**Project Initialization and Planning Phase**

| Date | 10 June 2025 |
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| Team ID | SWTID1749709340 |
| Project Name | Predicting Co2 Emission by countries Using Machine Learning |
| Maximum Marks | 3 Marks |

**Define Problem Statements (Customer Problem Statement Template):**

As a policymaker, environmental researcher, or concerned citizen, I need to understand how CO₂ emissions will change in the coming years for different countries so that I can plan effective policies, research interventions, and awareness strategies to mitigate climate change and manage resources responsibly.

Currently, it is challenging for individuals and organizations to easily access reliable, country-specific CO₂ emission predictions based on historical data. Existing data is often static, outdated, or hard to interpret, making it difficult to:

* Track and compare emission trends across countries.
* Forecast future emissions under current and potential policy scenarios.
* Raise awareness and encourage accountability among governments and corporations.

As a result, stakeholders lack actionable insights to take timely decisions toward climate goals.

**What they need:**

* A user-friendly tool where they can input a country and year to predict CO₂ emissions accurately.
* Insights into emission trends to evaluate the effectiveness of existing policies and plan interventions.
* Reliable, data-driven support for reporting, planning, and climate change research.

**Outcome:**

By solving this problem, we can empower users to visualize and act upon CO₂ emission forecasts, supporting data-driven decisions for a sustainable future.

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| **Problem**  **Statement (PS)** | **I am**  **(Customer)** | **I’m trying to** | **But** | **Because** | **Which makes me feel** |
| PS-1 | A policymaker | Plan effective climate policies for my country | I lack accurate, future-focused CO₂ emission predictions | current data is outdated, fragmented, or hard to analyze | unprepared and uncertain in making policy decisions |
| PS-2 | An environmental researcher or student | Analyze CO₂ emission trends of countries for upcoming years | I cannot easily get interactive, country-specific forecasts | existing tools are not user-friendly or lack country + year customization | frustrated and limited in conducting climate research |