

Project Design Phase-I
Proposed Solution Template

Date	08 – 11- 2023
Team ID	Team - 592286
Project Name	Online payments fraud detection
Maximum 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 problem being addressed is credit card fraud detection, where the objective is to develop a machine learning solution to identify fraudulent transactions.
2.	Idea / Solution description	The code implements a solution that involves preprocessing the dataset, oversampling to handle class imbalance (SMOTE), and applying various machine learning models for fraud detection. It also includes dimensionality reduction using PCA.
3.	Novelty / Uniqueness	The code doesn't explicitly mention novelty or uniqueness. However, the use of various machine learning models and PCA for dimensionality reduction is a common approach for fraud detection.
4.	Social Impact / Customer Satisfaction	Detecting and preventing credit card fraud has a significant social impact as it helps protect consumers and financial institutions from monetary losses. Customer satisfaction is indirectly improved by reducing the number of false positives and negatives.
5.	Business Model (Revenue Model)	The provided code does not directly address the revenue model, but it could be related to selling the fraud detection solution or services to financial institutions or organizations in need of fraud detection.
6.	Scalability of the Solution	The scalability of the solution depends on the efficiency of the algorithms and infrastructure. The code does not explicitly address scalability, but it can be improved by optimizing algorithms and deploying them on scalable infrastructure.

