



**Department** : Computer Science and Engineering

**Title** : Credit Card Fraud Detection

**Guide** : Mrs. Simran Choudhary (Assistant Professor)

# Overview

- ❖ Introduction to Credit Card Fraud Detection.
  - ❖ Introduction to Data
  - ❖ Model Training
  - ❖ Creating Web App
  - ❖ Sneak Peek into Our Web App
  - ❖ Conclusion
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# Introduction to Credit Card Fraud Detection

- Need of the hour.
- Complex
- Technological Limitations

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# Introduction to the Data

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- Dimensionally reduced

| Time                 | V1                  | V2                 | V3                  | V4                 |
|----------------------|---------------------|--------------------|---------------------|--------------------|
| -1.1152878574425795  | -19.1397328634111   | 9.28684735978866   | -20.134992104854    | 7.81867331002574   |
| -1.0375841188797272  | -1.51924353075082   | 2.3084924536764304 | -1.50359931953802   | 2.06410058377601   |
| 0.7238059114969032   | 0.290155157802135   | 0.0492431315858544 | -0.7405236661026908 | 2.86546277005979   |
| -1.0617586153215035  | -4.617461029179861  | 3.6633952531875598 | -5.29744641020372   | 3.88095965427288   |
| -0.19459331612956565 | -1.7567118508364998 | 3.26657425418237   | -4.15338789695403   | 3.9245256135755495 |

- Unbalanced



# Model Training

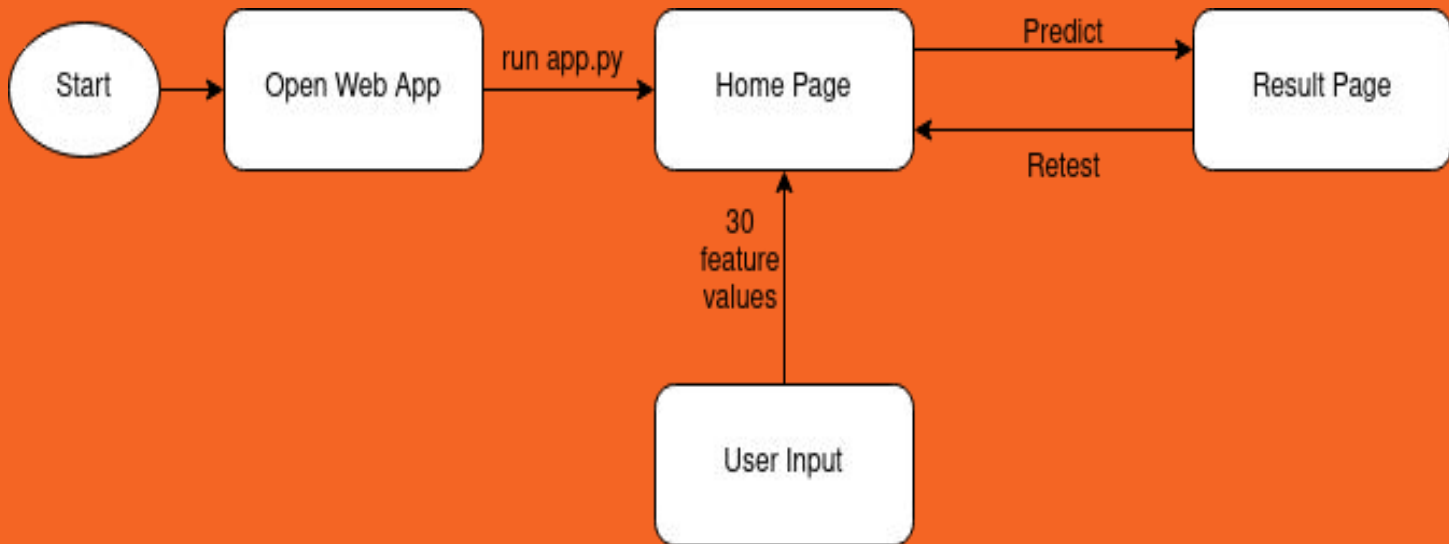
- Logistic Regression with balanced Class Weight.
- Over Sampling and Under Sampling
- Accuracy: 0.976
- Recall: 0.903

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# Creating Web App

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**Credit Card Fraud Detection Web App**



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# Sneak Peek into Our Web App

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## Credit Card Fraud Detection Rest API

Enter the 30 feature values in the below cell(in order):

Predict

## Credit Card Fraud Detection Results

Validation Completed.

According to our model, this transaction is a Fraud transaction.

Retest

## Credit Card Fraud Detection Results

Validation Completed.

According to our model, the provided transaction is NOT a Fraud transaction.

Retest

# Conclusion

- Credit Card Fraud Detection is a developing technique.
- Machine Learning advances will achieve greater results in future.

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# References

- <https://github.com/saarkes/credit-card-fraud-detection>
- <https://github.com/RK1126/Temp/blob/master/Credit%20Card%20Fraud%20Detection.ipynb>
- <https://credit-card-fraud-detect-ion.herokuapp.com/>

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# Thank You!

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