TECHNOLOGY TREND ANALYSIS

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OUTLINE

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- Methodology
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- Discussion
- Findings & Implications
- Conclusion
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EXECUTIVE SUMMARY

Current Technology Usage Trend

- Language
- Database
- Platform
- Web frame
- Future Technology Trend
- Language
- Database
- Platform
- Web frame
- Demographics Survey
- Country & Gender Difference

INTRODUCTION

- Analyze technology trends in software and web development among developers around the world
- purpose of this Analysis • Identify the top programming languages, database, platform, and web frame skills in demand
- notify skill requirements for the future • Identify the human resource gap in the industry
- Audience for this Presentation • Programmers • IT industry leaders • Computer science students

METHODOLOGY

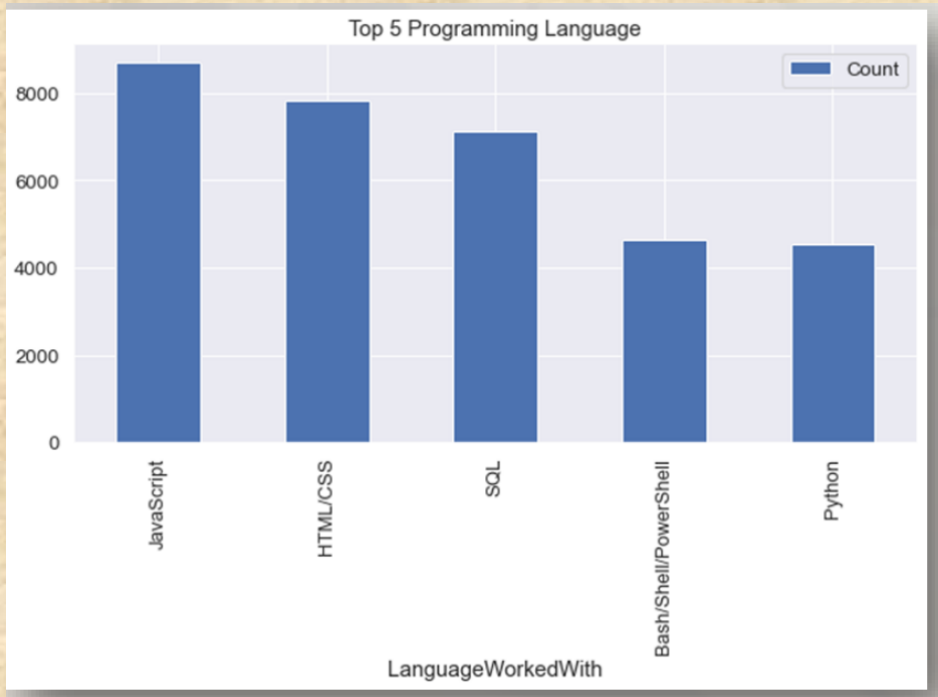
- Data Collection (Sources) • Stack overflow developer 2019 survey
- GitHub job postings • Programming languages annual salary
- Data Wrangling • Data Exploration • Data Cleaning • Data Visualization
- Python matplotlib & turtle • IBM Cognos • Presentation

RESULTS

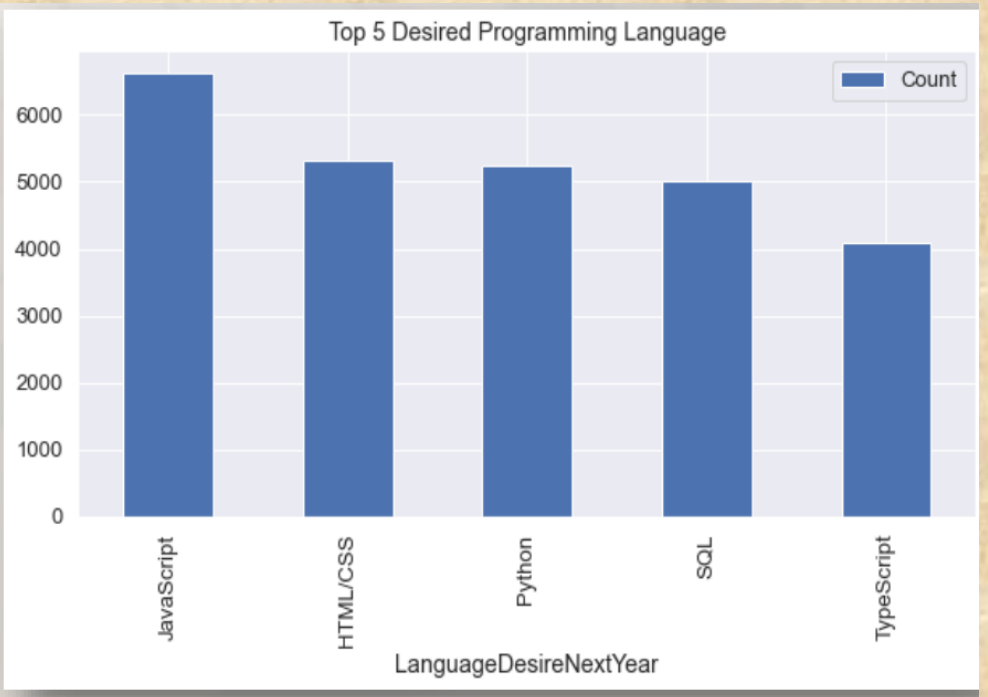
	Respondent	LanguageWorkedWith	LanguageDesireNextYear	DatabaseWorkedWith	DatabaseDesireNextYear	PlatformWorkedWith
0	4	C	C	MySQL	MySQL	Linux
1	4	C++	C#	SQLite	SQLite	Windows
2	4	C#	JavaScript	NaN	NaN	NaN
3	4	Python	SQL	NaN	NaN	NaN
4	4	SQL	NaN	NaN	NaN	NaN
...	...	...	...	...	...	...
74584	25142	Go	Python	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

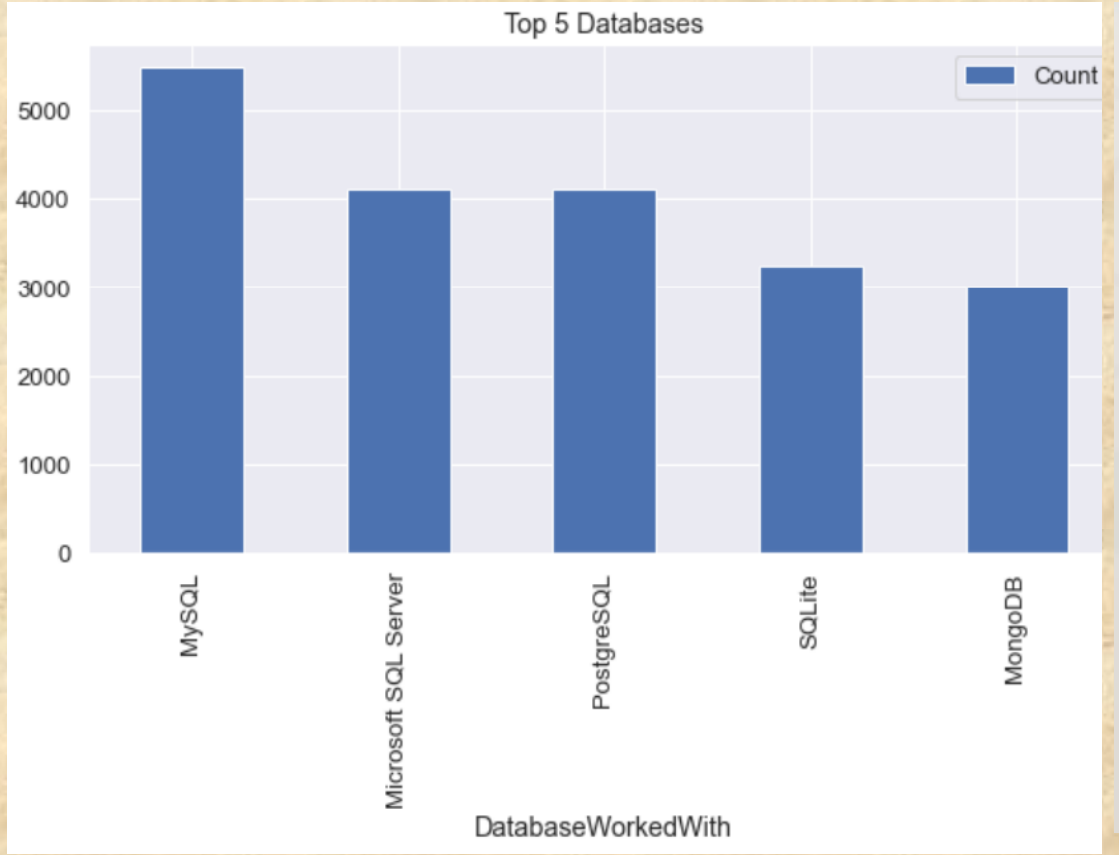
- JavaScript is the top trending language in the world
- Python and TypeScript are becoming more and more popular
- HTML/CSS and SQL still have a great helping of the language usage trend

Implications

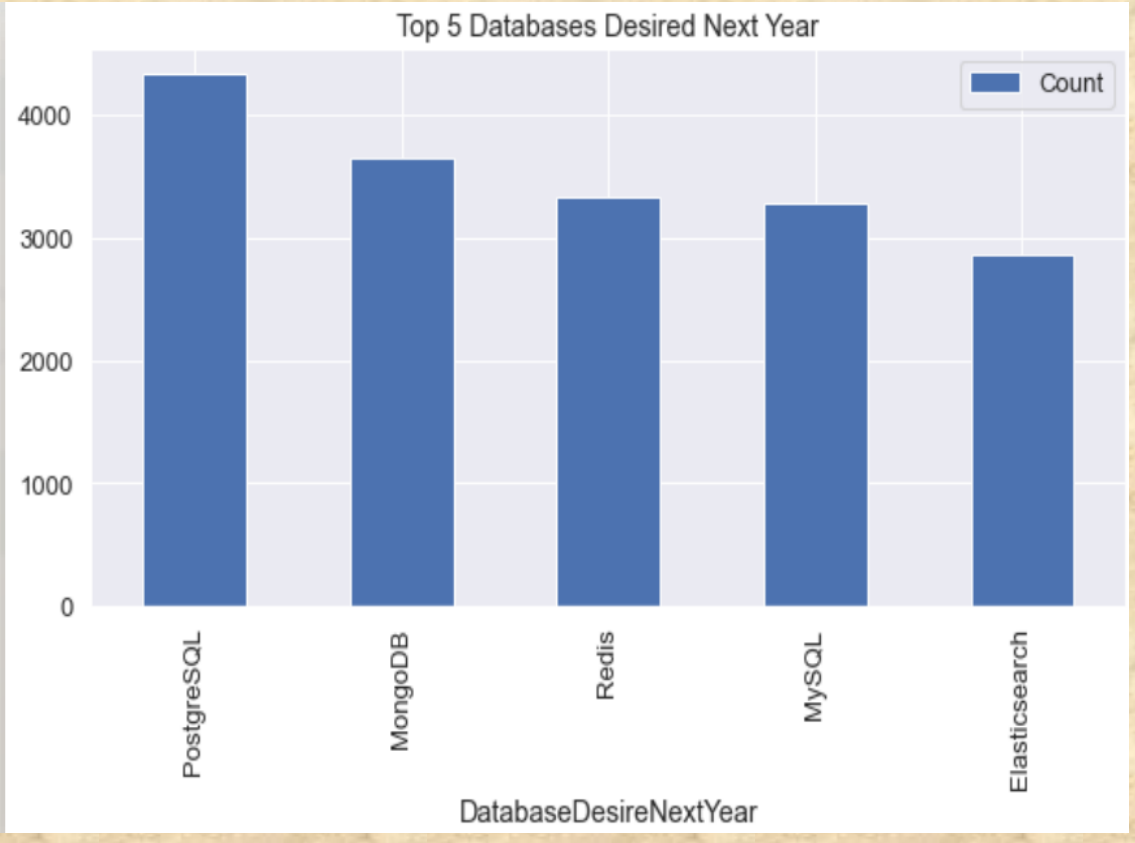
- Web developments and web developers are still in high demands
- JavaScript and TypeScript are crucial to learning for developers
- Python is the new trending language, especially popular in AI fields

DATABASE TRENDS

Current Year



Next Year



DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL is the most popular database
- There are still a lot of companies using Microsoft SQL Server
- MongoDB and Redis are the most favorable NoSQL database

Implications

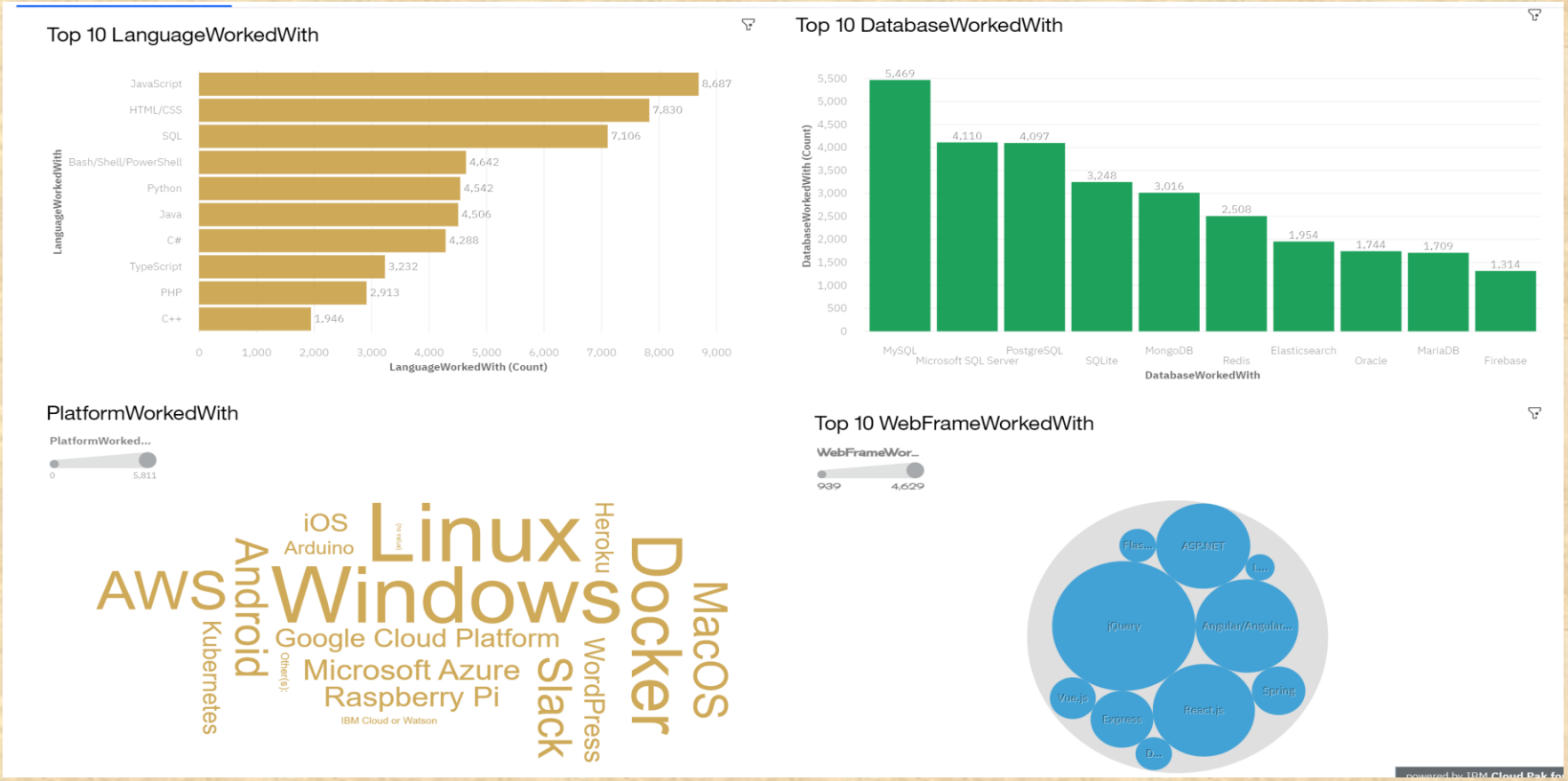
- Open-source databases like MySQL are still preferable
- Software development and Big Data technology still requires SQL
- NoSQL databases will make an impact on relational databases

DASHBOARD

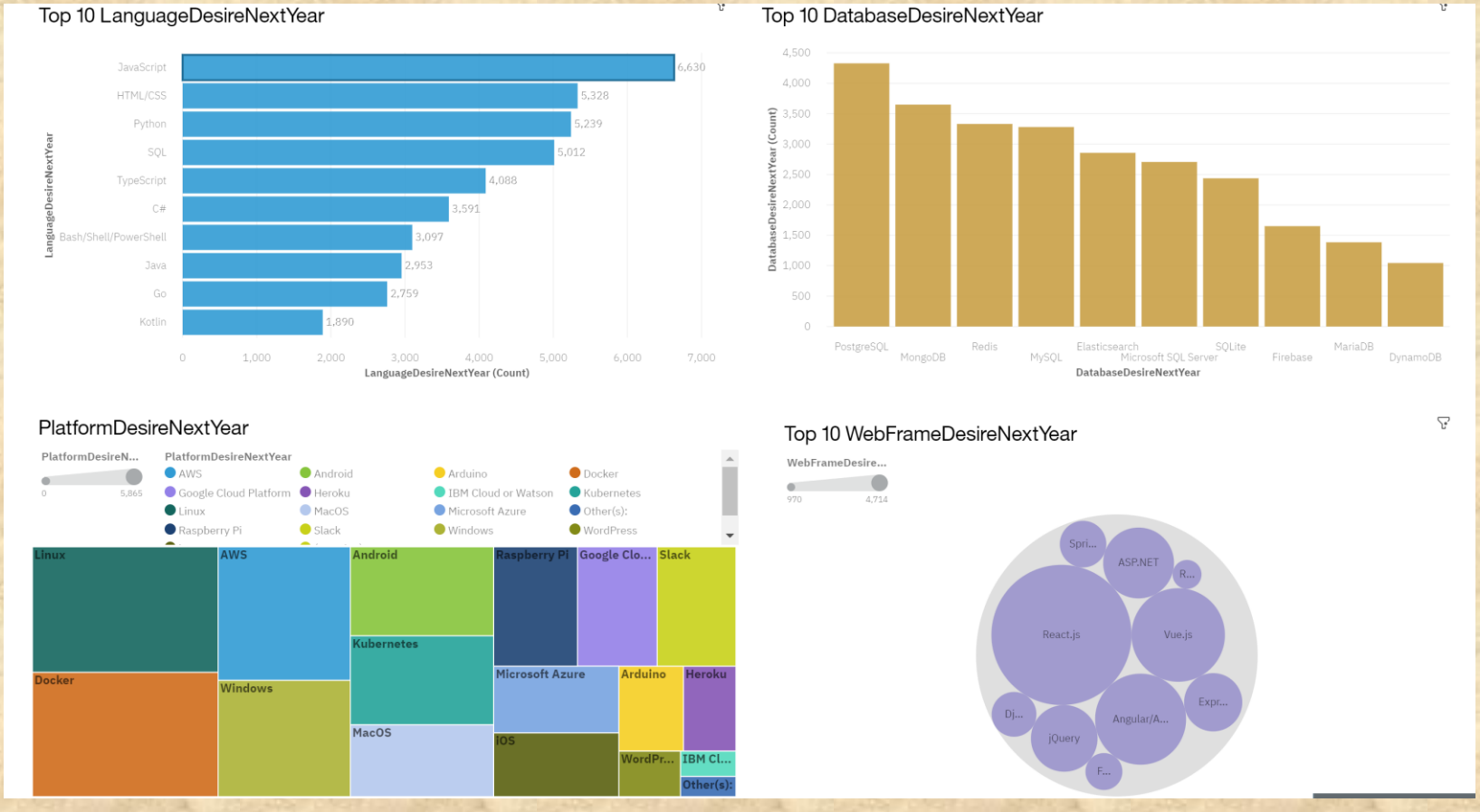
Here is the link

https://dataplatform.cloud.ibm.com/dashboards/fe52d392-0d9c-4f29-8996-389531352958/view/6e1bdc0911b91dfc56efe6e4079979037f652454e1bb8b0b83867b495e607197a96f12c7c87a495cd9425037fbee4708cc

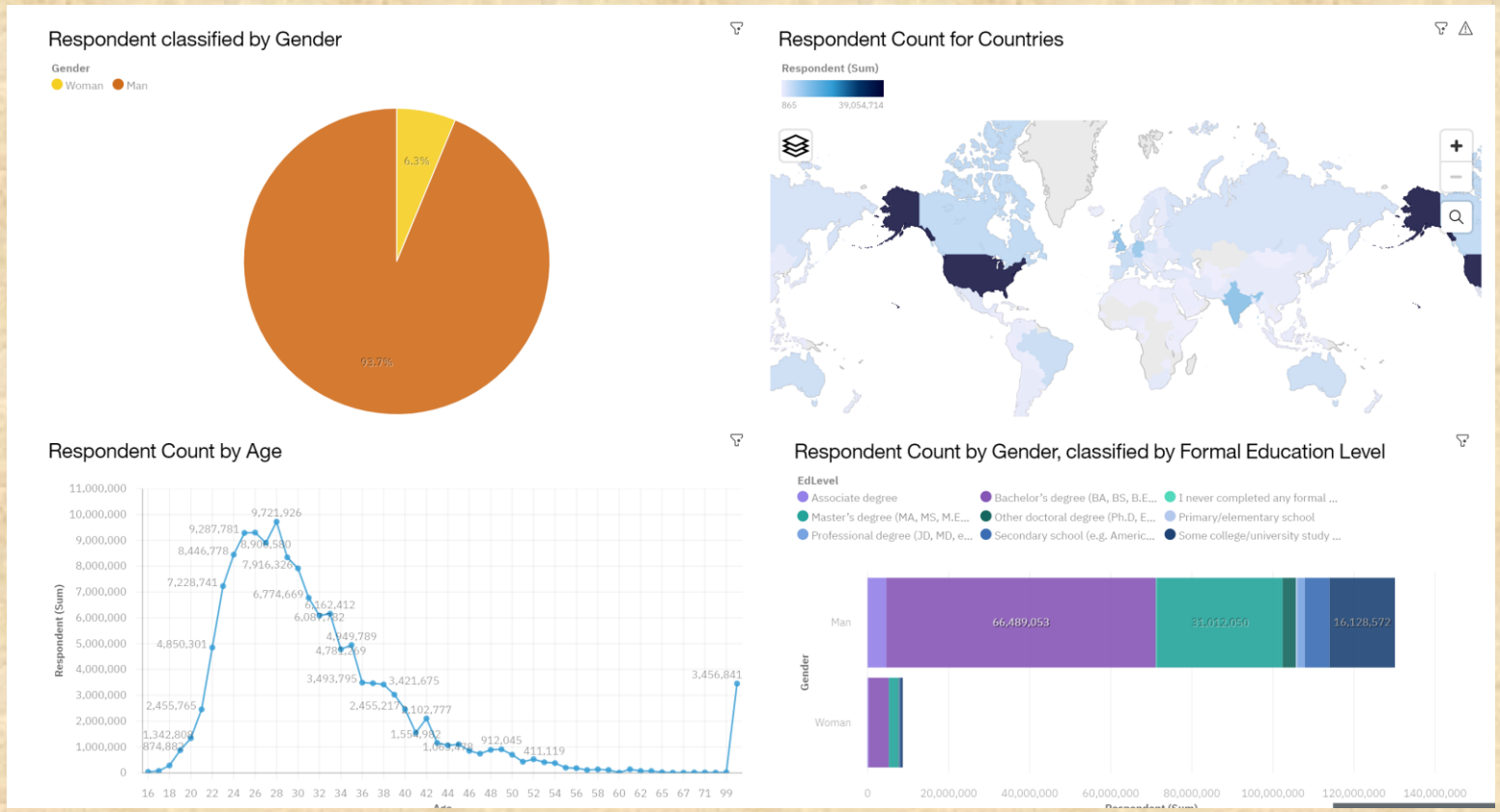
CURRENT TECHNOLOGY USAGE



FUTURE TECHNOLOGY TREND



DEMOGRAPHICS



DISCUSSION

- Technology Usage Trend Now and Future
- Gender, Age and Education Discrimination in IT Industry

OVERALL FINDINGS & IMPLICATIONS

Findings

- Technology trends change every year
- the USA is the top technology country
- There are extreme gender and age discrimination
- Docker and AWS are the most popular platform

Implications

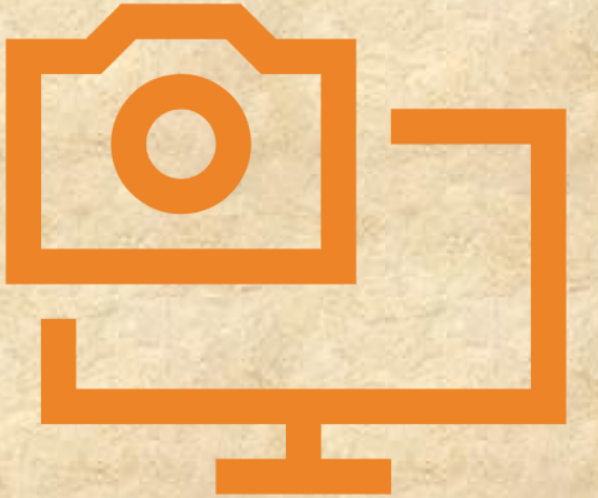
- Programmers should always follow the latest technology trends
- More countries should have an equal chance to be exposed to new technology
- Gender and Age should not be one of the concerns or benefits of Employment

CONCLUSION

Technology Trends

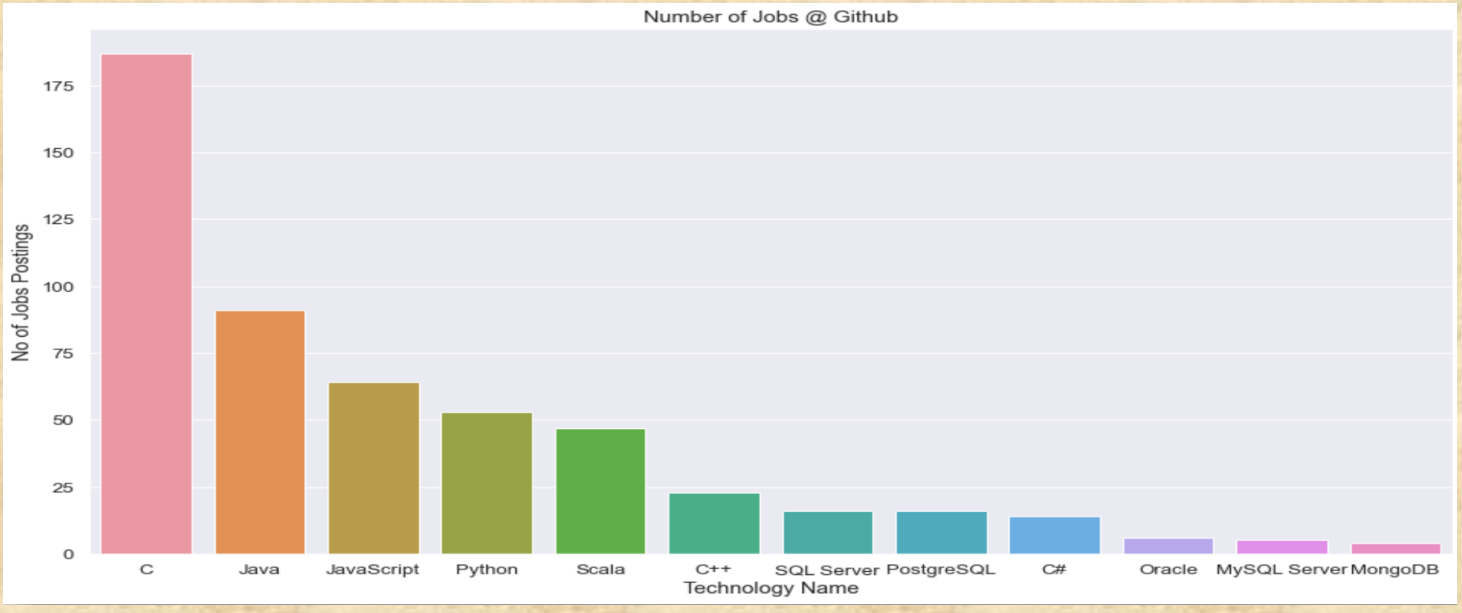
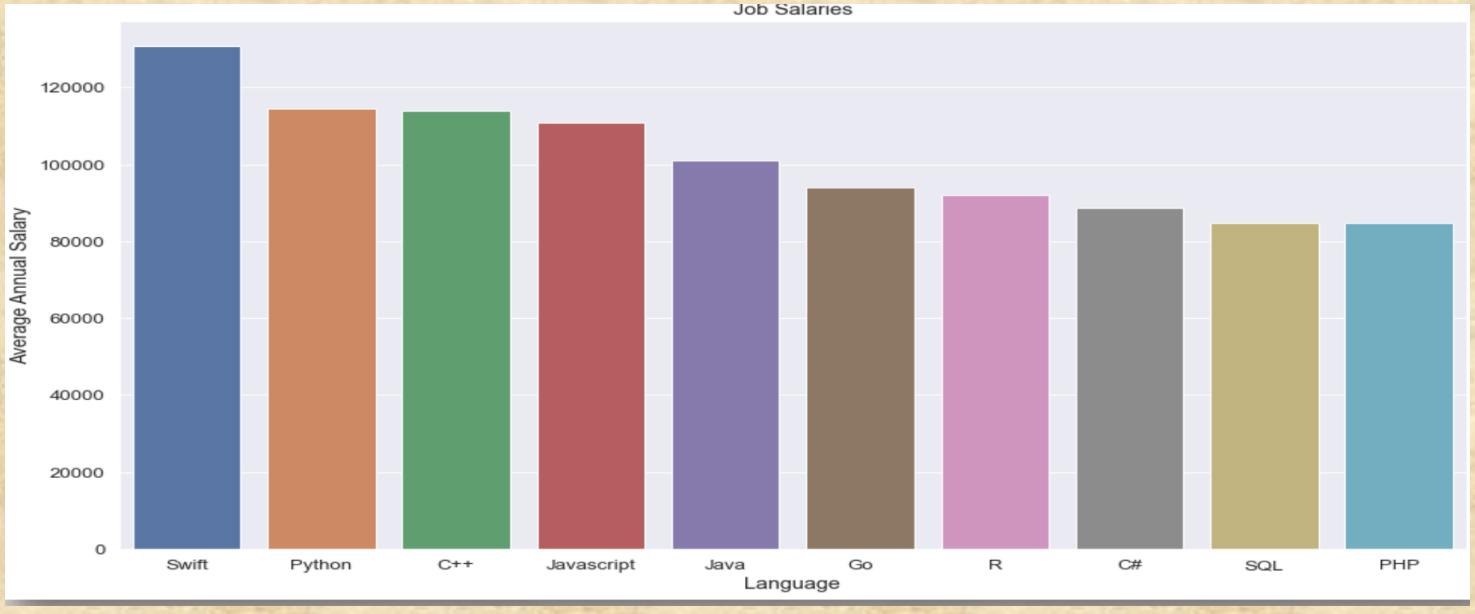
- Programming Languages, Database, Platform, and Web frame Trends
- Demographics Trends
- Gender and Education
- Programming Languages Trends and Salary Trends

APPENDIX



BM Cognos Dashboard Embedded (CDE) is an AI-fueled business intelligence benefit that supports the whole information analytics cycle, from discovery to operationalization. It provides users with information revelation capabilities to visually explore and associated with their information to identify the key bits of knowledge for progressing data-driven driven decisions. Clients can perform information revelation and then rapidly gather that data into interactive, outwardly engaging dashboards; all without the need of formal preparing

GITHUB JOB POSTINGS



POPULAR LANGUAGES