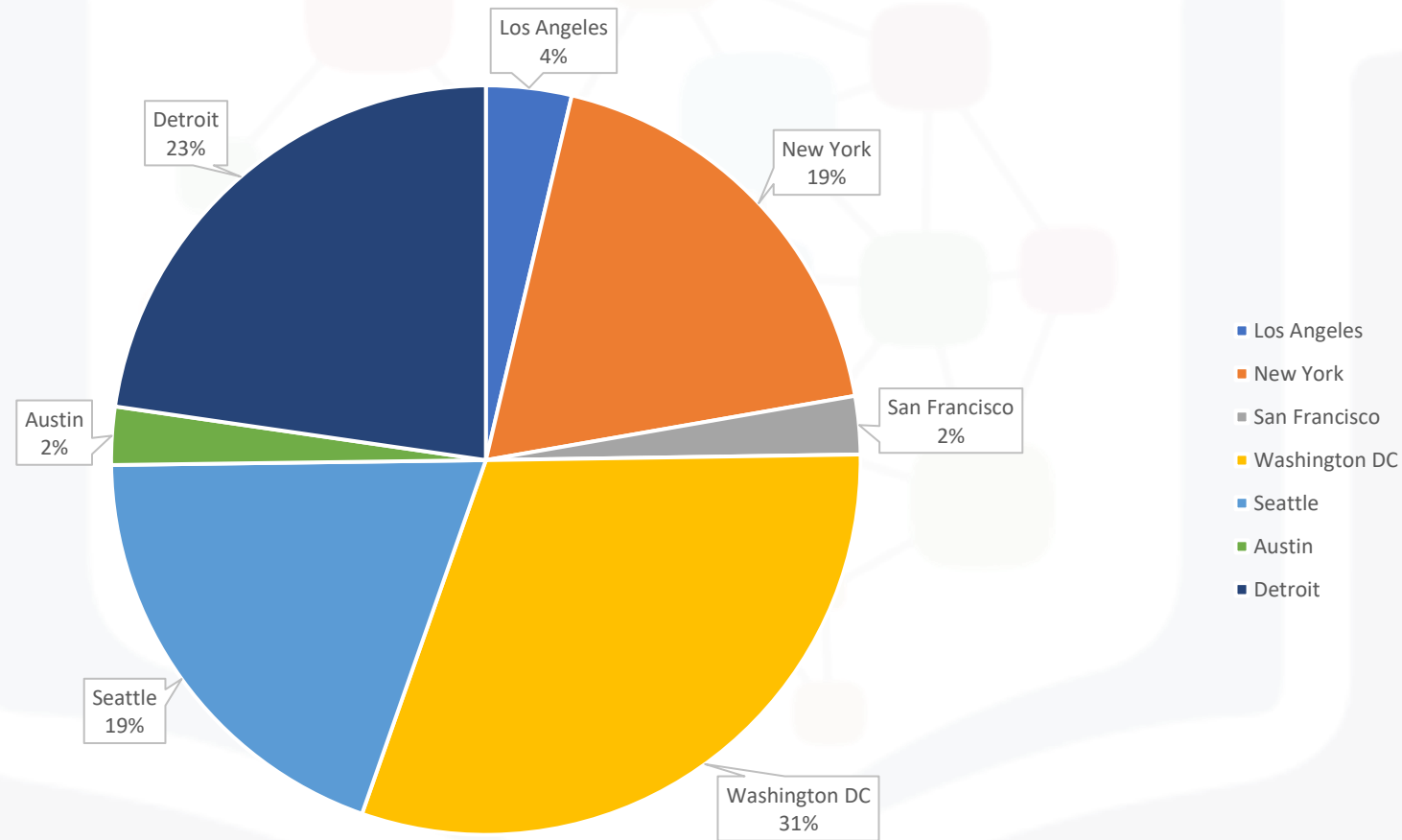
APPENDIX

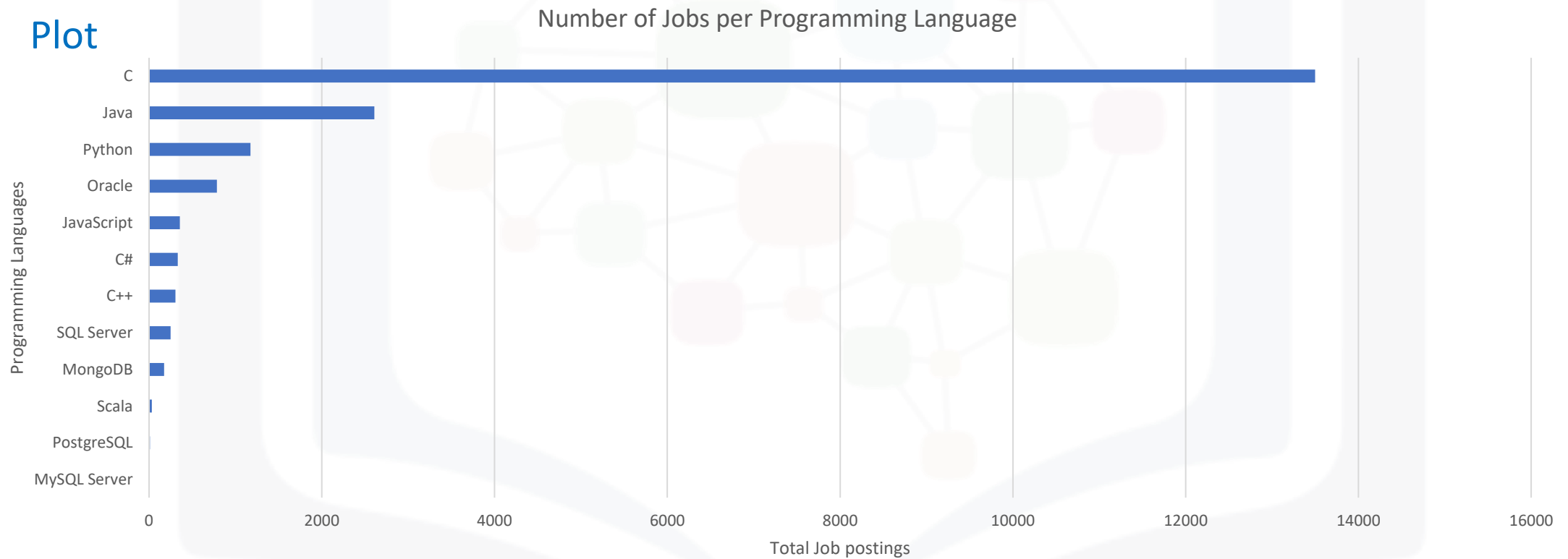- Additional plots are in the following slides

JOB POSTINGS BASED ON LOCATION

Number of Jobs based on Location

Los Angeles 4%

New York 19%

San Francisco 2%

Washington DC 31%

Detroit 23%

Austin 2%

Seattle 19%

Legend:
- Los Angeles
- New York
- San Francisco
- Washington DC
- Seattle
- Austin
- Detroit

IBM Developer

SKILLS NETWORK

JOB POSTINGS

Plot

Number of Jobs per Programming Language

POPULAR LANGUAGES