Project 1: Credit Card Fraud Detection

Phase 1: Problem Definition and Design Thinking

In order to effectively test, detect, validate, correct error and monitor control systems against fraudulent activities, businesses entities and organizations rely on specialized data analytics techniques such as data mining, data matching, the sounds like function, regression analysis, clustering analysis etc

Problem Definition:

The Credit Card Fraud Detection Problem includes modeling past credit card transactions with the knowledge of the ones that turned out to be fraud

Design Thinking:

**Data Source:**

When we make any transaction while purchasing any product online a good amount of people prefer credit cards. The credit limit in credit cards sometimes helps us me making purchases even if we don’t have the amount at that time.

**Data Preprocessing:**

Data source resulted from preprocessing affects directly the quality of data mining. The methods are not the same according to particular application fields and industries.

**Feature Engineering:**

Create additional features that could enhance fraud detection, such as transaction frequency and amount deviations

**Model Selection:**

Choose suitable machine learning algorithms (e.g., Logistic Regression, Random Forest, Gradient Boosting) for fraud detection.

**Model Training:**

Train the selected model using the preprocessed data.