T5 Data Science Bootcamp

Project Proposal

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Question/need:

What is the framing question of your analysis, or the purpose of the model/system you plan to build?

Any type of theft or fraud involving a credit card is referred to as credit card fraud. There have always been people who would develop new ways to illegally access someone's finances since the payment systems were invented. This has become a huge issue in the current era, as all purchases can now be made quickly and efficiently online with only credit card information.

Purpose: This project aims to create a Fraud Detection System (classification model) to detect fraud on Credit card transactions.

Framing question: Is this a valid Credit card transaction or a fraudulent transaction?

Who benefits from exploring this question or building this model/system?

This system is useful for both people who use credit cards and banks to keep their customers safe.

Data Description:

What dataset(s) do you plan to use, and how will you obtain the data?

Credit Card Fraud Detection
From Kaggle: https://www.kaggle.com/mlg-ulb/creditcardfraud
The dataset contains transactions made by credit cards in September 2013 by European cardholders. This dataset presents transactions that occurred in two days, where we have 492 frauds out of 284,807 transactions. Moreover, it contains 31 features, 29 features are dismal, and 2 features are integer.

What is an individual sample/unit of analysis in this project? What characteristics/features do you expect to work with?

Because of privacy issues, the dataset developer didn't provide the original features and more background information about the data. Features V1, V2, … V28 are the principal components obtained with PCA, to be used to train the model.

If modeling, what will you predict as your target?

The system should be able to classify operations as either legal (Valid) transactions or fraud transactions.

Tools:

How do you intend to meet the tools requirement of the project?

Using Jupiter notebook as a platform to work, and Python 3 with the required libraries.

Are you planning in advance to need or use additional tools beyond those required?

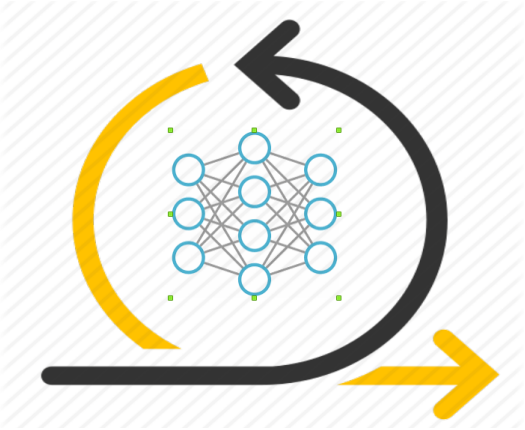
At the moment the tools available to me are sufficient, but if additional tools are needed, I will use them.

MVP Goal:

What would a minimum viable product (MVP) look like for this project?

A Fraud Detection System that can distinguish between legal and fraudulent transactions.

Credit Card Transaction



Fraud Detection System

Valid Transaction

OR

Fraud Transaction