Report on trending technologies and Jobs

By: Debarshi Biswas

Date: January, 2022

OUTLINE

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

IBM Developer

SKILLS NETWORK

EXECUTIVE SUMMARY

- In-Demand languages and databases in the current job market
- Demographics of
  - Trending Frameworks
  - Platforms used
- Trending Dev Environments
- Gender gaps in the job market

IBM Developer

SKILLS NETWORK

INTRODUCTION

- An Analysis of trending technologies such as programming languages, databases, Web Frameworks that are currently used in the Job market

- Gives an answer to questions such as:
  - New in demand Languages and technologies
  - Gender gap in tech
  - Education Qualifications of devs
  - Popular Platforms
  - Most used dev environments

METHODOLOGY

- Collecting Data from
  - Survey of Stack Overflow Developer 2019
  - GitHub Job Postings
- Data Wrangling
- Data Analysis
- Data Visualization
- Creating Dashboard
- Presentation

IBM Developer

SKILLS NETWORK

RESULTS

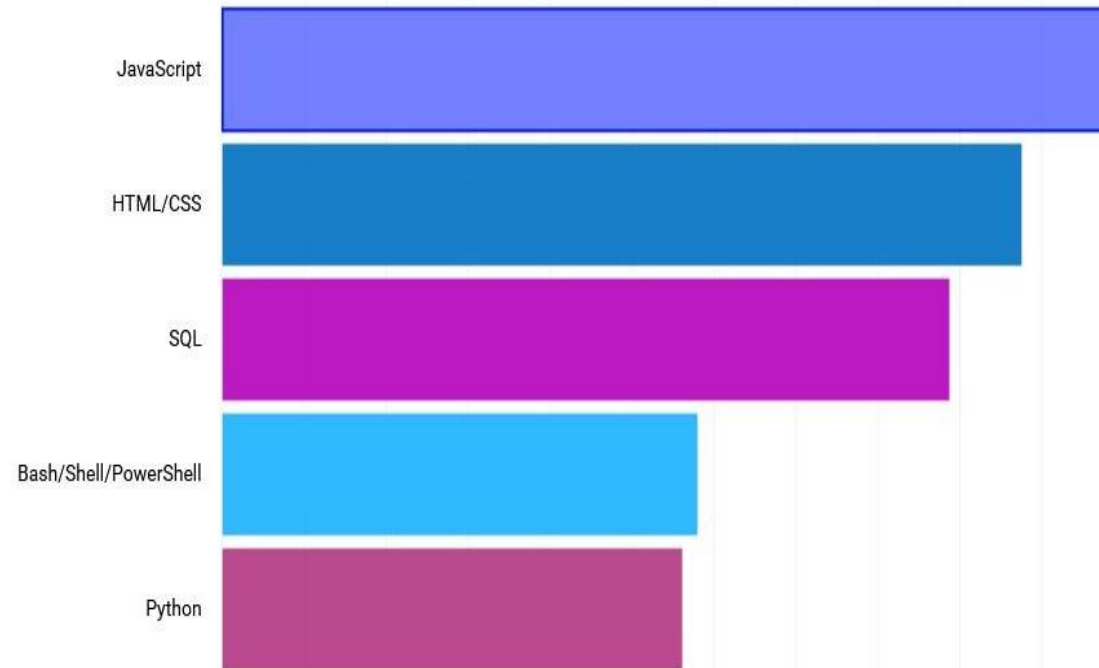Data was imported from Stack Overflow Survey and GitHub Job Posting.
The results were visualised in Cognos which lead to finding of:
- Highest in demand Jobs
- Most used DBMS and growth of Open Source DB systems
- Growth in Web Frameworks like React.Js, Angular.Js, Vue.Js.
- Popularity of cloud platforms like Docker, AWS, Kubernetes
- Gender Gap
- Countries lacking in tech
- Education Qualifications of devs
- Number of senior devs in tech
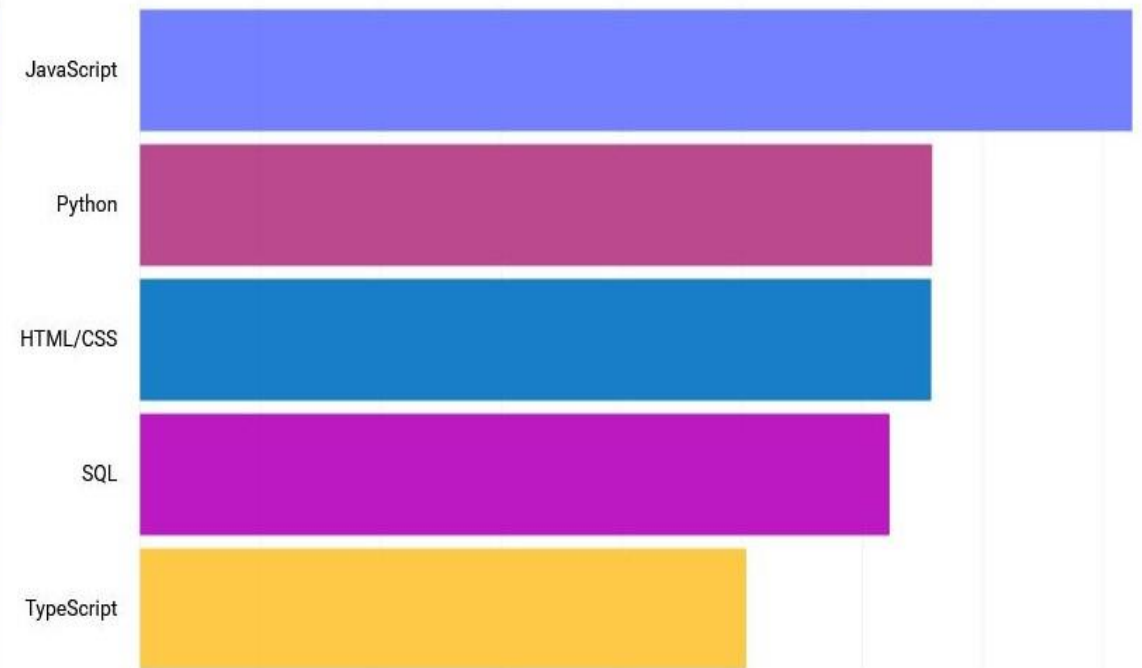
PROGRAMMING LANGUAGE TRENDS

Current Year

Next Year

Top 5 programming languages for the current year

JavaScript
HTML/CSS
SQL
Bash/Shell/PowerShell
Python

Top 5 programming languages for the next year

JavaScript
Python
HTML/CSS
SQL
TypeScript

IBM Developer

SKILLS NETWORK

PROGRAMMING LANGUAGE TRENDS – FINDINGS & IMPLICATIONS

Findings

- JavaScript, HTML/CSS and SQL tops the list currently
- Python emerges as second most popular language by the next year
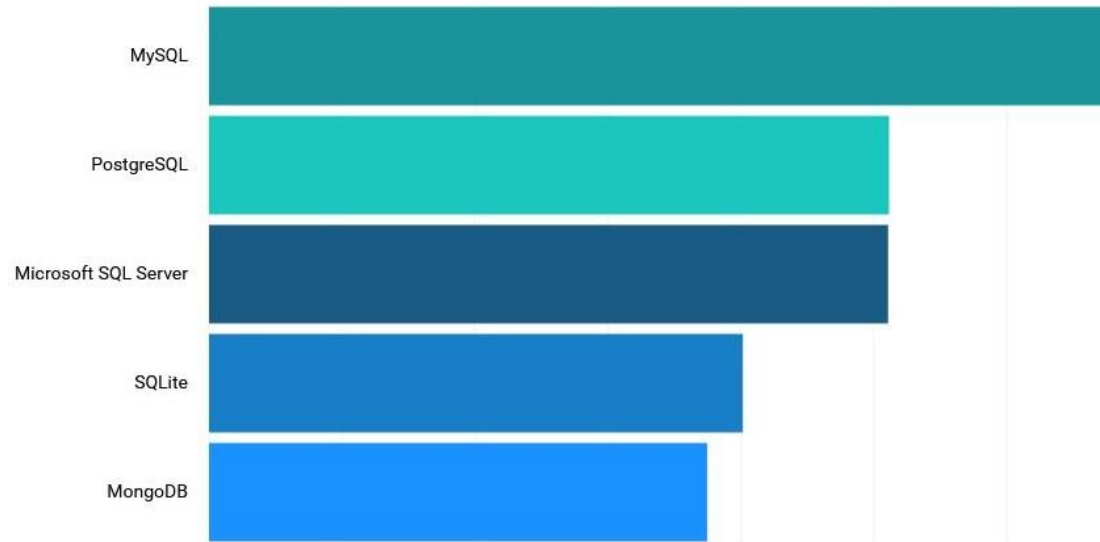- TypeScript replaces Bash in the list

Implications

- Frontend Development have high demands
- Python will probably be the most popular language soon
- SQL is quite in demand showing importance of Data management

IBM **Developer**

SKILLS NETWORK

DATABASE TRENDS

Current Year

Next Year

Top 5 Databases for the current year

- MySQL
- PostgreSQL
- Microsoft SQL Server
- SQLite
- MongoDB

Top 5 Databases for the next year

- PostgreSQL
- MongoDB
- Redis
- MySQL
- Elasticsearch

IBM Developer

SKILLS NETWORK

DATABASE TRENDS
– FINDINGS & IMPLICATIONS

Findings

- PostgreSQL is high in demand followed by MongoDB

- SQLite and Microsoft SQL Server is replaced by Redis and Elasticsearch in popularity

Implications

- PostgreSQL, MySQL and Redis emerges as popular open-source systems

- MongoDB, a NoSQL DBMS stays in demand

- ElasticSearch a RESTful Search engine gains popularity

IBM **Developer**

SKILLS NETWORK

DASHBOARD

The link of the Cognos dashboard:

<*https://jp-tok.dataplatform.cloud.ibm.com/dashboards/ec437357-3dd9-4a77-b209-cf205eff9955/view/543aa60a13bd38954ccfb1e407cc2c542c32735ab2bbd50ad6857b495e617397f3691593c82f435bd9145035a0e4105fcb*>

IBM Developer

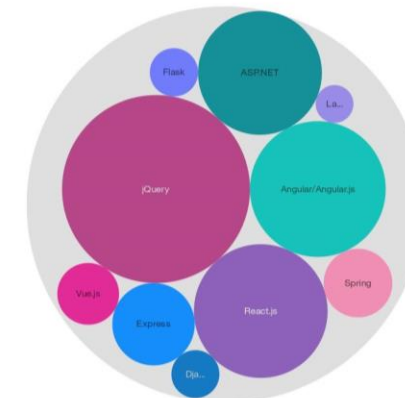**SKILLS NETWORK**

DASHBOARD TAB 1

Top 10 Languages worked with
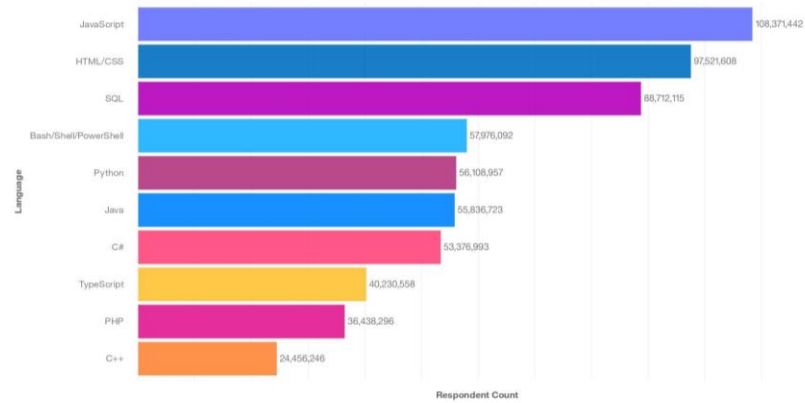
Top 10 Databases worked with
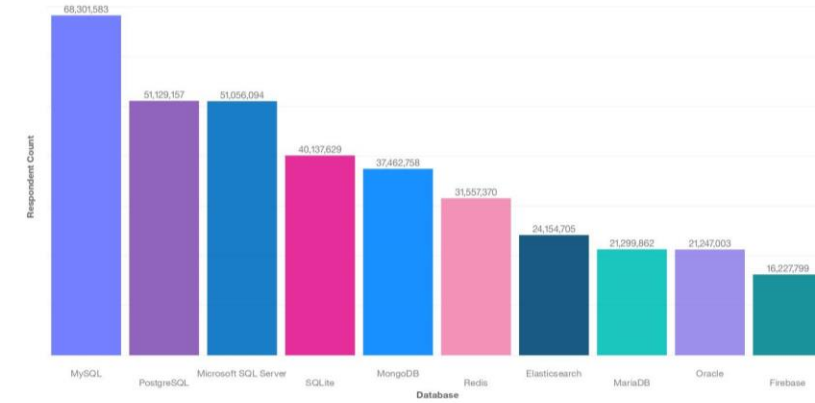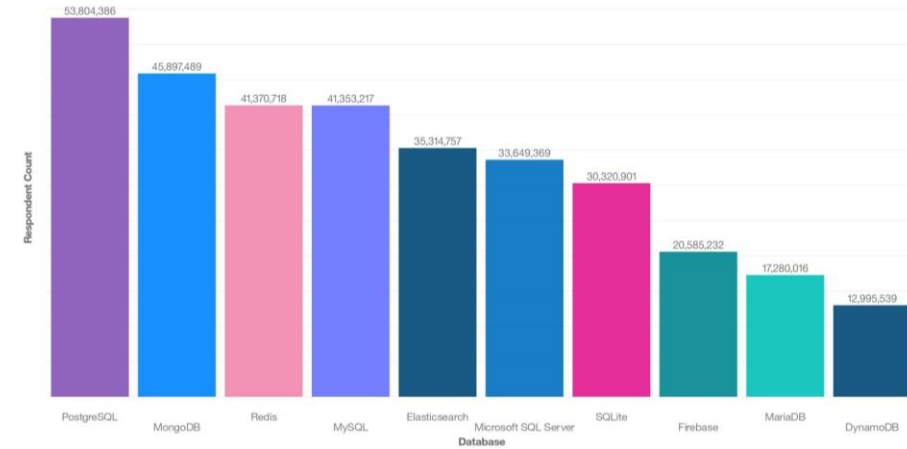
Platforms worked with

Top 10 Web Frameworks worked with

IBM Developer

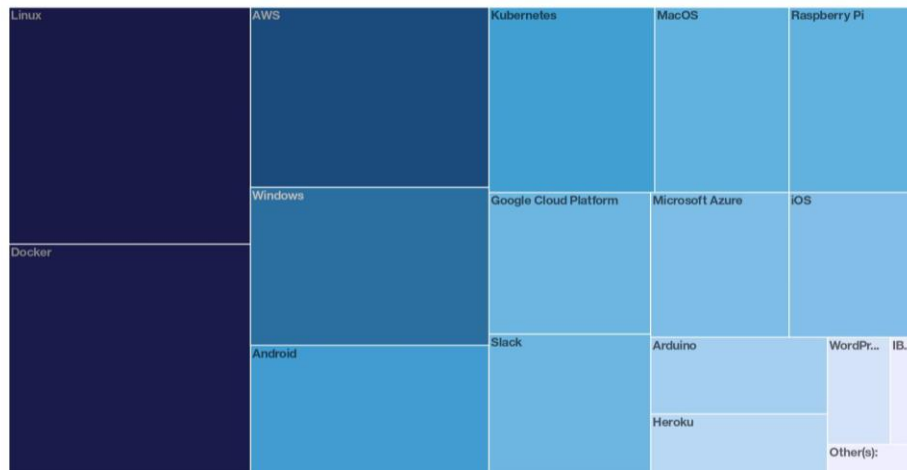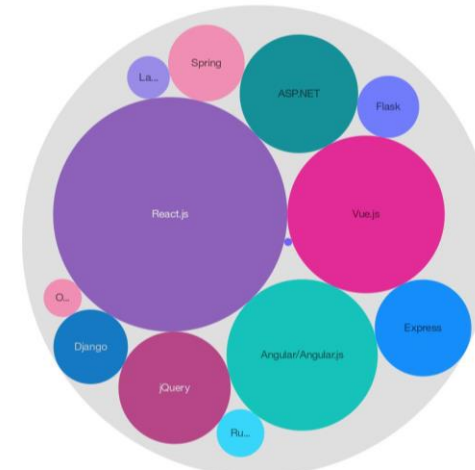SKILLS NETWORK

DASHBOARD TAB 2

Top 10 Language desire next year
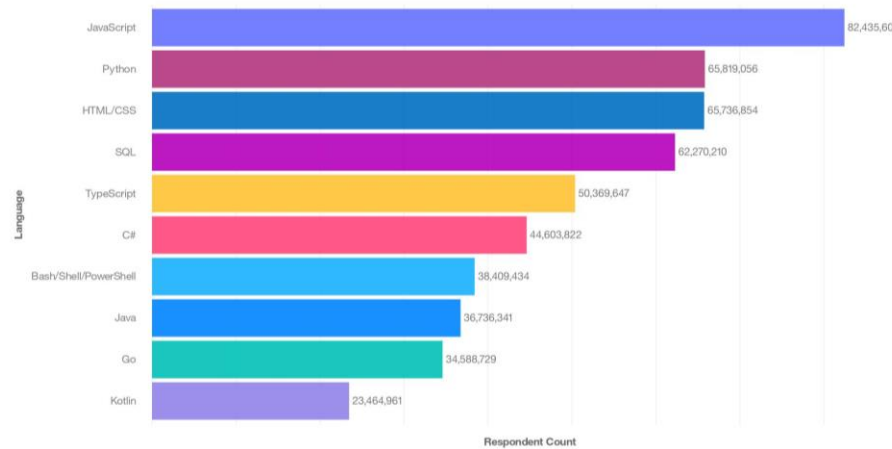
Top 10 Database desire next year

Platform desire next year

Top 10 Web Framework desire next year
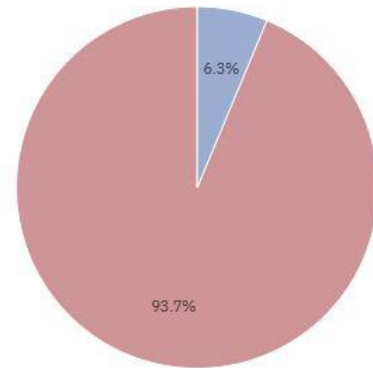
DASHBOARD TAB 3
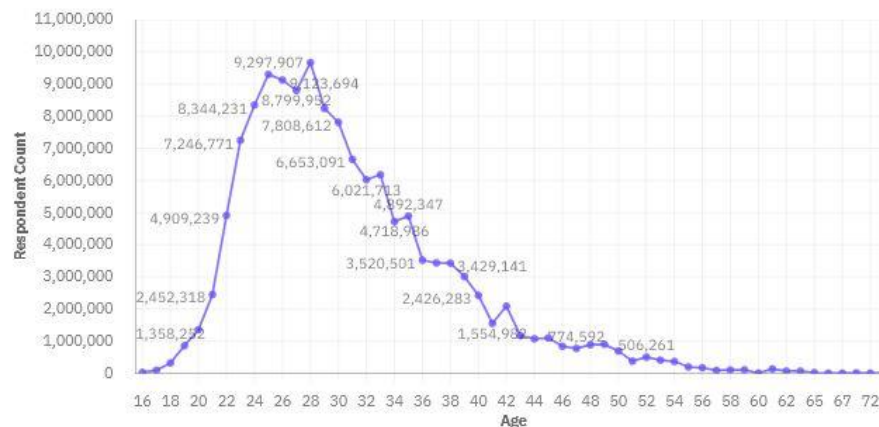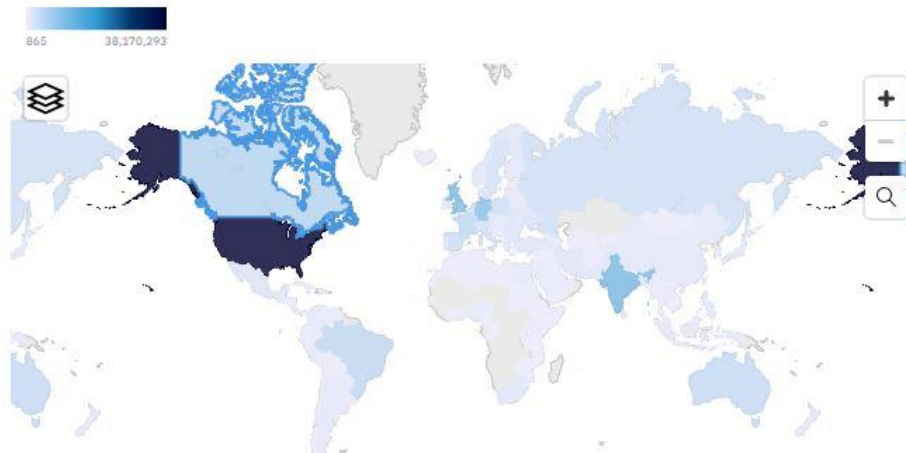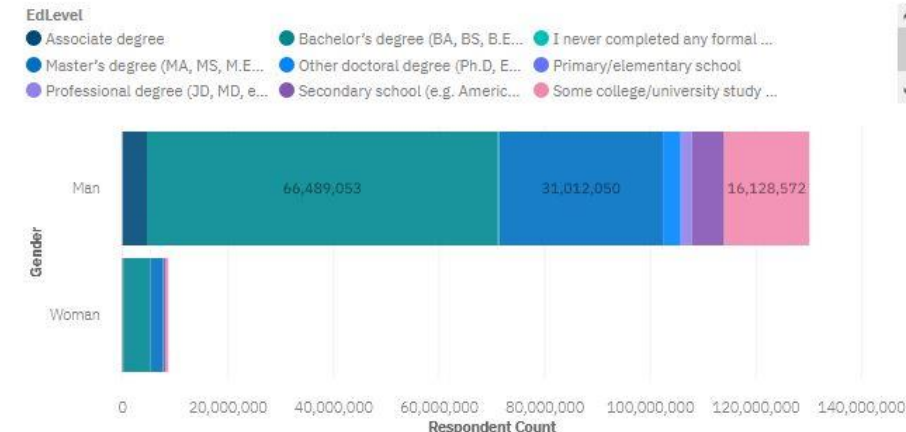
DISCUSSION

- Being at par with the in-demand technologies
- Keeping up with new frameworks and systems
- Upskilling countries to catch up with rest of the tech world
- Gender imbalance in tech

IBM Developer

SKILLS NETWORK

OVERALL FINDINGS & IMPLICATIONS

Findings

- Python becomes emerging popular language
- Open Source DBMS gains popularity
- New Platforms beside with Linux and Windows

Implications

- More companies shifting to python based tasks like ML
- High demand of DBMS skills
- Cloud platforms implys high demand of PaaS services like AWS,Azure
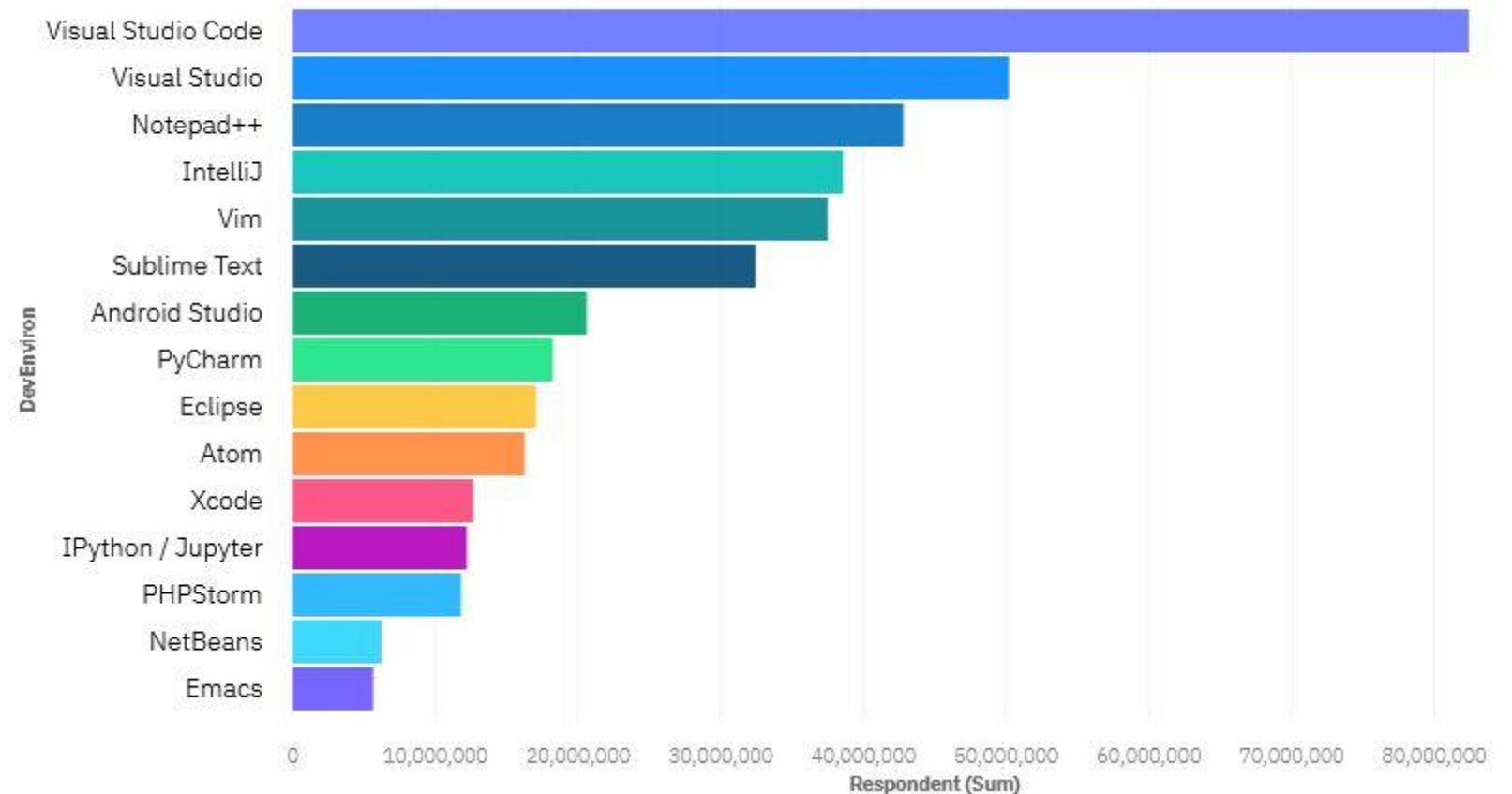
IBM Developer

SKILLS NETWORK

CONCLUSION

- Web Development and Python based studies are high in demand
- Open Source and NoSQL DBMS gains popularity
- Cloud Services like Docker are used heavily
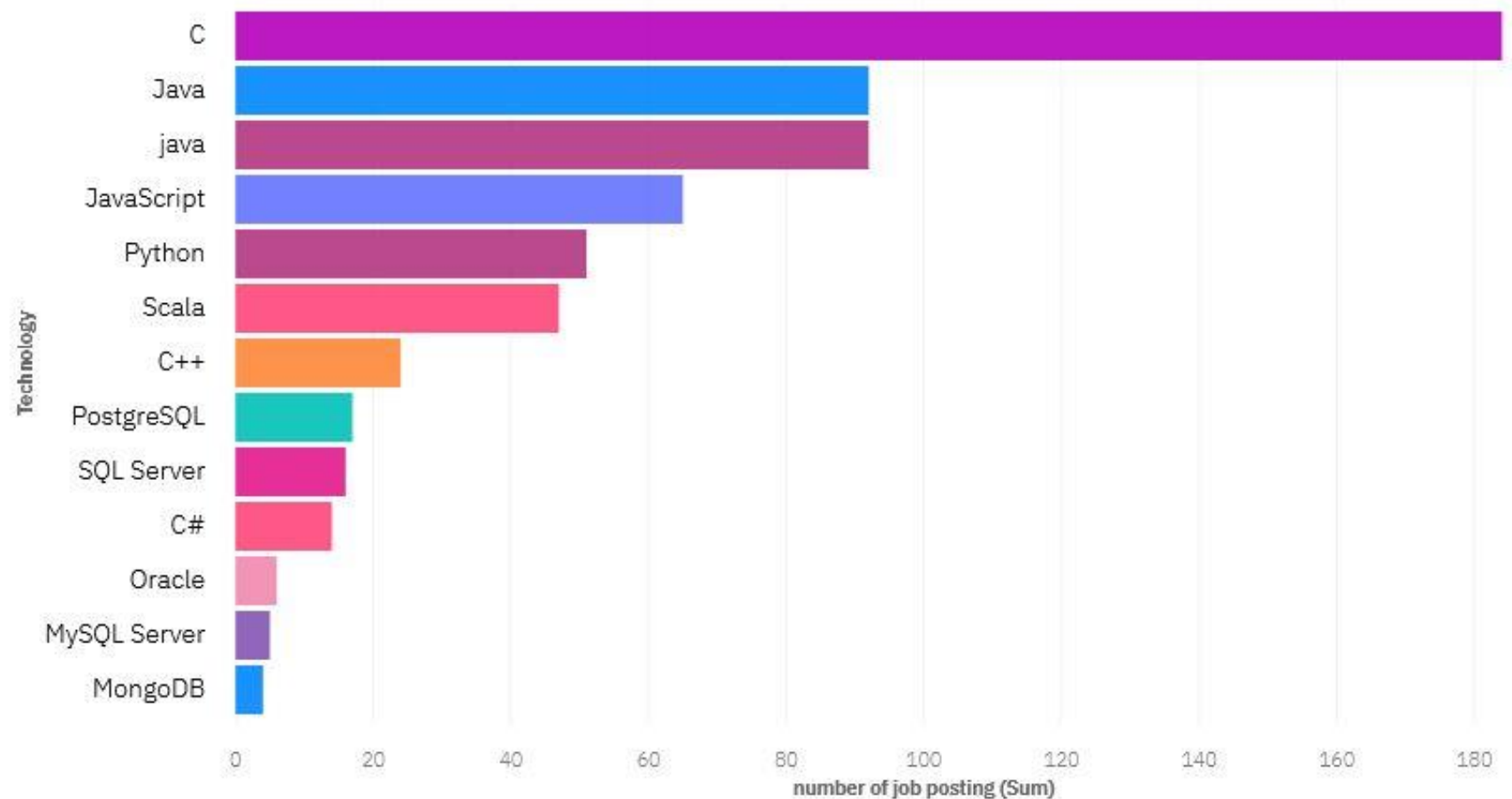- USA have high count of devs followed by India and UK

IBM Developer

SKILLS NETWORK

APPENDIX

15 Most Popular Development Environment

DevEnviron	Respondent (Sum)
Visual Studio Code	
Visual Studio	
Notepad++	
IntelliJ	
Vim	
Sublime Text	
Android Studio	
PyCharm	
Eclipse	
Atom	
Xcode	
IPython / Jupyter	
PHPStorm	
NetBeans	
Emacs	

GITHUB JOB POSTINGS

Popular Languages by GitHub Job Postings

IBM Developer

SKILLS NETWORK

POPULAR LANGUAGES

Popular Languages by Salary