

Project Initialization and Planning Phase

Date	15 June 2025
Team ID	SWTID1751617613
Project Title	Auto_Insurance_Fraud Detection using ML
Maximum Marks	3 Marks

Project Proposal (Proposed Solution) template

This project proposal outlines a solution to address a specific problem. With a clear objective, defined scope, and a concise problem statement, the proposed solution details the approach, key features, and resource requirements, including hardware, software, and personnel.

Project Overview	
Objective	To build a machine learning model that can accurately detect fraudulent auto insurance claims and help insurance companies reduce financial losses.
Scope	This project focuses on analyzing historical insurance claim data, identifying key fraud indicators, training models, and deploying the solution via a web interface for real-time prediction support.
Problem Statement	
Description	Insurance companies face increasing challenges in detecting fraudulent claims, leading to significant financial losses and delays in genuine claim processing.
Impact	Solving this problem will reduce operational costs, improve claim processing efficiency, and enhance customer trust in the auto insurance process.
Proposed Solution	

Approach	Collect and preprocess claim data, perform feature engineering, train machine learning models (e.g., Decision Tree, Random Forest), evaluate performance, and deploy via a simple web interface.
Key Features	- Early fraud detection using historical patterns

Resource Requirements



Resource Type	Description	Specification/Allocation
Hardware		
Computing Resources	CPU/GPU specifications, number of cores	NVIDIA V100 GPUs
Memory	RAM specifications	8 GB
Storage	Disk space for data, models, and logs	256GB SSD
Software		
Frameworks	Python frameworks	Flask
Libraries	Additional libraries	scikit-learn, pandas, numpy
Development Environment	IDE, version control	Google Colab, Git
Data		
Data	Source, size, format	Kaggle dataset, 10,000 images