

# USER MANUAL

## Fraudulent Transaction Detector User Manual

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### Introduction

This Fraudulent Transaction Detector is a web-based application designed to analyze transaction data and predict potential fraudulent activities. It has been created as part of the end-to-end AI project of course DA5402 – ML Operations Lab at IIT Madras. This manual provides step-by-step instructions for users to upload data, generate predictions, and provide feedback.

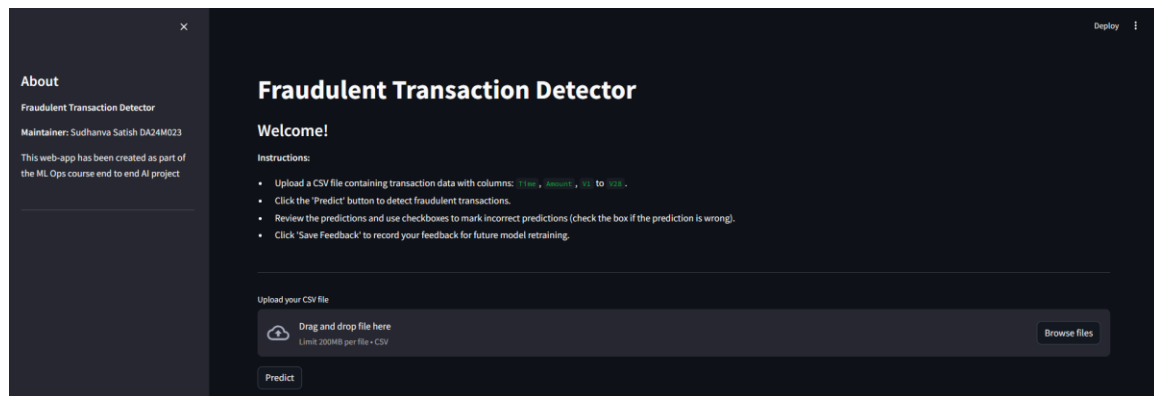
### System Requirements

- Web browser
- A CSV file with columns: Time, Amount, V1 to V28

### Getting Started

1. Access the Application:

- Open your web browser and navigate to <http://localhost:8501>. This is where the web-app frontend is deployed



## 2. Upload Transaction Data:

- On the homepage, locate the "Upload your CSV file" section.
- Click the file uploader and select a CSV file containing transaction data.
- The application will display a preview of the uploaded data.

Upload your CSV file

Drag and drop file here  
Limit 200MB per file • CSV

Browse files

app\_test.csv 6.4KB

Uploaded Data (Preview):

	Time	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19	V20	V21	V22	V23	V24	V25	V26	V27	V28
0	77,290	-0.334	1.102	1.724	0.8117	0.2858	-0.6178	0.9889	-0.4446	-0.5983	0.0182	-0.1797	0.4486	1.2617	-0.2063	1.0468	-0.3537	-0.4058	-0.0899	0.4518	0.1298	0.0358	0.3354	-0.1451	0.4179	-0.2306	-0.4603	-0.1213	-0.077
1	38,895	-0.8811	0.2197	1.6199	-0.5457	1.3538	-0.8863	0.6328	-0.2611	-0.3534	-0.5143	-1.0518	0.0011	0.7903	-0.2221	0.4481	0.5784	-1.0925	-0.2389	-0.334	0.1945	-0.2178	-0.7127	-0.1037	-0.4609	-0.032	-0.0379	-0.1467	-0.112
2	118,473	-1.1494	1.6653	-3.1104	-2.2019	2.8964	2.607	0.3295	1.4866	-0.5084	-0.287	-0.397	0.2213	-0.3483	1.4361	0.1935	-0.5371	-0.1651	-0.4594	-0.3277	0.0236	0.2651	0.7355	-0.0691	0.7451	-0.1192	0.1239	0.3785	0.2555
3	27,864	-0.1062	0.9216	1.5483	1.2757	-0.0179	0.2532	0.3338	0.002	-0.508	-0.0418	-1.1901	-0.1417	0.9868	-0.0272	1.9135	-0.1329	-0.3228	0.7886	1.5166	0.2566	0.2191	0.7393	-0.2252	-0.4078	-0.259	-0.0779	0.2105	0.1624
4	32,612	0.9204	0.0595	0.3382	2.6255	-0.369	-0.5966	0.3246	-0.1157	-0.594	0.6822	-0.8058	-0.9028	-1.4399	0.6615	0.6187	0.6807	-0.5044	-0.0782	-1.0406	0.0442	0.0794	-0.1955	-0.1662	0.3566	0.4544	0.0258	-0.0544	0.0413

Predict

Click "Predict" to see the results.

## 3. Generate Predictions:

- Click the "Predict" button to analyze the uploaded data.
- The application will process the data and display a table of predictions, including:
  - Original data
  - Prediction (Fraud or Not Fraud)
  - Fraud probability
  - A checkbox to mark incorrect predictions (unchecked by default, check if incorrect)
  - A summary of the predictions

Predict

Prediction completed!

Prediction Results:

row	data	prediction	fraud_probability	Mark as Incorrect
1	[{"Time": 60031.0, "V1": -0.435154028083353, "V2": 0.999283054294642, "V3": 1.44850707}	Not Fraud	0.0109	<input type="checkbox"/>
2	[{"Time": 165356.0, "V1": 0.520196629566405, "V2": 1.07807406819824, "V3": 0.0149783}	Not Fraud	0.017	<input type="checkbox"/>
3	[{"Time": 166099.0, "V1": 1.79389849128036, "V2": -0.603551547456802, "V3": 0.14750388}	Not Fraud	0.026	<input type="checkbox"/>
4	[{"Time": 153077.0, "V1": -3.36951977369601, "V2": 3.04253467157677, "V3": -0.63799836}	Not Fraud	0.0076	<input type="checkbox"/>
5	[{"Time": 60172.0, "V1": 1.03298901139611, "V2": 0.155759993456997, "V3": 0.319374011}	Not Fraud	0.0236	<input type="checkbox"/>
6	[{"Time": 112399.0, "V1": 2.05078517538345, "V2": 0.11085269096997, "V3": -1.882399814}	Not Fraud	0.0312	<input type="checkbox"/>
7	[{"Time": 49561.0, "V1": 1.2037778066026, "V2": -0.0752354129211267, "V3": 0.48926174}	Not Fraud	0.0122	<input type="checkbox"/>
8	[{"Time": 44768.0, "V1": 1.21507724249431, "V2": -0.825942465887011, "V3": 0.481119446}	Not Fraud	0.0137	<input type="checkbox"/>
9	[{"Time": 79401.0, "V1": 1.16429952096711, "V2": -2.02337419018612, "V3": 1.6296103408}	Not Fraud	0.0317	<input type="checkbox"/>
10	[{"Time": 157927.0, "V1": 2.00999773155784, "V2": 0.0780338456622836, "V3": -1.6165215}	Not Fraud	0.041	<input type="checkbox"/>

Summary:

Total Rows: 1000

Fraudulent Transactions: 84 (8.40%)

Incorrect Predictions: 0 (0.00%)

Save Feedback

## 4. Provide Feedback:

- Review the predictions and check the "Mark as Incorrect" checkbox for any rows where the prediction is wrong.
- Click "Save Feedback" to record your feedback. The data will be saved for future model retraining.

#### 5. View Summary:

- After checking the feedback checkboxes, the summary will update with:
  - Total rows
  - Number of fraudulent transactions
  - Number of incorrect predictions

#### Troubleshooting

- Error: Failed to parse CSV: Ensure your CSV has the correct columns (Time, V1 to V28, Amount).
- No Predictions: Verify the file is uploaded and contains valid data.
- Feedback Not Saved: Check that checkboxes are updated before saving.

#### Contact Support

For issues, contact the maintainer

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