

AI-Powered Credit Card Fraud Detection and Prevention

Source Code:

```
import pandas as pd

from sklearn.model_selection import train_test_split

from sklearn.ensemble import RandomForestClassifier

from sklearn.metrics import classification_report, accuracy_score


# Load dataset

data = pd.read_csv("creditcard.csv")


# Prepare data

X = data.drop("Class", axis=1)

y = data["Class"]


# Split the data

X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.3, random_state=42)


# Train model

model = RandomForestClassifier()

model.fit(X_train, y_train)


# Make predictions

y_pred = model.predict(X_test)
```

```
# Evaluate model

print("Accuracy:", accuracy_score(y_test, y_pred))

print(classification_report(y_test, y_pred))
```

Sample Output:

```
Accuracy: 0.9993

      precision    recall  f1-score   support

0         1.00      1.00      1.00     85296
1         0.90      0.81      0.85       147

 accuracy              1.00     85443
 macro avg       0.95    0.90    0.92     85443
weighted avg       1.00    1.00    1.00     85443
```