TREND OF TECHNOLOGY ANALYSIS

Nihal Navin Thampy

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OUTLINE

- Executive Summary

- Introduction

- Methodology

- Results

  - Visualization – Charts

  - Dashboard

- Discussion

  - Findings & Implications

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IBM Developer

SKILLS NETWORK

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 trend 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
  - Identify skill requirements for future
  - Identify 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
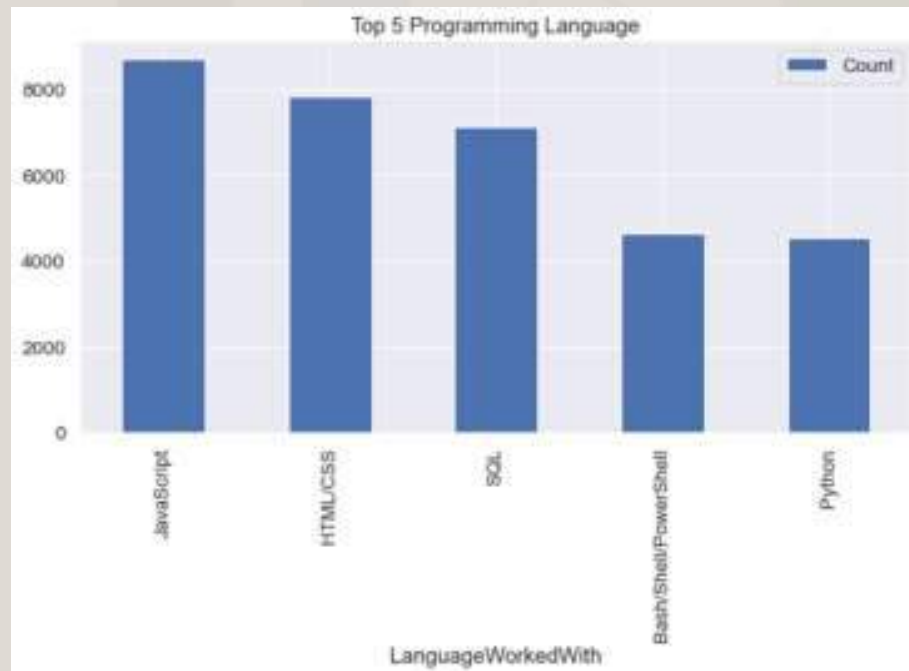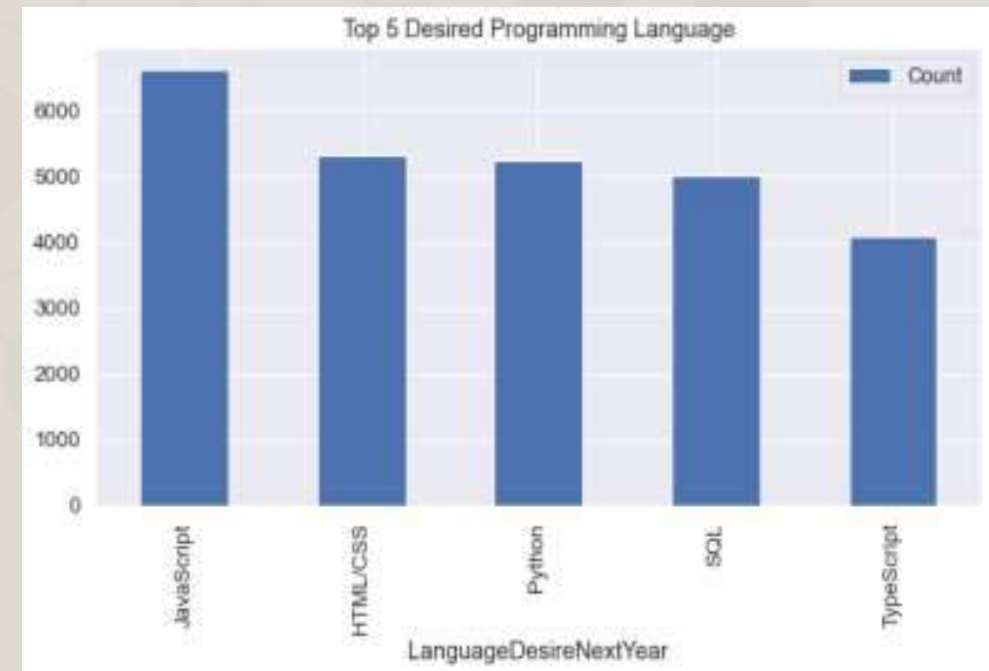 - Python matplotlib & turtle
  - IBM Cognos
- Presentation

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 IN TECHNOLOGY

Current Year

Next Year

PROGRAMMING LANGUAGE TRENDS - FINDINGS & IMPLICATIONS

Findings

- JavaScript leads the programming language trends globally.
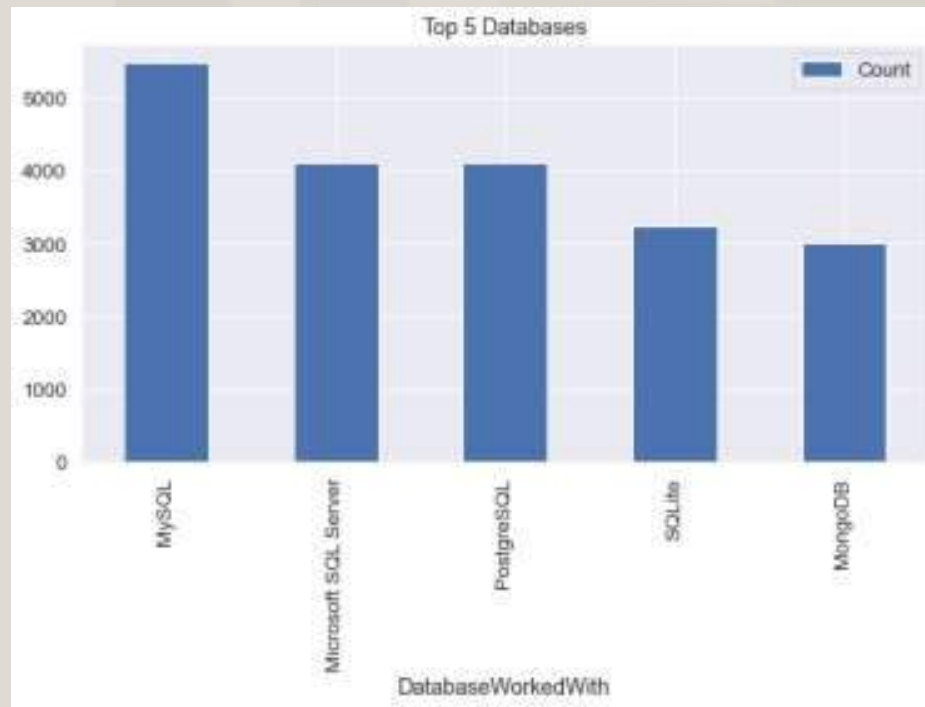- Python and TypeScript are steadily gaining popularity across various applications.

Implications

- Web development and developers are in continuous high demand due to the need for digital solutions and online experiences.

- JavaScript and TypeScript proficiency is essential for modern web development and application creation.

- Python is emerging as a trending language, particularly in the field of artificial intelligence, powering innovation and advancements.
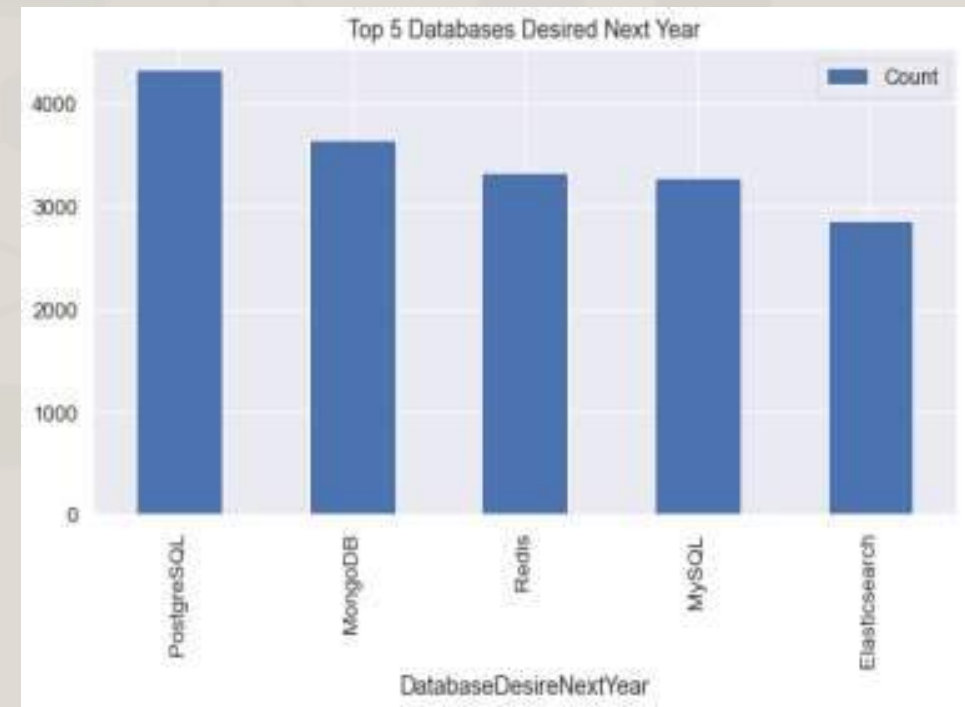
DATABASE TRENDS

Current Year

Next Year

DATABASE TRENDS - FINDINGS & IMPLICATIONS

Findings

- MySQL is the widely favored database system in various industries.
- Microsoft SQL Server remains a reliable choice for data management in many businesses.
- MongoDB and Redis lead the NoSQL category, preferred for flexible and scalable data storage.

Implications

- Open-source databases like MySQL are still popular choices.
- SQL remains crucial in software development and Big Data.
- NoSQL databases are set to transform the relational database landscape.
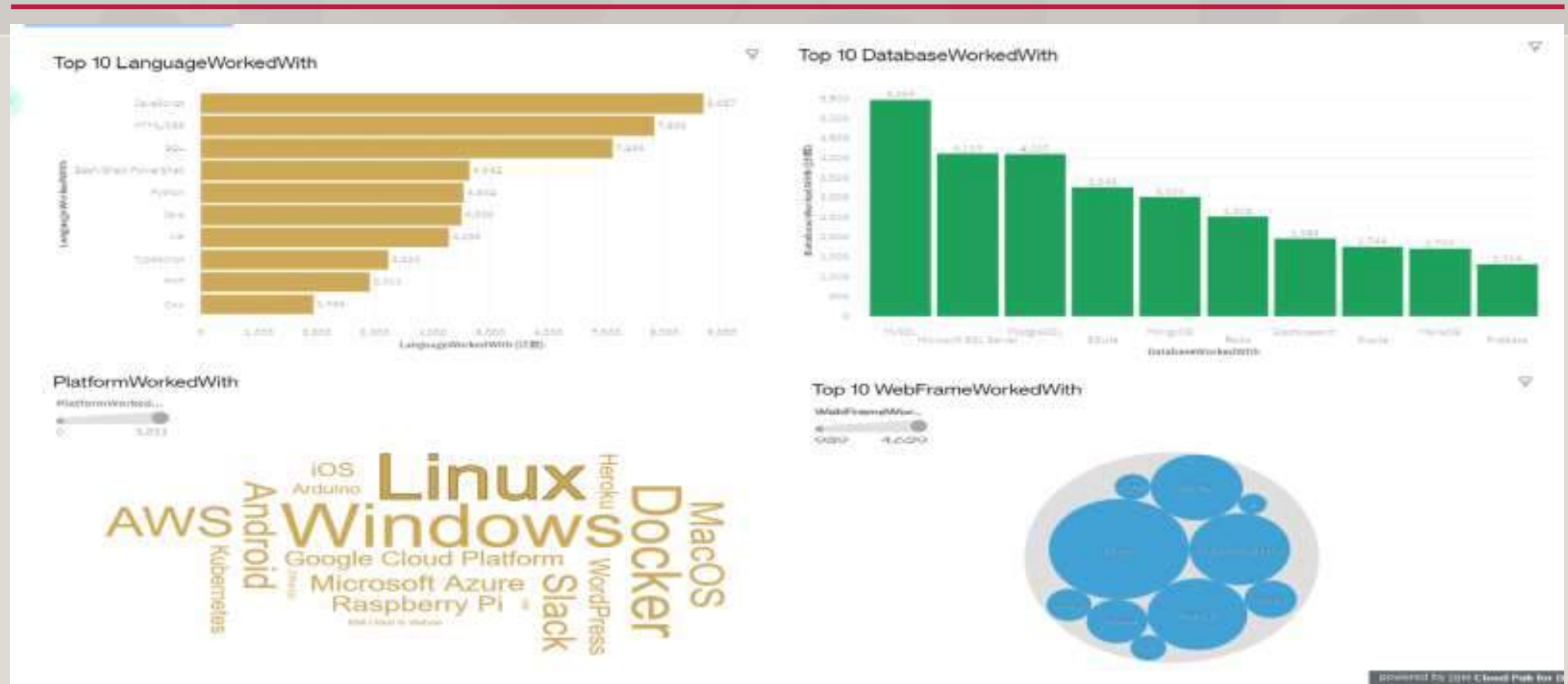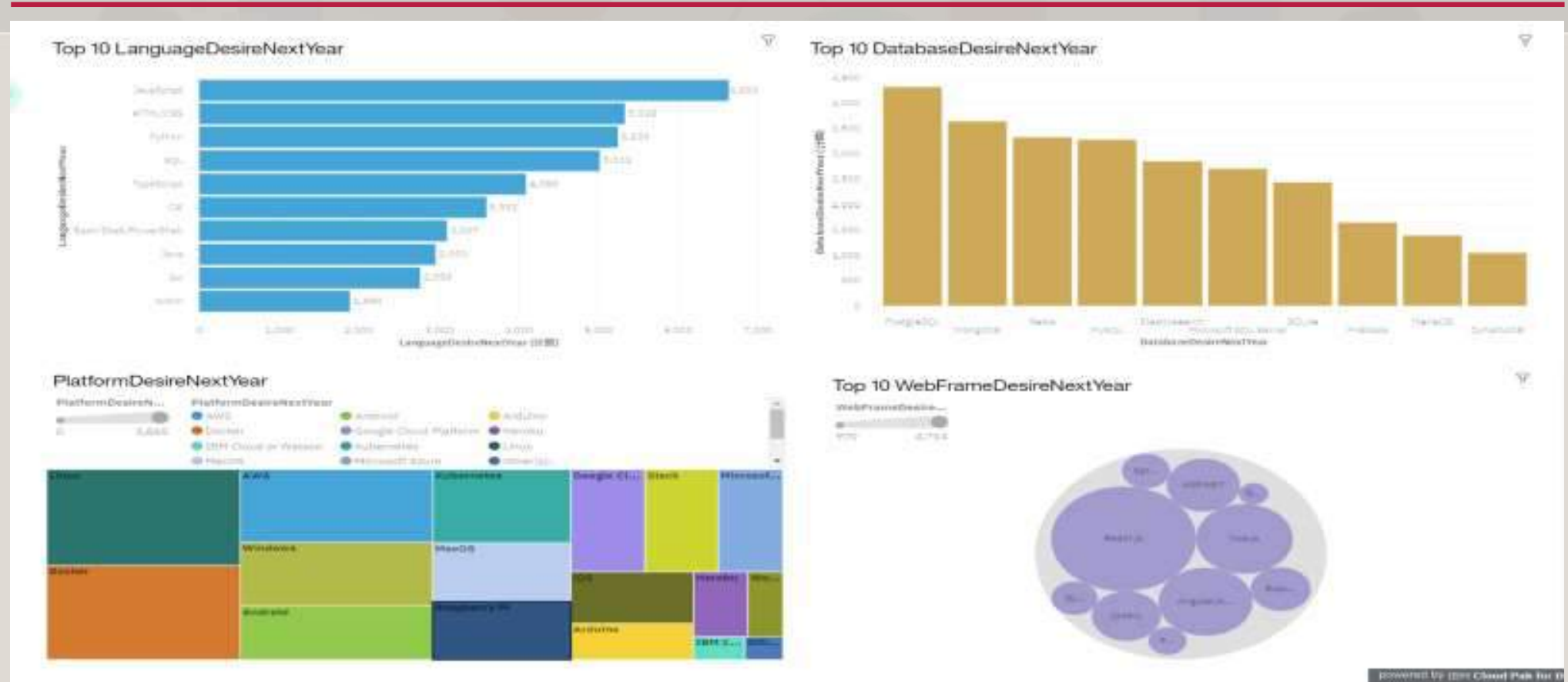
DASHBOARD

The permanent link of the read-only view of the Cognos dashboard:

https://github.com/nihal2329/Capstone-story-project/blob/34be1404959e81aba922e68a82e0f891a95a68fb/A%20dashboard%20with%20Cognos%20Dashboard%20Embedded%20(CDE).json
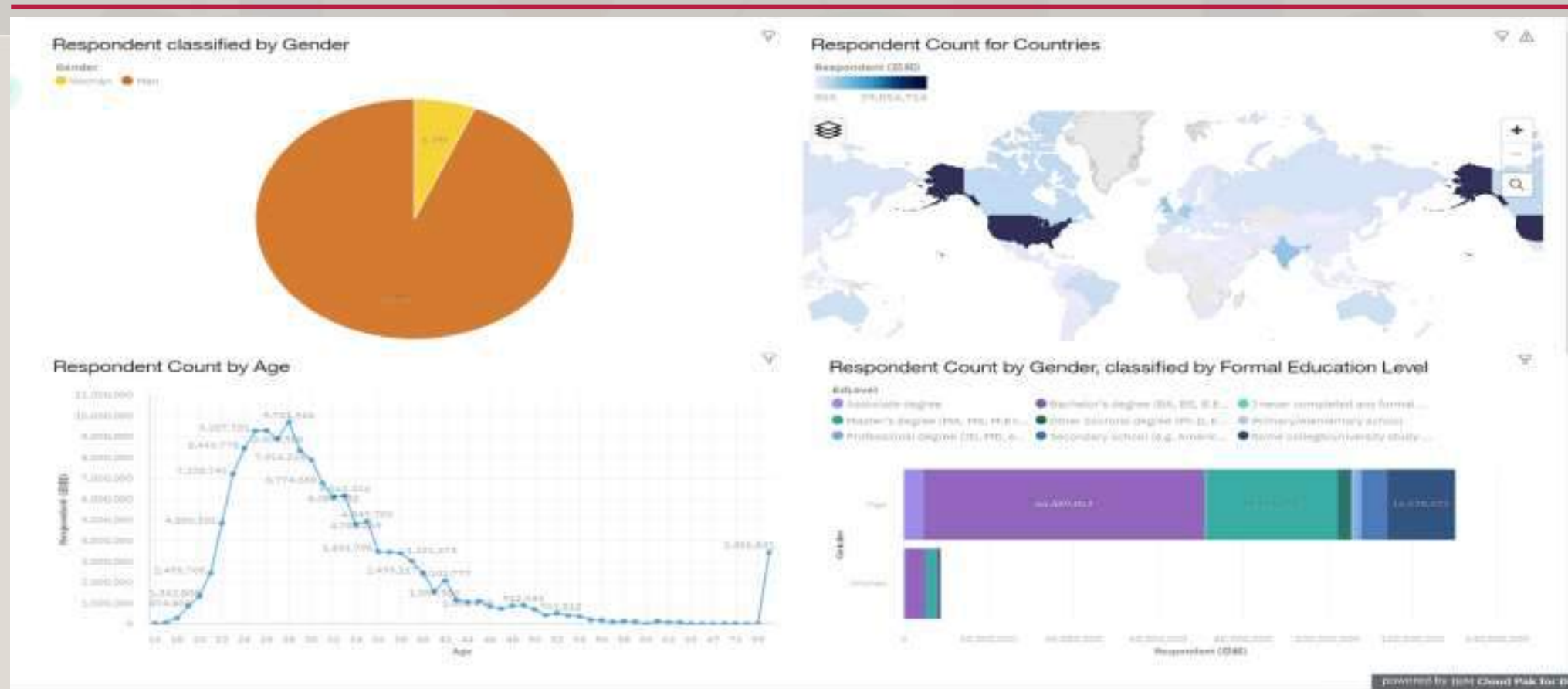
CURRENT TECHNOLOGY USAGE

FUTURE TECHNOLOGY TREND

DEMOGRAPHICS

DISCUSSION

- Technology Usage Trends: Present and Future
- Disparities in the IT Industry: Gender, Age, and Education Bias.

OVERALL FINDINGS & IMPLICATIONS

Findings

- Yearly Tech Trend Changes
- USA's Role in Tech Leadership
- Gender and Age Bias in Tech
- Docker and AWS Platform Dominance

Implications

- Keeping Current: Programmers Must Embrace Technology Trends
- Equal Tech Exposure: Bridging the Global Gap

CONCLUSION

- Tech Trends: Languages, Databases, Platforms, Frameworks
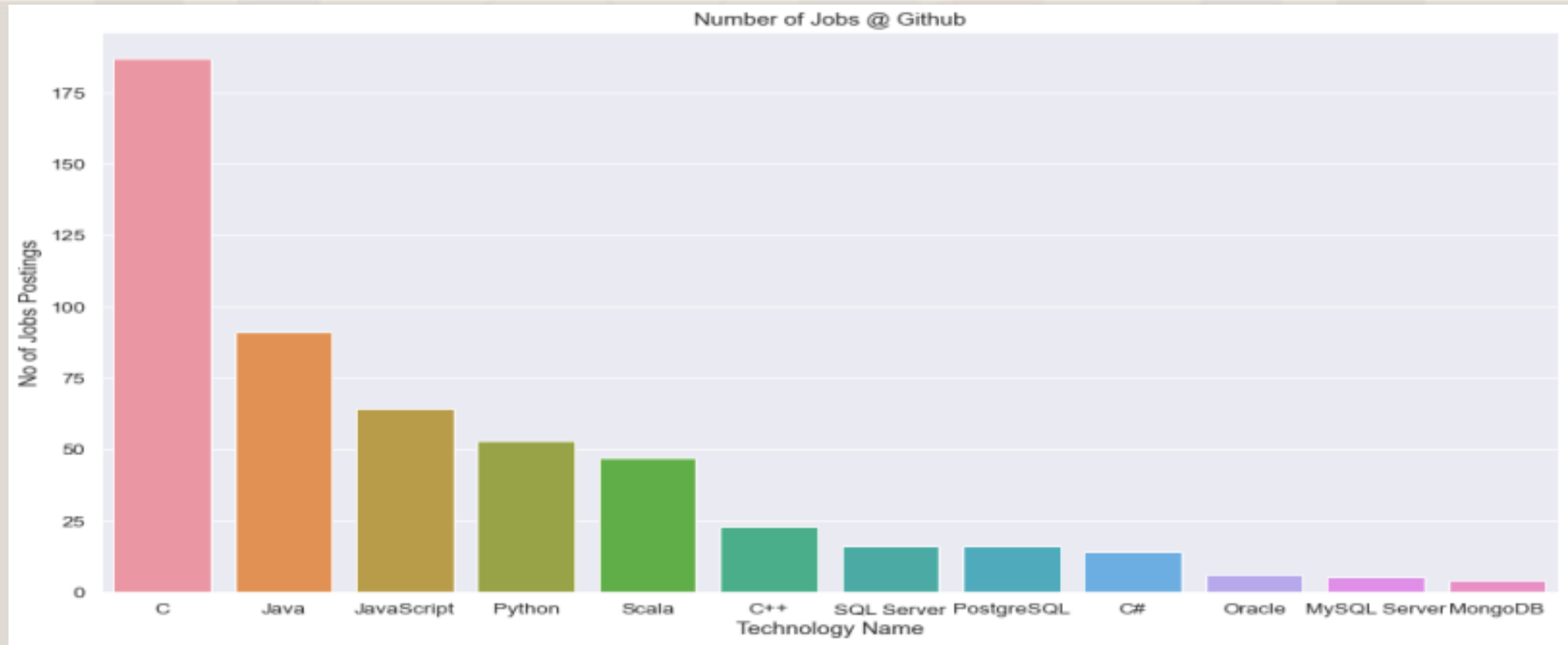- Demographics: Gender, Education
- Language Trends vs. Salaries

APPENDIX

- IBM Cognos Dashboard Embedded: AI-Powered Business Intelligence
- Supports Full Data Analytics Cycle
- User-Friendly Data Exploration
- No Formal Training Needed for Interactive Dashboards

GITHUB JOB POSTINGS

POPULAR LANGUAGES

Job Salaries