Harnessing Machine Learning to Predict and Analyze CO2 Emissions Globally

Background: Climate change, driven largely by the emission of greenhouse gases, poses a significant threat to global stability, with carbon dioxide (CO2) identified as the primary contributor. Understanding and accurately predicting the dynamics of CO2 emissions is crucial for assessing environmental impacts and informing effective policy decisions aimed at sustainability. This project uses a predictive modeling approach to tackle this challenge, leveraging historical data on CO2 emissions across various sectors and economic indicators.

Objective: The goal of this project is to develop a predictive model that can estimate CO2 emissions from diverse sources such as cement, coal, gas, oil, and flaring, based on associated economic data and emissions data. This model aims to provide valuable insights for researchers, policymakers, and environmental planners, helping them to understand emission trends and develop strategies to mitigate environmental impact. By integrating and analyzing data from multiple domains, the model seeks to capture the complex interdependencies between economic activities and environmental outcomes, thereby facilitating more informed and effective decision-making in the realm of environmental policy and economic planning