TechnologyStack

Date:	30 October 2023
Team ID:	10.1
Project Name:	Ai-Enhanced Security Analytics Dashboard That Provides Real-Time Insights Into Security Events, Trends, And Risks
Maximum Marks:	4 Marks

Technical Architecture: The Deliverable shall include the architectural diagram as below and the information as per the table1 & table 2

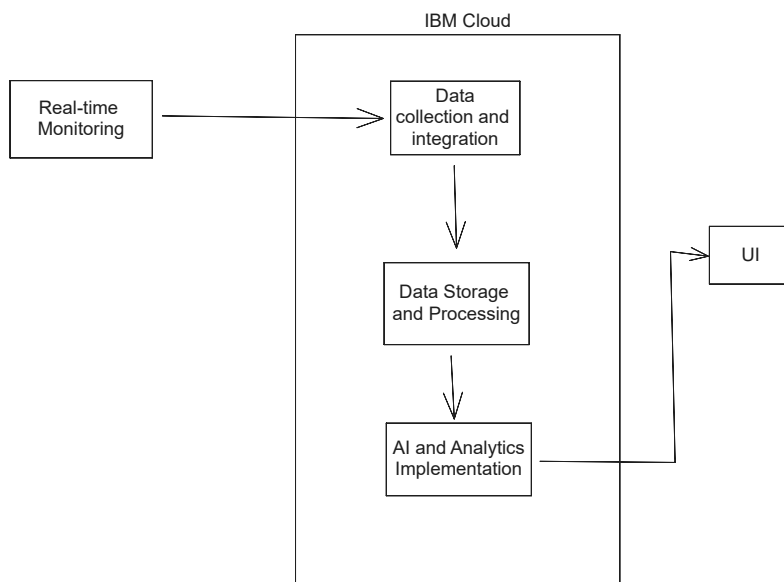**Technical Architecture:**

Architectural Diagram:

Table 1: Components & Technologies:

S.No	Component Description	Technology
1.	User Interface	React.js, Angular, D3.js
2.	Data Collection	Logstash, Beats, Custom APIs
3.	Data Storage	Elasticsearch, Apache Kafka
4.	Data Processing	Apache Spark, Python (TensorFlow/PyTorch)
5.	AI and Analytics	Python (TensorFlow/PyTorch), NLP libraries
6.	Real-time Monitoring	Custom scripts, Messaging systems (Slack, email)

S.No	Component Description	Technology
7.	User Experience	User feedback tools, analytics
8.	Security and Compliance	RBAC frameworks, Security assessment tools
9.	Testing and Quality Assurance	Automated testing frameworks, Load testing tools
10.	Deployment and Training	Docker, Documentation tools, Zoom

Table 2: Application Characteristics:

S.No	Characteristics	Technology
1.	Open-Source Frameworks	React.js, Angular, D3.js, TensorFlow, PyTorch
2.	Security Implementations	RBAC, Security assessment tools
3.	Scalable Architecture	Microservices, Apache Kafka, Docker
4.	Availability	Load balancers, Distributed servers
5.	Performance	Apache Spark, Caching, CDNs

References:

1. [Elasticsearch Documentation](#)
2. [Logstash Documentation](#)
3. [Beats Documentation](#)
4. [ELK Stack](#)
5. [Apache Kafka Documentation](#)
6. [Apache Spark Documentation](#)
7. [TensorFlow Documentation](#)
8. [PyTorch Documentation](#)
9. [Matplotlib Documentation](#)
10. [Plotly Documentation](#)
11. [Natural Language Toolkit (NLTK) Documentation](#)
12. [React.js Documentation](#)
13. [Angular Documentation](#)
14. [D3.js Documentation](#)
15. [Docker Documentation](#)
16. [Zoom Developer Documentation](#)