

SDG 13 - Climate Action: Predicting CO2 Emissions

Problem:

Predict future CO2 emissions using GDP and population data to support sustainable policies.

Machine Learning Approach:

- Type: Supervised Learning (Regression)
- Algorithm: Linear Regression
- Features: GDP, Population
- Target: CO2 Emissions
- Tool: Python (Scikit-learn, Pandas, Matplotlib)

Results:

- R2 Score: 0.84 (strong correlation)
- MAE: ~270,000 Mt
- Visualized actual vs predicted emissions with scatter plot

Ethical Reflection:

- Data bias: Underreporting may affect fairness
- Sustainability: Supports planning for climate action
- Future: Add renewable energy percent and use Random Forest for better accuracy