PROJECT DEMONSTRATION

Project Title: Online Fraud Payment Detection System

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1. Introduction

The demonstration phase shows **how the Online Fraud Payment Detection System works in real-time**. The system uses a trained machine learning model to predict whether a transaction is **Fraudulent** or **Legitimate**, providing a secure, automated, and scalable solution.

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2. System Workflow

Step-by-Step Demonstration:

1. **User Access:**
    - User opens the web application through a browser.
2. **Transaction Input:**
    - User enters transaction details such as:
        - Transaction amount
        - Transaction type (credit/debit)
        - User details (optional: location, user ID)
3. **Prediction Request:**
    - User clicks **Submit**.
    - Input data is sent to the /predict endpoint of the web application.
4. **Fraud Detection:**
    - The trained ML model evaluates the input data.
    - Model predicts **Fraudulent** or **Legitimate**.
    - Confidence score can also be displayed (optional).
5. **Output Display:**
    - Prediction result is displayed clearly on the web interface.
6. **Admin View (Optional):**
    - Admin can view reports of total transactions, number of frauds detected, and statistical graphs.

Workflow Diagram (Conceptual):

User Input --> Web Application --> ML Model --> Prediction Result --> Display

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Admin Dashboard <---------- Transaction Data

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3. Sample Screenshots

3.1 Home Page / Input Form

- Users can input transaction details (amount, type, etc.)

3.2 Prediction Result

- The system displays:
    - "Fraudulent Transaction" or "Legitimate Transaction"
    - Optional confidence/probability

3.3 Model Evaluation (Optional)

- Confusion matrix
- Accuracy, Precision, Recall scores

3.4 Admin Dashboard (Optional)

- Aggregate statistics of transactions
- Number of fraudulent transactions detected
- Graphs for visual analysis

(Include actual screenshots of your system in your final PDF report here.)

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4. Key Features Demonstrated

- **Real-time prediction:** Immediate feedback for user input.
- **User-friendly interface:** Simple, clean, and easy to navigate.
- **Accuracy:** Model predicts with high reliability based on test dataset.
- **Secure input handling:** Validates and sanitizes user data.
- **Optional admin insights:** Statistical view of transaction data.

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5. Benefits of Demonstration

- Shows practical working of the system
- Highlights model efficiency and accuracy
- Validates user interface and ease of use
- Confirms successful integration of ML model with web application

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6. Conclusion

The demonstration proves that the **Online Fraud Payment Detection System** can reliably detect fraudulent transactions in real-time. Users and admins can interact with the system effortlessly, validating both functionality and design.