**Project Design Phase-I**
**Proposed Solution Template**

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| Date | 19 October 2023 |
| Team ID | Team-591653 |
| Project Name | Online Fraud Detection |
| Maximum Marks | 2 Marks |

**Proposed Solution Template:**

Project team shall fill the following information in proposed solution template.

| S.No. | Parameter | Description |
|---|---|---|
| 1. | Problem Statement (Problem to be solved) | The primary objective of our project is to develop a predictive model that can accurately classify transactions as either legitimate or fraudulent. The problem is classified as a binary classification problem, which requires the use of supervised machine learning algorithms. Our approach involves deploying well-established machine learning models that have been trained on a large dataset of labeled transactions to optimize prediction accuracy. Through the use of these models, we aim to provide businesses with a reliable and efficient tool to mitigate the risk of fraudulent transactions in their operations |
| 2. | Idea / Solution description | Our objective is to accurately classify transactions as either legitimate or fraudulent, which is a binary classification problem. To achieve the highest prediction accuracy, we plan to leverage the power of Supervised Machine Learning models. By training these models on a large dataset of labeled transactions, we aim to develop a system that can reliably and efficiently detect fraudulent transactions. This approach has the potential to significantly reduce the financial losses that businesses face due to fraudulent activities |
| 3. | Novelty / Uniqueness | The increasing number of online payment methods offered by e-commerce and other online sites has made online transaction fraud an easy target. As fraud rates continue to rise, machine learning techniques can be leveraged to detect and prevent fraudulent online transactions. The primary objective of this |

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| | | project is to implement supervised machine learning models for fraud detection by analyzing prior transaction information. The transactions will be classified into distinct groups based on the type of transaction and various classifiers will be trained independently. The models will then be evaluated for accuracy, and the classifier with the highest rating score will be selected as one of the best approaches for predicting fraud. By utilizing this approach, we aim to develop a reliable and efficient system for detecting fraudulent online transactions, thereby mitigating the risks associated with online payment methods. |
| 4. | Social Impact / Customer Satisfaction | Online transaction fraud is a growing concern due to the rise in the number of online payment methods offered by e-commerce and other online sites. This has made online transactions an easy target for fraudulent activities, leading to an increase in fraud rates. we can develop reliable and efficient systems to detect fraudulent activities and minimize the financial losses associated with online transaction fraud. |
| 5. | Business Model (Revenue Model) | The primary objective of this project is to classify transactions as either legitimate or fraudulent by predicting the isFraud target variable. By leveraging machine learning algorithms, we aim to develop a reliable and efficient system for detecting fraudulent transactions in order to protect individuals and financial institutions from the financial losses associated with fraudulent activities. Therefore we can charge fees to the user to keep him safe from online transactiom |
| 6. | Scalability of the Solution | Online fraudulent transactions represent a serious criminal offense that costs individuals and financial institutions billions of dollars each year. As a result, financial institutions play a critical role in detecting and preventing fraudulent activities. By adopting effective fraud detection measures, financial institutions can minimize the risks associated with online transactions and protect their customers' financial assets. for accuracy, and the classifier with the highest rating score will be selected as one of the best. |