Project Design Phase-II
Data Flow Diagram & User Stories

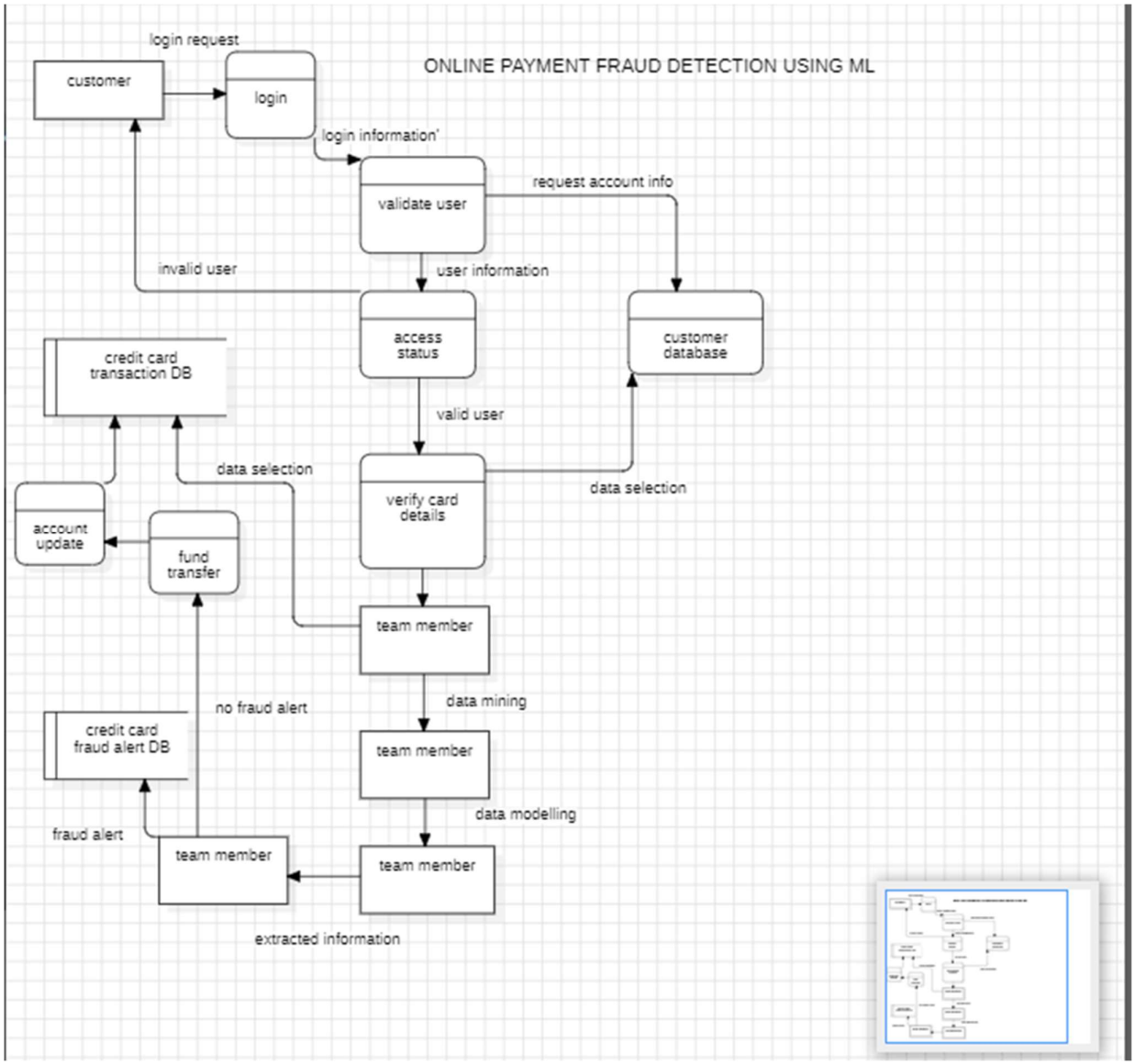
Date	23 October 2023
Team ID	Team-592699
Project Name	Project – Online payment fraud detection using ML
Maximum Marks	4 Marks

Data Flow Diagrams:

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.

Online Payments Fraud Detection Using ML

The growth in internet and e-commerce appears to involve the use of online credit/debit card transactions. The increase in the use of credit / debit cards is causing an increase in fraud. The frauds can be detected through various approaches, yet they lag in their accuracy and its own specific drawbacks. If there are any changes in the conduct of the transaction, the frauds are predicted and taken for further process. Due to large amount of data credit / debit card fraud detection problem is rectified by the proposed method
We will be using classification algorithms such as Decision tree, Random forest, svm, and Extra tree classifier, xgboost Classifier.We will train and test the data with these algorithms. From this the best model is selected and saved in pkl format. We will be doing flask integration and IBM deployment.


ONLINE PAYMENT FRAUD DETECTION USING ML
login request
customer
login
login information'
validate user
request account info
invalid user
user information
access status
customer database
credit card transaction DB
valid user
data selection
verify card details
data selection
account update
fund transfer
team member
data mining
no fraud alert
credit card fraud alert DB
team member
data modelling
fraud alert
team member
team member
extracted information

User Stories

Use the below template to list all the user stories for the product.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer	Online payment fraud detection	USN-1	As an customer,I want the online payment system to have fraud detection capabilities using machine learning, so my financial transactions are secure.	The system can detect potential fraudulent activities based on transaction history and behavior patterns.	High	Sprint-1
		USN-2	As a customer, I want the system to notify me in real-time if any suspicious or fraudulent activity is detected during my online payment, so I can take immediate action.	Receive real-time notifications for suspicious transactions, along with details and recommended actions.	High	Sprint-1
		USN-3	As a customer, I want to have the option to review and verify potentially fraudulent transactions, so I can confirm or report them to the payment provider.	The system allows customers to review and verify transactions through the user interface.	High	Sprint-2
		USN-4	As a customer, I want the system to provide guidance on securing my online payment accounts in case of a security breach or fraud, so I can protect my financial information.	The system provides security recommendations and steps to follow in case of a security incident.	Medium	Sprint-2
Administrator	Online payment fraud detection	USN-5	As an administrator, I want to access a dashboard that provides insights into online payment fraud detection, so I can monitor and manage the fraud prevention system.	The dashboard displays real-time fraud detection metrics, historical data, and trends..	High	Sprint-3

		USN-6	As an administrator, I want to be able to configure and customize fraud detection rules and thresholds, so I can adapt the system to changing fraud patterns.	The system allows administrators to adjust fraud detection parameters through a user interface.	High	Sprint-3
Data Analyst	Online payment fraud detection	USN-7	As a data analyst, I want access to the system's historical data and logs for fraud detection, so I can perform data analysis and improve the machine learning models.	Access to a database of historical payment transaction data and fraud-related logs.	Medium	Sprint-5
		USN-8	As a data analyst, I want to receive regular reports on the performance and effectiveness of the fraud detection system, so I can make data-driven recommendations for improvements.	Scheduled reports on fraud detection accuracy, false positives, and other relevant metrics.	Medium	Sprint-5
		USN-9	As a data analyst, I want to collaborate with data scientists to refine and enhance the machine learning models used for fraud detection.	Access to data and tools for collaboration with data scientists.	Medium	Sprint-6