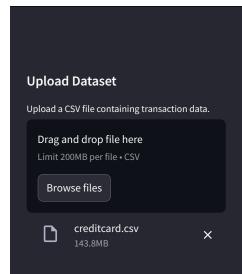
12/2/24, 5:36 PM app3



# Real-Time Credit Card Fraud Detection

A web app to detect fraudulent transactions using a Decision Tree Classifier.

#### **Dataset Preview:**

|   | V20     | V21     | V22     | V23     | V24     | V25     | V26     | V27     | V28     | Amount | Class |
|---|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|-------|
|   | 0.2514  | -0.0183 | 0.2778  | -0.1105 | 0.0669  | 0.1285  | -0.1891 | 0.1336  | -0.0211 | 149.62 | 0     |
|   | -0.0691 | -0.2258 | -0.6387 | 0.1013  | -0.3398 | 0.1672  | 0.1259  | -0.009  | 0.0147  | 2.69   | 0     |
| 2 | 0.525   | 0.248   | 0.7717  | 0.9094  | -0.6893 | -0.3276 | -0.1391 | -0.0554 | -0.0598 | 378.66 | 0     |
|   | -0.208  | -0.1083 | 0.0053  | -0.1903 | -1.1756 | 0.6474  | -0.2219 | 0.0627  | 0.0615  | 123.5  | 0     |
| 4 | 0.4085  | -0.0094 | 0.7983  | -0.1375 | 0.1413  | -0.206  | 0.5023  | 0.2194  | 0.2152  | 69.99  | 0     |

## **Preprocessing the Data:**

Dropped 'Time' column.

Scaled 'Amount' column.

Dropped duplicates. Reduced dataset size from (284807, 30) to (275663, 30).

Training a Decision Tree Classifier...

### **Model Performance:**

Accuracy: 1.00

Precision: 0.65

Recall: 0.70

**F1 Score:** 0.68

## **Predict Fraud for New Transactions:**

Enter all feature values separated by commas (e.g., -0.425965,0.960523,...):

-2.3122265423263, 1.95199201064158, -1.60985073229769, 3.9979055875468, -0.522187864667764, -1.426199364, -1.42619964, -1.42619964, -1.42619964, -1.42619964, -1.42619964, -1.42619964, -1.42619964, -1.42619964, -1.42619964, -1.42619964, -1.42619964, -1.42619964, -1.42619964, -1.4261964, -

Predict

The transaction is Fraudulent.

localhost:8501