Project Initialization and Planning Phase

Date	15 july 2024
Team ID	739907
Project Title	Price prediction of natural gas using machine learning approach
Maximum Marks	3 Marks

Project Proposal (Proposed Solution) template

To address the problem of accurately predicting natural gas prices, we propose a comprehensive solution leveraging advanced machine learning techniques.

Project Overview	
Objective	This project aims to leverage machine learning (ML) techniques to develop a robust predictive model for natural gas prices, providing valuable insights and tools for stakeholders in the energy sector..
Scope	The future scope for predicting the price of natural gas using machine learning approaches is promising, with several potential avenues for advancement and application.
Problem Statement	
Description	How can machine learning techniques be applied to predict natural gas prices more accurately than traditional methods by effectively capturing and modeling the complex relationships among the various influencing factors.
Impact	Makes user in understanding the price and demand of natural in present and future. Resulting in understanding volatility and complexity of natural gas prices.
Proposed Solution	
Approach	To address the problem of accurately predicting natural gas prices, we propose a comprehensive solution leveraging advanced machine learning techniques.
Key Features	Data Collection and Preprocessing, Feature Engineering and Selection, . Model Development, . Model Training and Validation, Model Evaluation

	and Comparison, . Deployment and Visualization, Continuous Improvement and Adaptation, Implementation Plan, Expected Outcomes.

Resource Requirements

Resource Type	Description	Specification/Allocation
Hardware		
Computing Resources	CPU/GPU specifications, number of cores	e.g., 2 x NVIDIA V100 GPUs
Memory	RAM specifications	e.g., 8 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,
Development Environment	IDE, version control	e.g.,Google colab, anaconda prompt, pycharm, Git.
Data		
Data	Source, size, format	e.g., Kaggle dataset, 10 images