Wireframe Documentation for Fraud Transaction Detection System

➤ Homepage

Section	Description
Pop-up Window (User Input)	A pop-up window prompts users for input regarding their interest in fraud transaction detection.
Pop-up Window (User Details)	Another pop-up window collects user details necessary for the system's operation.
Recommendation Display	Displays recommendations based on user inputs directly on the homepage.

➤ About Page

Section	Description
Heading	A section dedicated to a headline about the fraud transaction detection system.
Text	Provides detailed information about the system, its purpose, and benefits.

➤ Data Validation and Data Insertion

Section	Description
File Validation	Validate fraudtrain and fraudtest datasets for integrity and structure.
Number of Columns	Ensure datasets have correct column counts as per schema.
Column Names	Verify column names match the expected schema.
Data Type Validation	Validate data types of columns in both datasets.
Missing Values	Handle missing values in datasets appropriately.

➤ Model Training

Section	Description
Data Extraction	Extract data from fraud_train_data table for model training.
Data Preprocessing	Preprocess data including handling missing values, encoding categorical variables, and scaling features.

Section	Description
Model Selection	Train machine learning models (e.g., SVM, Random Forest, XGBoost) and optimize using cross-validation.
Model Evaluation	Evaluate models using metrics like accuracy, precision, recall, and ROC-AUC score.

➢ Prediction

Section	Description
Data Extraction	Extract data from fraud$_{test\_data}$ table for model prediction.
Data Preprocessing	Apply preprocessing steps used during training on fraudtest dataset.
Model Prediction	Use trained model to predict fraud labels for transactions in fraudtest dataset.
Performance Evaluation	Evaluate model performance using metrics such as accuracy, precision, recall, and ROC-AUC score.

➢ Conclusion

This structured wireframe document outlines the key sections and functionalities of the fraud transaction detection system, ensuring clarity in the design and development phases. Each section provides a clear description of its purpose and content, facilitating seamless integration and development of the system.