```
from google.colab import files
uploaded = files.upload()
```

Choose files creditcard.csv

- **creditcard.csv**(text/csv) - 150828752 bytes, last modified: 06/07/2025 - 100% done

```
Saving creditcard.csv to creditcard.csv
```

```
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns
from sklearn.model_selection import train_test_split
from sklearn.ensemble import RandomForestClassifier
from sklearn.metrics import accuracy_score, confusion_matrix, classification_report

df = pd.read_csv("creditcard.csv")
df.head()
```

	Time	V1	V2	V3	V4	V5	V6	V7	V8
0	0.0	-1.359807	-0.072781	2.536347	1.378155	-0.338321	0.462388	0.239599	0.098698
1	0.0	1.191857	0.266151	0.166480	0.448154	0.060018	-0.082361	-0.078803	0.085102
2	1.0	-1.358354	-1.340163	1.773209	0.379780	-0.503198	1.800499	0.791461	0.247676
3	1.0	-0.966272	-0.185226	1.792993	-0.863291	-0.010309	1.247203	0.237609	0.377436
4	2.0	-1.158233	0.877737	1.548718	0.403034	-0.407193	0.095921	0.592941	-0.270533

5 rows × 31 columns

```
print(df.shape)
print(df.isnull().sum())
print(df['Class'].value_counts())  # 0 = Legit, 1 = Fraud
```

```
(284807, 31)
Time      0
V1        0
V2        0
V3        0
V4        0
V5        0
V6        0
V7        0
V8        0
V9        0
V10       0
```

```
V11       0
V12       0
V13       0
V14       0
V15       0
V16       0
V17       0
V18       0
V19       0
V20       0
V21       0
V22       0
V23       0
V24       0
V25       0
V26       0
V27       0
V28       0
Amount    0
Class     0
dtype: int64
Class
0    284315
1       492
Name: count, dtype: int64
```

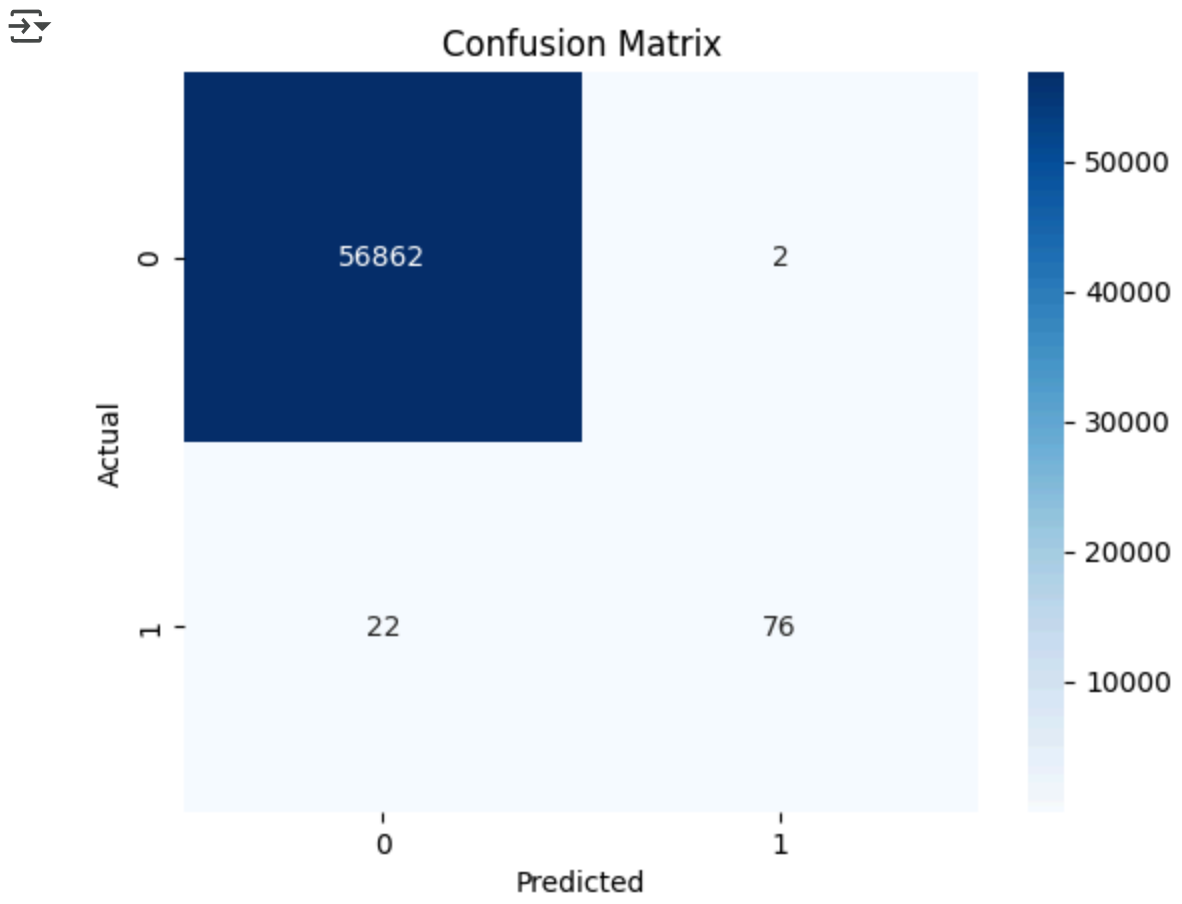
```
sns.countplot(x='Class', data=df)
plt.title("Fraud vs Legit Transactions")
plt.show()
```


```
X = df.drop('Class', axis=1)
y = df['Class']


X_train, X_test, y_train, y_test = train_test_split(
    X, y, test_size=0.2, random_state=42
)


model = RandomForestClassifier()
model.fit(X_train, y_train)

y_pred = model.predict(X_test)

print("Accuracy:", accuracy_score(y_test, y_pred))
print("Classification Report:\n", classification_report(y_test, y_pred))
```

```
Accuracy: 0.9995786664794073
Classification Report:
              precision    recall  f1-score   support

           0       1.00      1.00      1.00     56864
           1       0.97      0.78      0.86        98
```

```
          accuracy                           1.00     56962
         macro avg       0.99      0.89      0.93     56962
      weighted avg       1.00      1.00      1.00     56962
```

```
sns.heatmap(confusion_matrix(y_test, y_pred), annot=True, fmt='d', cmap='Blues')
plt.xlabel("Predicted")
plt.ylabel("Actual")
plt.title("Confusion Matrix")
plt.show()
```



Start coding or generate with AI