Project Design Phase-I

Proposed Solution

Date	02 November 2023
Team ID	592128
Project Name	Online Payments Fraud Detection using ML
Maximum Marks	2 Marks

Proposed Solution Template:

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Develop an effective online payments fraud detection system using machine learning to reduce false positives, enhance customer satisfaction, and minimize financial losses for the company/banks
2.	Idea / Solution description	Create a smart system that uses machine learning to catch and stop online payment fraud, making internet shopping safer for everyone.
3.	Novelty / Uniqueness	Our innovative approach combines deep learning with real-time transaction analysis to detect payment fraud patterns, offering a more dynamic and effective solution.
4.	Social Impact / Customer Satisfaction	Enhancing customer satisfaction by reducing false positives and ensuring secure online transactions through advanced ML-driven fraud detection.
5.	Business Model (Revenue Model)	Generating revenue through subscription-based access to our online payment fraud detection platform, with tiered pricing for different business sizes.
6.	Scalability of the Solution	Designed for scalability, our solution can seamlessly adapt to growing transaction volumes, making it suitable for businesses of all sizes.

Project Design Phase-I
Solution Architecture

Date	02 November 2023
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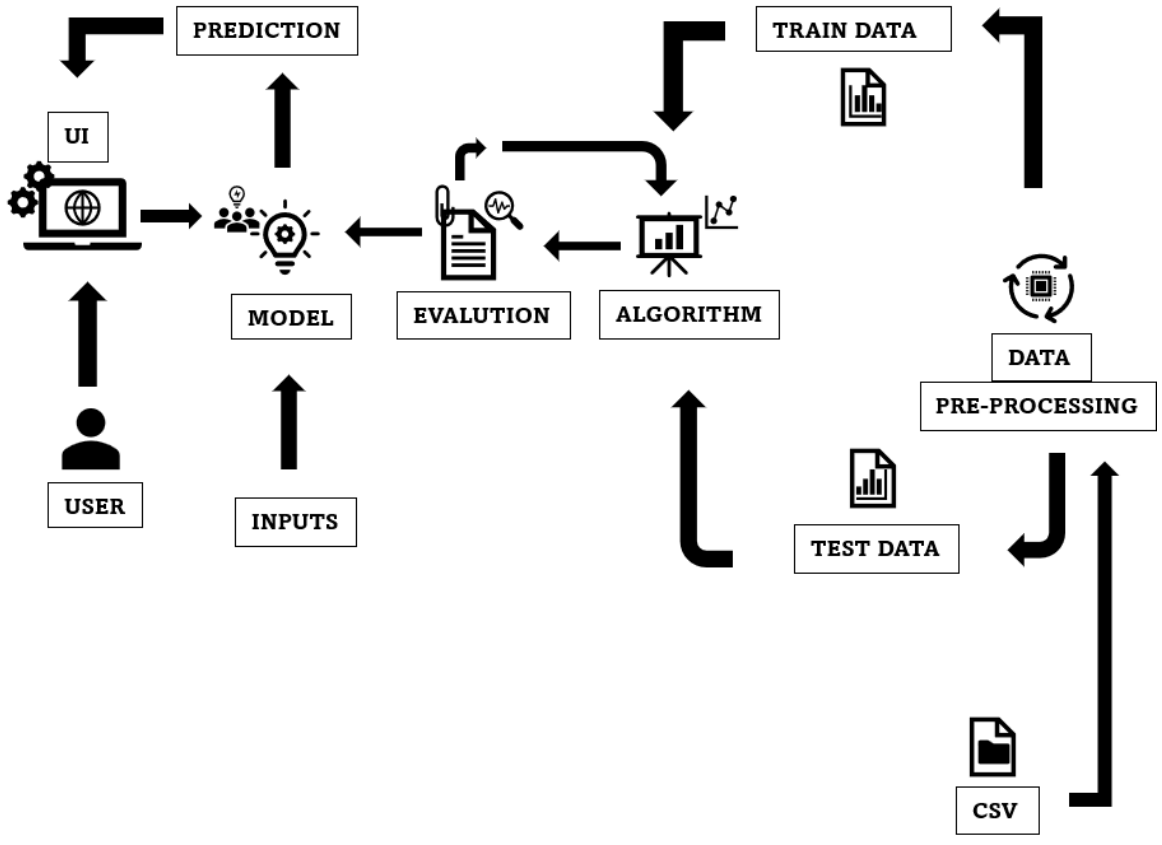
Maximum Marks	4 Marks

Solution Architecture: (Example - Solution Architecture Diagram)

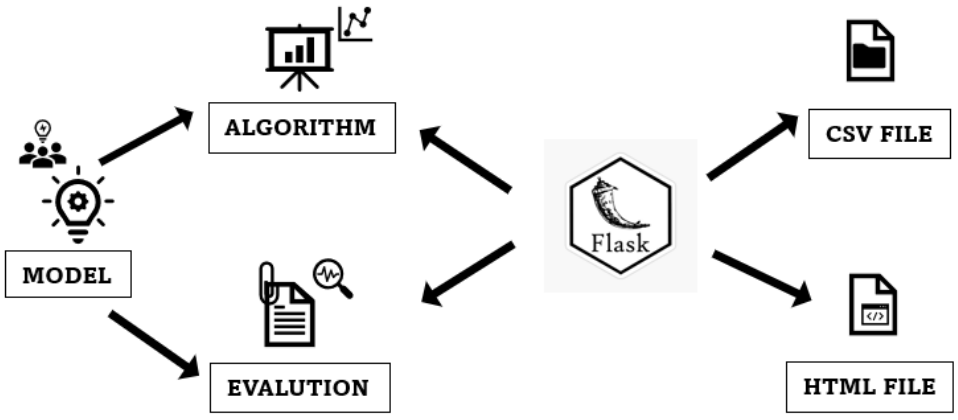


Project Design Phase-II
Data Flow Diagram & User Stories

Date	03 November 2023
Team ID	592128
Project Name	Online Payments 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.



User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Retail banking customer	Real-time alerts	USN-1	I want to receive instant notifications on my mobile device if any suspicious activity is detected on my account.	The system sends real-time alerts for transactions that deviate from my typical spending patterns.	High	Sprint-1

Investment banking client	Real time monitoring	USN-2	I want the investment platform to automatically trigger alerts if there are unusual trading patterns or unexpected changes in my portfolio.	Receive immediate alerts for any high-risk trading activities or portfolio adjustments.	High	Sprint-1
Pension plan participant	Detects irregularities	USN-3	I want the pension management system to alert me if there are irregularities in my contribution or disbursement history.	Receive notifications for any unexpected changes in pension contributions or withdrawals.	Medium	Sprint-2
Payment services user	Detects unauthorized transactions	USN-4	I want the payment system to detect and prevent unauthorized transactions, especially for online and mobile payments.	Experience seamless authentication processes and receive alerts for any suspicious transactions.	Medium	Sprint-2
System administrator for the financial services group	Regular software updates	USN-5	I want to ensure that the fraud detection software is regularly updated to adapt to emerging fraud patterns and maintain optimal performance.	Receive regular updates on software enhancements, and have the ability to schedule and implement updates seamlessly.	Medium	Sprint-2