Technology Trends Analysis

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OUTLINE

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- Methodology
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- Discussion
  - Findings & Implications
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EXECUTIVE SUMMARY

Current Technology Usage

Language

Database

Platform

Web frame

Demographics

Gender

Country

Age

Education Level

Future Technology Trend Implications of Findings.

Language

Database

Platform

Web frame

INTRODUCTION

Aim:

Analyzing the trends in software and web development around the world.

Purpose:

1. Identify the top programming languages, database, platform and web frame skills in demand.

2. Industry

3. Understanding industry demographics.

Audience:

Industry leaders

Human Resources

Developers

IT Aspirants

METHODOLOGY

Data Sources (Data Collection through API & web scrapping)

- Stack overflow developer 2019 survey
- Github job postings
- Programming languages annual salary

Data Wrangling

Exploratory Data Analysis

Data Visualization (IBM Cognos Dashboard)

Presentation

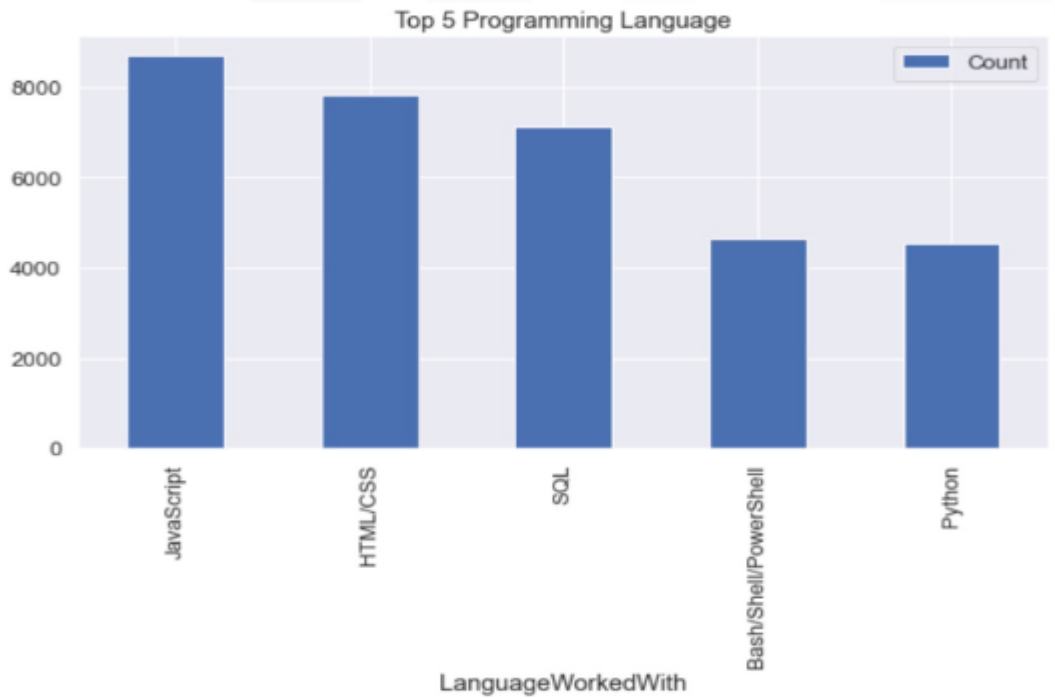
RESULTS

Screenshot of Source Data

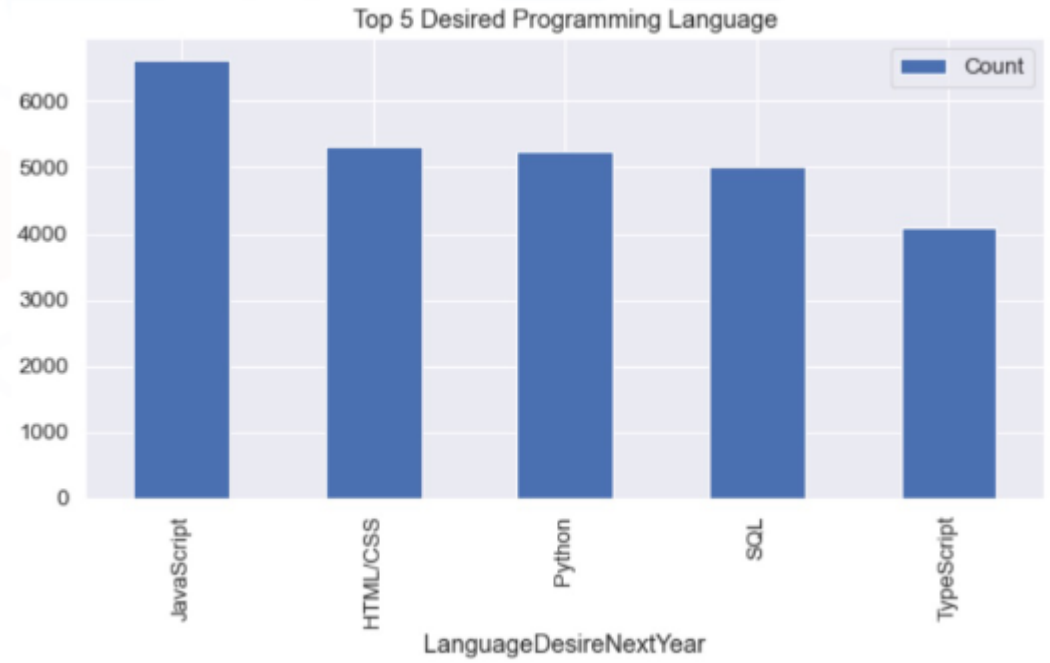
	Respondent	LanguageWorkedWith	LanguageDesireNextYear	DatabaseWorkedWith	DatabaseDesireNextYear	PlatformWorkedWith
0	4	C	C	MySQL	MySQL	Linux
1	4	C++	C#	SQLite	SQLite	Windows
2	4	C#	JavaScript	NaN	NaN	NaN
3	4	Python	SQL	NaN	NaN	NaN
4	4	SQL	NaN	NaN	NaN	NaN
...	...	...	...	...	...	...
74584	25142	Go	Python	NaN	NaN	NaN
74585	25142	HTML/CSS	R	NaN	NaN	NaN
74586	25142	PHP	NaN	NaN	NaN	NaN
74587	25142	Python	NaN	NaN	NaN	NaN
74588	25142	R	NaN	NaN	NaN	NaN

PROGRAMMING LANGUAGE TRENDS

Current Year



Next Year



PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

1. JavaScript, HTML/CSS & SQL are top 3 languages this year.
2. Python and Typescript are gaining popularity.
3. Bash/Shell/Power Shell are becoming less popular.

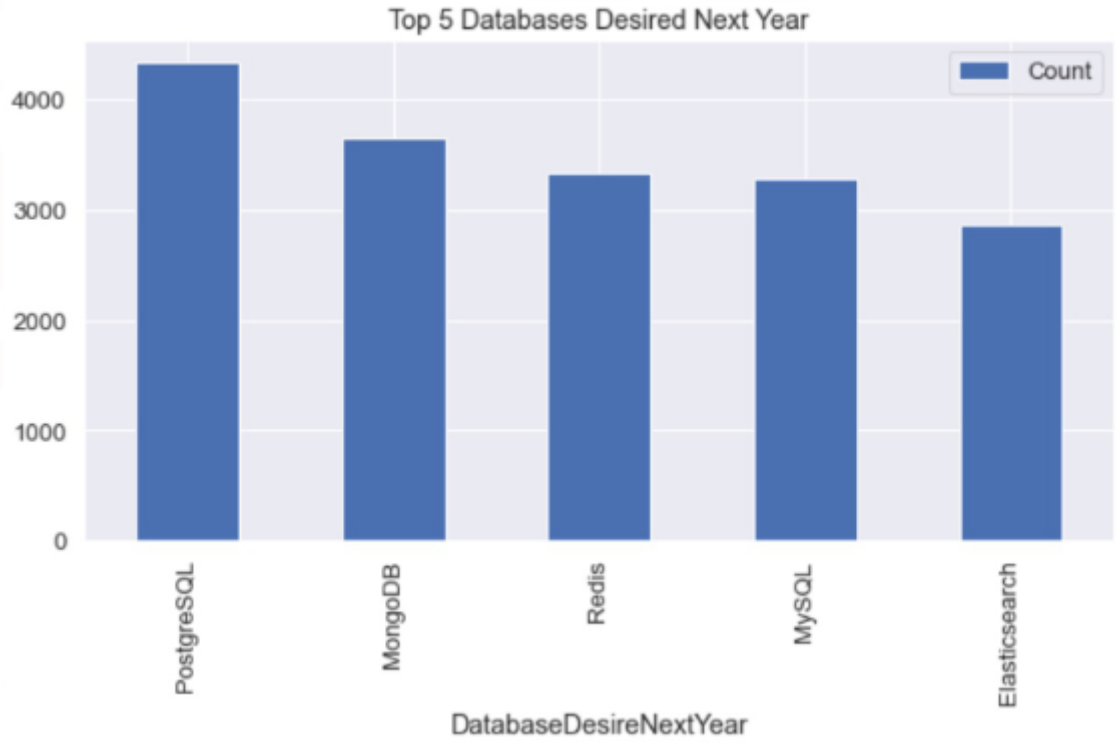
Implications

1. JavaScript and HTML/CSS are in high demand.
2. Python is new trending language.
3. SQL retains its popularity in field of Big Data.

DATABASE TRENDS

Current Year

Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

1. MYSQL most popular.
2. MongoDB and Redis are gaining popularity.
3. Elasticsearch is upcoming favorite.
4. Sqlite losing popularity.

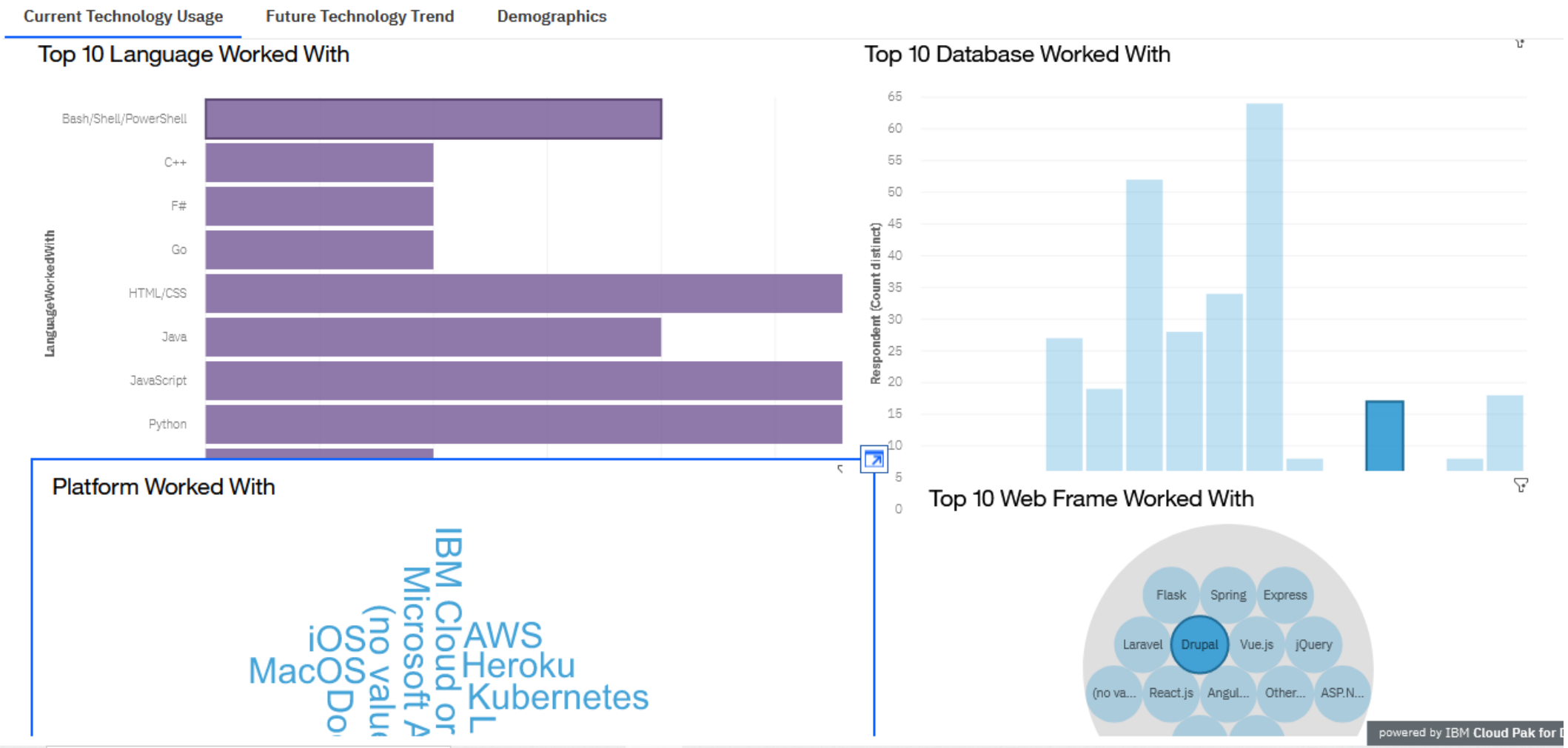
Implications

1. Open-source databases are still preferable in companies.
2. NoSQL databases are gaining popularity.
3. Elasticsearch is a document oriented database predicted to become a favorite.

DASHBOARD

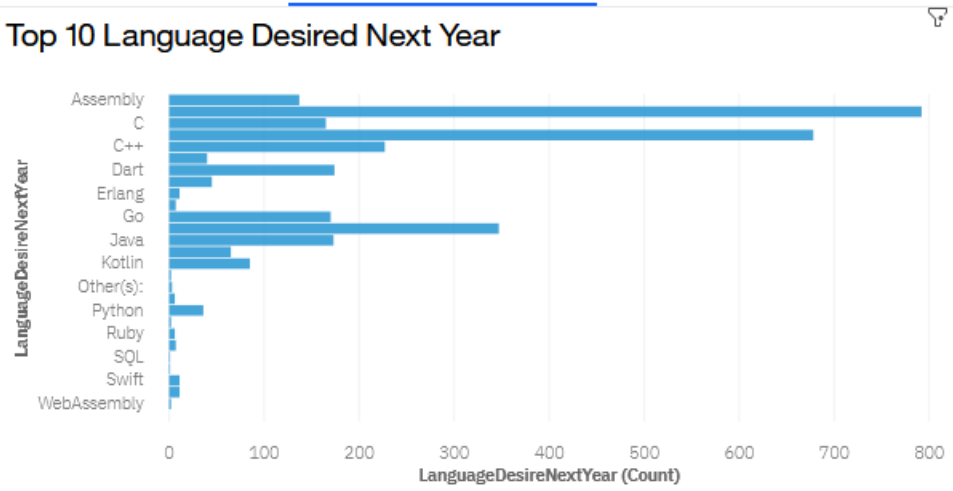
https://dataplatform.cloud.ibm.com/dashboards/1a25e0b3-1635-444b-b9c2-4e529f2fb080/view/797be726339f14ff69b3c8e407c87a037f32775db5bb8550838d7b4908352497a93b42c3c87b4f0edd175030f5ec445a9a

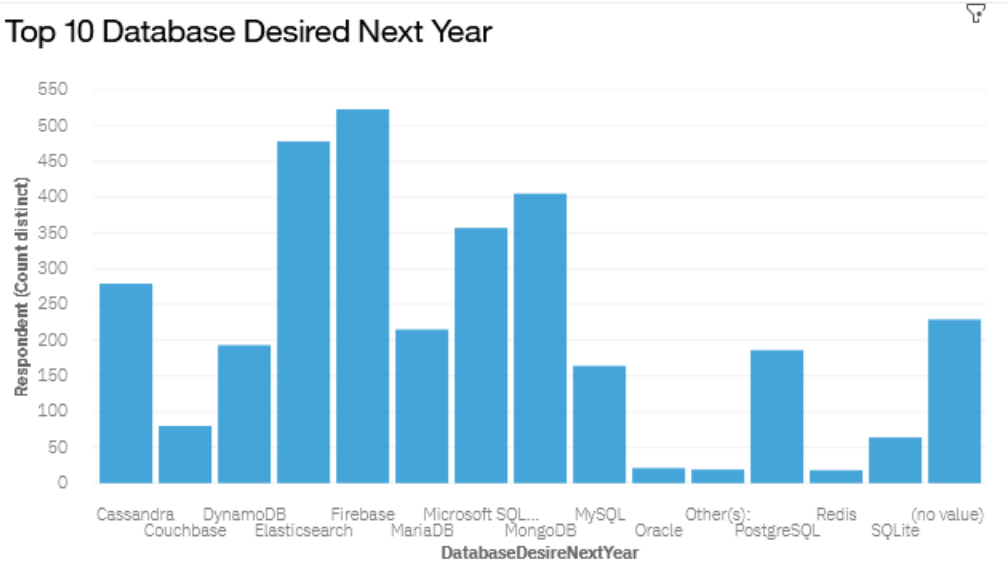
Current Technology Usage

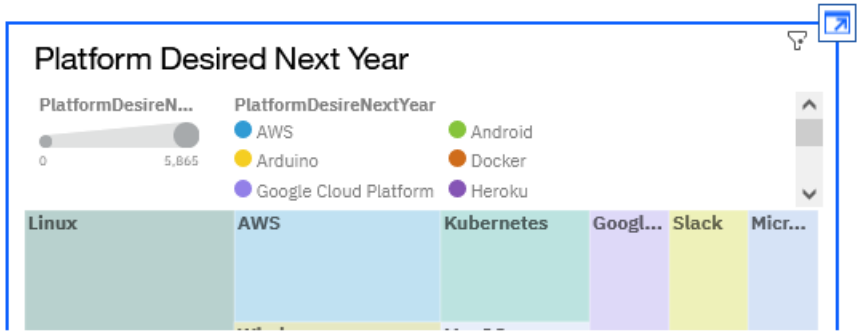


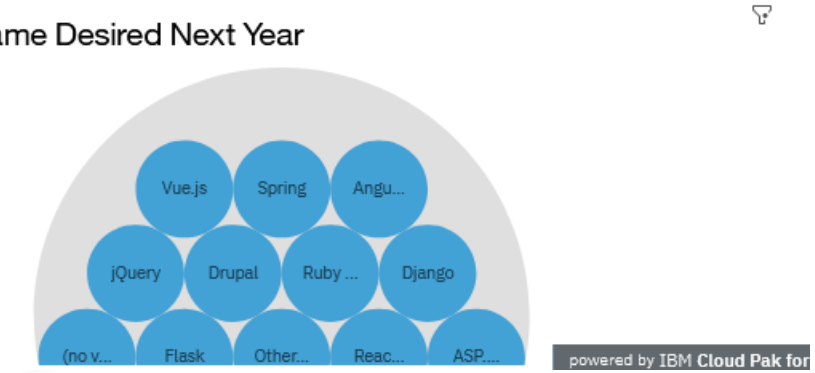
Future Technology Trends

Current Technology Usage | Future Technology Trend | Demographics

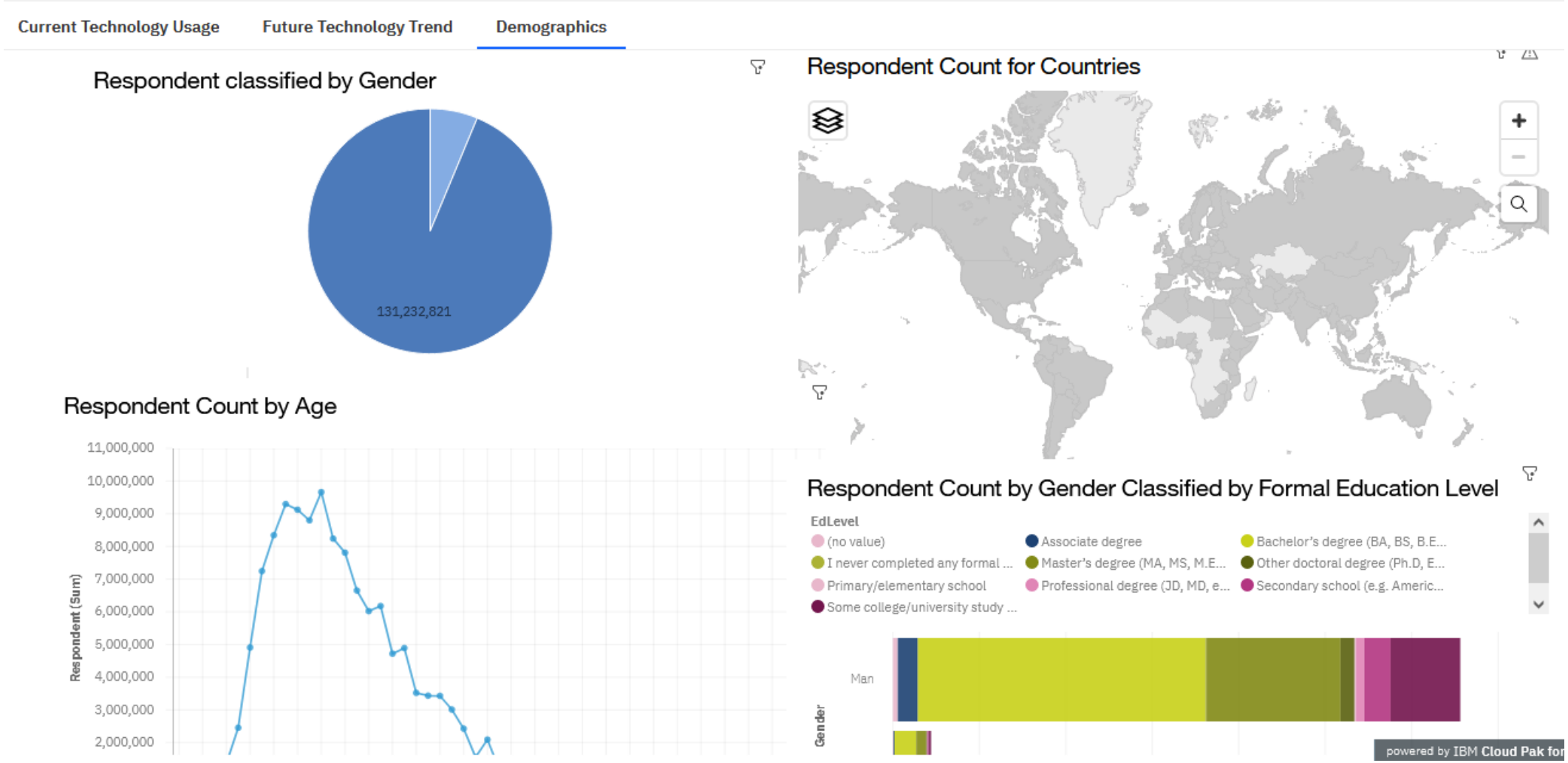








Demographics



DISCUSSION

- Technology Trends at present and in future.
- Low female participation in workforce.

OVERALL FINDINGS & IMPLICATIONS

Findings

- Changing technological trends.
- Concentration of jobs in a few countries like USA and India.
- Gender gap in the workforce.
- Platforms like Docker and AWS are growing

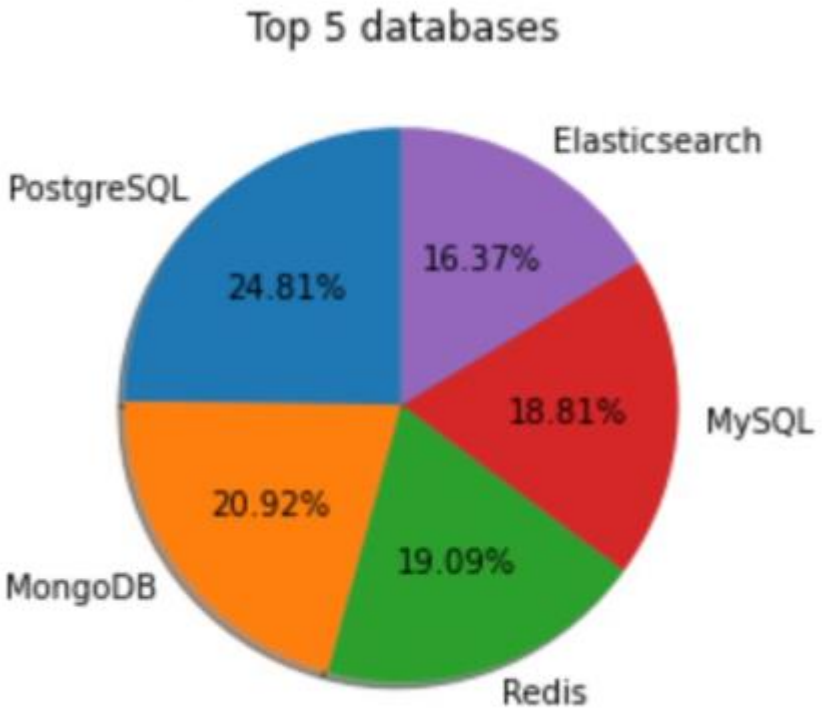
Implications

- Companies need to be flexible and adjust to rapid changes
- Need to spread technology out to lagging countries
- Policies to increase female participation.
- Demand for talent in upcoming technologies.

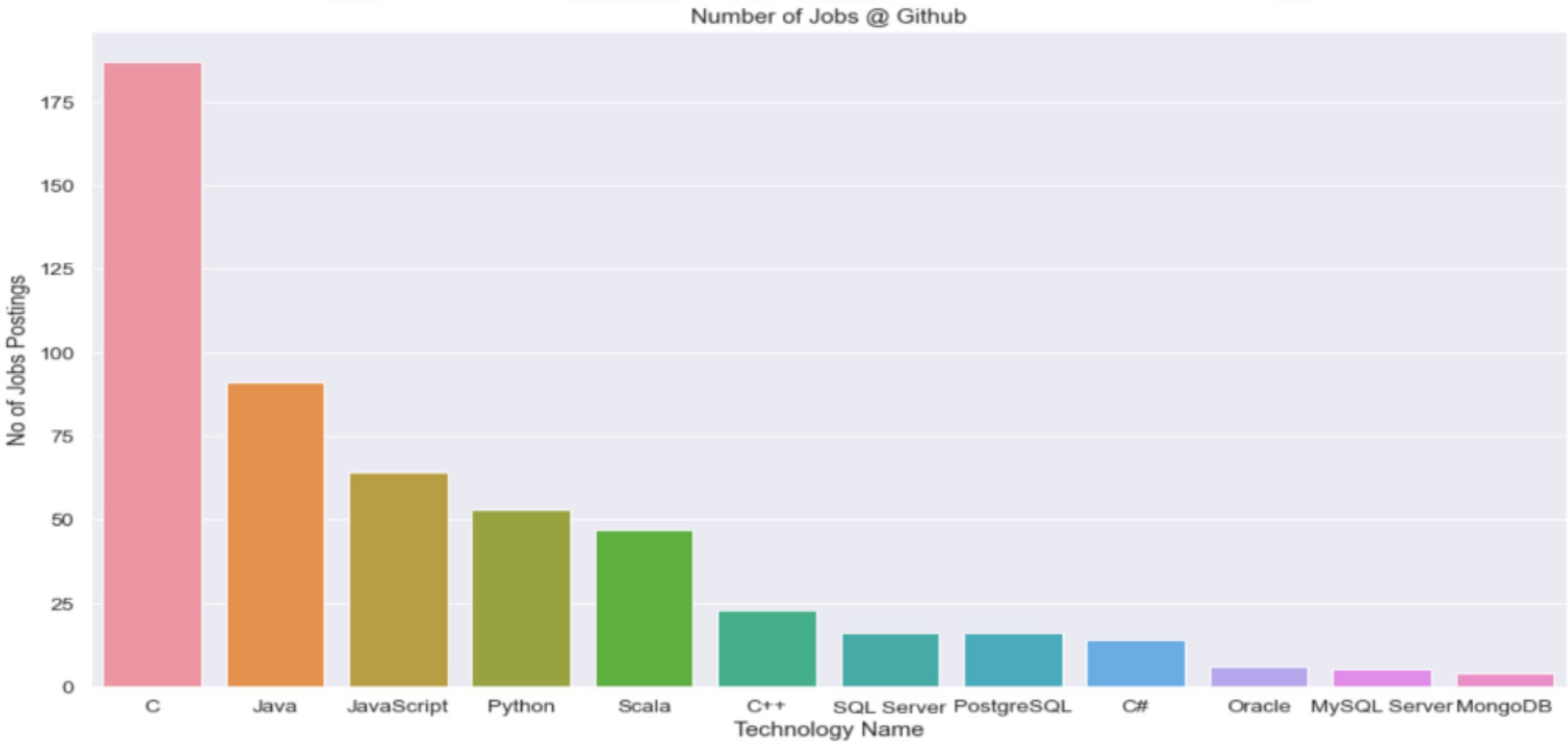
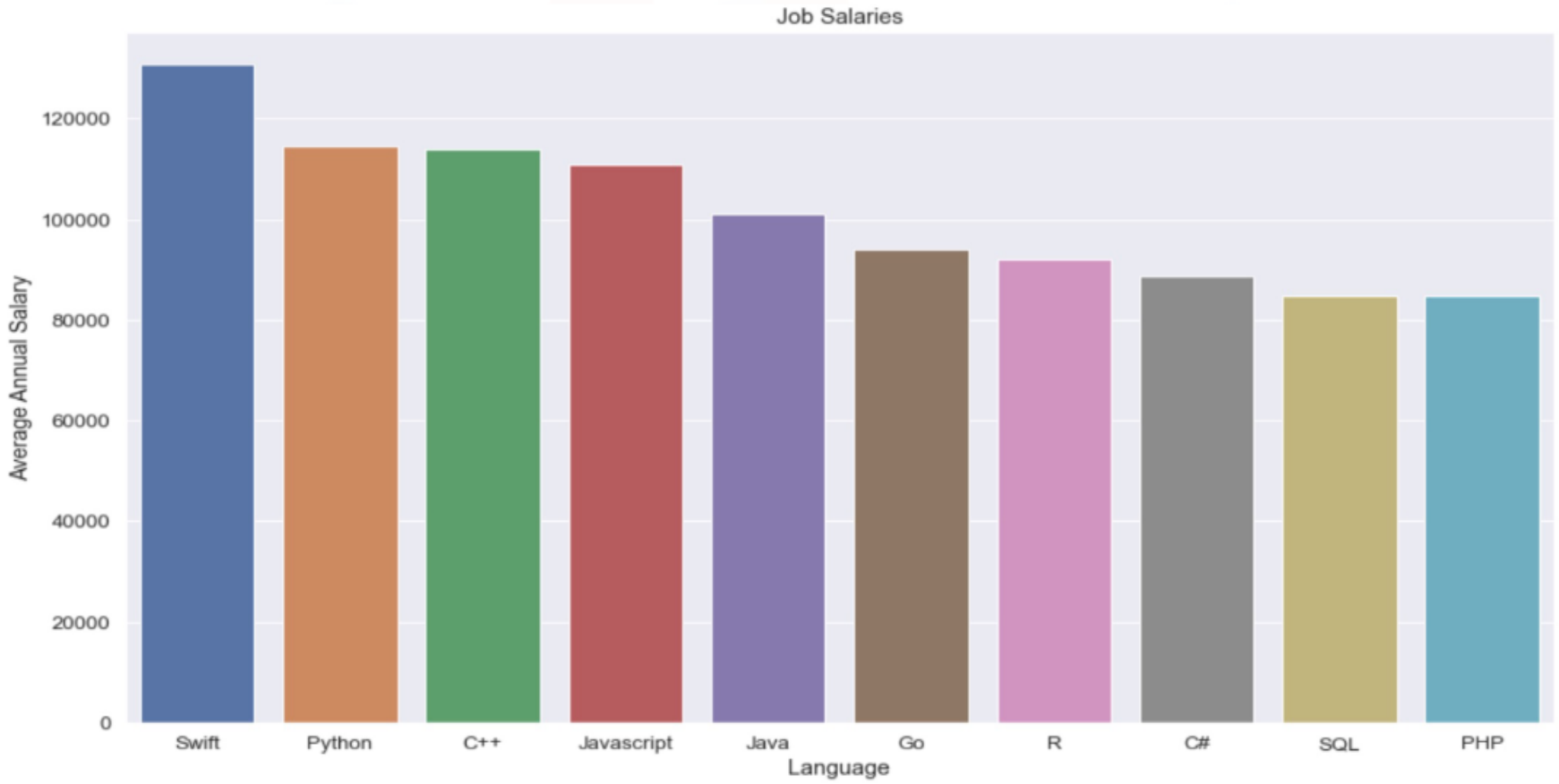
CONCLUSION

- Technology Trends for current and next year.
- Programming Languages, Database and Platform overview.
- Demographics overview.
- Actions to be taken.

APPENDIX


Top 5 databases
PostgreSQL
24.81%
Elasticsearch
16.37%
MySQL
18.81%
Redis
19.09%
MongoDB
20.92%

GITHUB JOB POSTINGS



POPULAR LANGUAGES