Project Initialization and Planning Phase

Date	03 July 2024
Team ID	739647
Project Title	Predicting CO2 emissions by countries by using Machine Learning
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 develop a machine learning model that accurately predicts the co2 emissions of different countries
Scope	The project will encompass data collection, preprocessing, model training, evaluation, and deployment. It will focus on historical CO2 emissions data from various countries,
Problem Statement	
Description	Global CO2 emissions contribute significantly to climate change, and there is a need for accurate prediction models to help policymakers and researchers understand future trends and plan mitigation strategies. The challenge is to create a model that can predict CO2 emissions with high accuracy using historical data and other relevant features.
Impact	predicting CO2 emissions can help in formulating effective climate policies, setting emission reduction targets, and planning sustainable development strategies.
Proposed Solution	
Approach	The project will employ machine learning techniques to develop the prediction model. The steps include: Data Collection, Data Preprocessing, Feature Selection ,

	Model Training , Model Evaluation, Model Deployment
Key Features	Implementation of advanced machine learning algorithms like Random Forest to improve performance. User-friendly interface for policymakers to input data and receive predictions.

Resource Requirements

Resource Type	**Description**	**Specification/Allocation**
Hardware		
Computing Resources	CPU/GPU specifications, number of cores	e.g., 4GB x NVIDIA GeForce GTX
Memory	RAM specifications	e.g., 16 GB
Storage	Disk space for data, models, and logs	e.g., 1 TB SSD
Software		
Frameworks	Python frameworks	e.g., Flask
Libraries	Additional libraries	e.g., scikit-learn, pandas, numpy, matplotlib, seaborn, random
Development Environment	IDE, version control	e.g., Google colab, spyder
Data		
Data	Source, size, format	e.g., Kaggle dataset, 10,000 images