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PREDICTION OF CO_2 EMISSIONS USING MACHINE LEARNING

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Abstract – Carbon dioxide (CO_2) is one of the important issues concerning human evolution that drives global climate change. It is emitted from the combustion of fuels causing global warming. The global community has gradually turned to pay more attention to environmental issues. This paper implements four prediction models using Multiple Linear Regression (MLR), Support Vector Machine (SVM), Random Forest (RF) and Convolutional Neural Network (CNN, or ConvNet) to predict CO_2 trapping efficiency among CO_2 emissions, energy use, and GDP. The Machine Learning (ML) approaches used in this study have shown good performance with SVM and CNN models with MAPE. The result can be a significant model for the decision support system to improve a suitable policy for global CO_2 emission reduction.

Keywords – Carbon dioxide (CO_2); Convolutional Neural Network; Forecast; Multiple Linear Regression; Random Forest; Support Vector Machine

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