**Project Initialization and Planning Phase**

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| Date | 29 April 2024 |
| Team ID | 737820 |
| Project Title | EcoForecast: AI-Powered Prediction of Carbon Monoxide Levels. |
| Maximum Marks | 3 Marks |

**Project Proposal (Proposed Solution) template**

EcoForecast proposes the development of an AI-powered prediction system that utilizes historical data, meteorological factors, and emission patterns to forecast CO concentrations in the environment. By employing sophisticated machine learning algorithms, such as neural networks and ensemble methods, the system will learn complex patterns and relationships in the data to generate accurate predictions.

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| **Project Overview** | |
| Objective | To develop an AI-powered system for predicting carbon monoxide levels in the environment to enable proactive measures against air pollution. |
| Scope | Implementing machine learning algorithms to analyze environmental data and generate accurate forecasts of carbon monoxide concentrations for public health protection. |
| **Problem Statement** | |
| Description | EcoForecast seeks to tackle the difficulty of forecasting and tracking carbon monoxide levels in the atmosphere by using AI-powered tools to protect public health and support effective environmental management |
| Impact | By accurately forecasting and tracking carbon monoxide levels, EcoForecast helps reduce health hazards, prevent pollution-related illnesses, and support effective policy and planning decisions for sustainable, healthier communities. |
| **Proposed Solution** | |
| Approach | Utilize real-time data and machine learning models to forecast carbon monoxide levels and issue timely alerts for proactive public health interventions. |
| Key Features | EcoForecast uses AI algorithms to provide real-time, accurate predictions of carbon monoxide levels by analyzing environmental data and patterns, aiding proactive air quality management. |

**Resource Requirements**

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| **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 Collab, Git |
| **Data** | | |
| Data | Timestamp, temp, humidity, | e.g., Kaggle dataset |