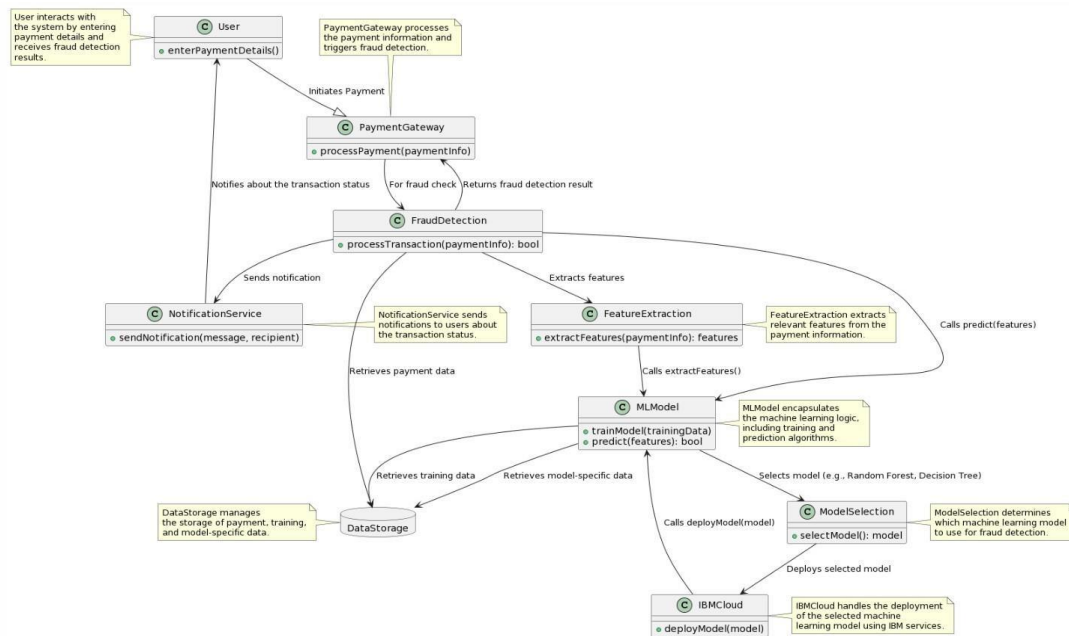


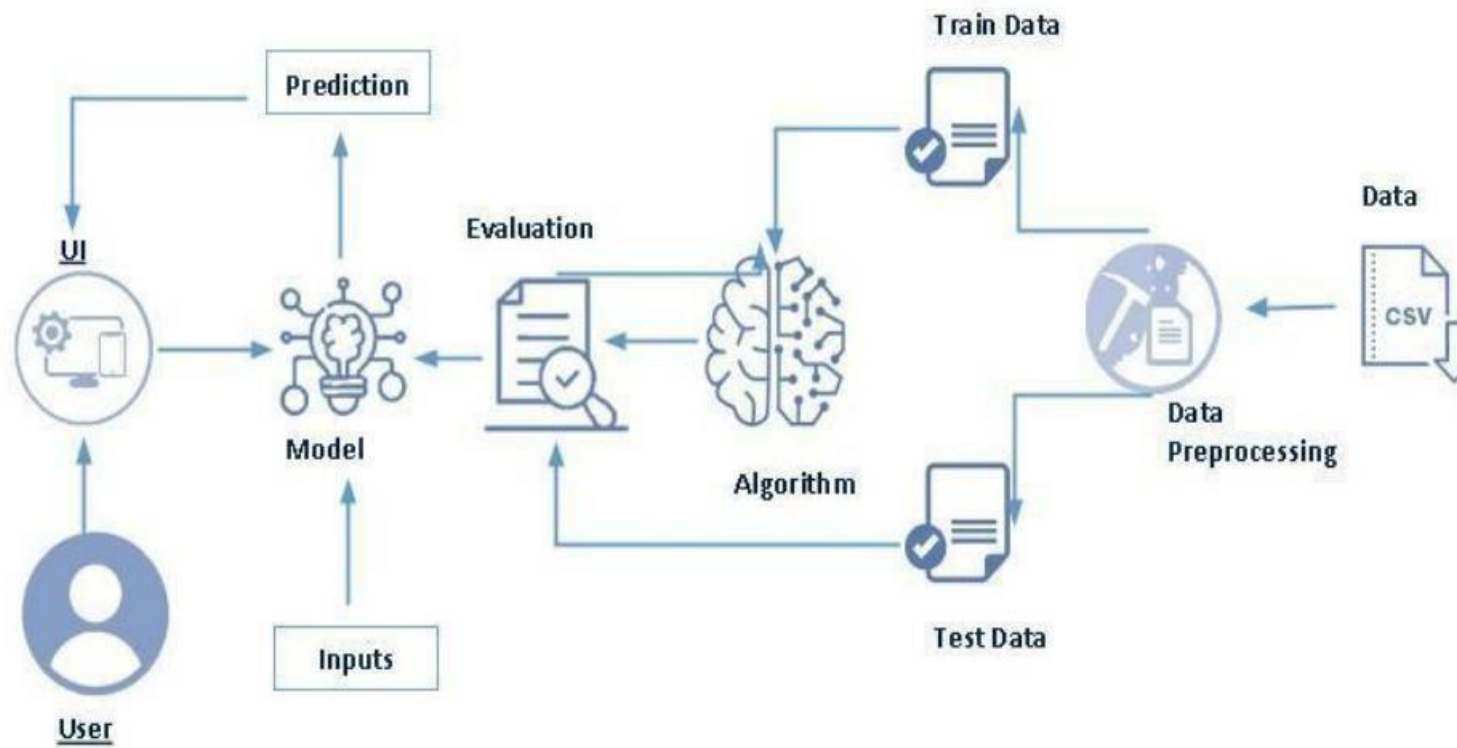
Project Design Phase-II Data Flow Diagram & User Stories

Date	13-11-2023
Team ID	Team-592025
Project Name	Project - Online Payments Fraud Detection Using ML
Maximum Marks	4 Marks

Data Flow Diagram:



Simplified data flow diagram:



Flow (How actually it is working):

- **User Interaction:**

- User initiates payment by entering payment details.

- **Payment Processing:**

- Payment details sent to PaymentGateway for processing.

- **Fraud Detection Trigger:**

- PaymentGateway triggers FraudDetection to check for fraud.

- **Feature Extraction:**

- FraudDetection calls FeatureExtraction to extract relevant features.

- **Machine Learning Model:**

- Extracted features sent to MLModel.
- MLModel includes methods for training (trainModel) and prediction (predict).

- **Model Selection:**

- ModelSelection determines the machine learning model (e.g., Random Forest or Decision Tree).

- **IBM Cloud Deployment:**

- Selected model deployed using IBMCloud.
- Involves deploying the model to the IBM Cloud using IBM services.

- **Data Storage:**

- System interacts with DataStorage to retrieve training data, payment data, and model-specific data.

- **Prediction and Notification:**

- MLModel predicts fraud based on features.
- FraudDetection uses results, and if fraud is detected, NotificationService sends a notification.

- **User Notification:**

- NotificationService informs the User about the transaction status, including fraud detection results.

- **Result Return:**

- Fraud detection result sent back to PaymentGateway to influence further processing.

User Stories

Sprint	Functional Requirement (Epic)	User Story Number	User Story / Task	Story Points	Priority
Sprint-1	Fraud Prevention and User Notification	USN-1	As a user, I want to input transaction details for fraud detection	3	Medium
Sprint-1	Fraud Prevention and User Notification	USN-2	As a user, I want to receive real-time alerts for suspicious transactions	2	Low
Sprint-2	Transaction History and Custom Preferences	USN-3	As a user, I want to view my transaction history for analysis	3	Medium
Sprint-2	Transaction History and Custom Preferences	USN-4	As a user, I want to customize my fraud detection preferences	2	Low
Sprint-3	Login Dashboard	USN-5	As a user, I want to receive detailed reports on flagged transactions	3	Medium
Sprint-3	Login Dashboard	USN-6	As a user, I want to provide feedback on false positives	2	Low
Sprint-4	AI Enhancements	USN-7	As a user, I want the system to adapt and improve fraud detection using AI	4	High
Sprint-4	AI Enhancements	USN-8	As a user, I want to explore advanced AI-driven fraud prevention settings	3	Medium
Sprint-5	Internationalization and Localization	USN-9	As a user, I want the system to support ENGLISH languages for a global audience	3	Medium
Sprint-5	Internationalization and Localization	USN-10	As a user, I want date and currency formats to be global irrespective of region	2	Low