Project Design Phase-II Technology Stack (Architecture & Stack)

Date

Team ID

Team-591868

Project Name

**Online Payments Fraud Detection Using ML**

Maximum Marks

4 Marks

Technical Architecture:

Events streaming

Refers to events streaming from digital banking applications.

This component must publish events as soon as they occur.

Kafka-connect. Kafka producer API

Data capture

Refers to events captured in a resilient way as well as making them available to different consumers.

Apache Kafka

Fraud prevention

Refers to real-time fraud prevention while transactions are in motion. This step must respond with a significantly reduced latency, given that the end-user would be blocked until this prevention is performed.

Apache Kafka Streams

Fraud detection

Refers to detection of fraud in a non-deterministic way, affecting a score to each transaction and persisting information about suspicious transactions.

Apache Spark Spark Streaming H2O

PostgreSQL

Monitoring

Refers to making potential fraud alerts available to human supervisors that could analyze and eventually contact end- users and perform curative actions accordingly.

React NodeJS

Alerting

Refers to raising alerts once a suspicious alert is confirmed to be fraudulent. These alerts could be consumed afterward by third-party consumers for actions such as account blocking and SMS notifications...

Kafka-connect. Kafka producer API