Ideation Phase

Brainstorm & Idea Prioritization Template

Date	14 February 2026
Team ID	LTVIP2026TMIDS88913
Project Name	Online Payments Fraud Detection using Machine Learning
Maximum Marks	4 Marks

Brainstorm & Idea Prioritization Template:

Brainstorming provides a free and open environment that encourages everyone within a team to participate in the creative thinking process that leads to problem solving. Out-of-the-box ideas are encouraged, and all participants collaborate to shape creative and practical solutions for the problem statement.

Step-1: Team Gathering, Collaboration and Problem Statement Selection

Problem   Statement:
With the rapid growth of digital transactions, online payment systems have become a primary target for fraudulent activities. Fraudulent transactions lead to significant financial losses for banks, businesses, and customers, while also reducing trust in digital payment platforms.

Step-2: Brainstorm, Idea Listing and Grouping

1. Analyze transaction data to detect unusual patterns indicating fraud.

2. Handle class imbalance since fraud cases are rare.

3. Create behavioral features to improve detection accuracy.

4. Train and compare multiple machine learning models.

5. Evaluate performance using precision, recall, and F1-score.

6. Deploy the model for real-time fraud monitoring and alerts.

Step-3: Idea Prioritization

High Priority:
- Exploratory Data Analysis (EDA) of transaction data
- Machine Learning-based fraud detection model
- Handling imbalanced dataset (SMOTE / resampling techniques)

Medium Priority:
- Feature engineering based on user behavior patterns

- Model evaluation and performance optimization

Low Priority (Future Scope):
- Real-time integration with payment gateway APIs
- Continuous model retraining system
- Automated alert/notification system for suspicious transactions