Carbon Dioxide (CO2) is the major contributing factor to global warming and climate change. Growing industry and civilization increase the amount of CO2 emissions rapidly. Being a developing country in South Asia, Bangladesh is also facing the consequences like climate change for the last few decades due to CO2 emissions. It is essential to monitor CO2 emissions to take necessary steps towards reducing the emission rate by identifying contributing factors. Authors have analyzed a time series data of 42 years CO2 emission of Bangladesh. Diverse factors of CO2 emission covering multiple areas like environment, fossil consumption, and energy production are considered. By analyzing these data, it is showed as a prediction model for CO2 emission rate. In this literature, authors have identified the relevant factors that have much impact on CO2 emission in Bangladesh along with prediction. Different machine learning algorithms like Linear regression, Multi-Layer Perceptron (MLP) are applied in this study to build
the prediction model to address the issue.

Our result depicts that CO2 emission follows a linear model, and environmental factors are mostly related to CO2 emission. Few of these factors show high relation with CO2 emission for the past few years. It shows that the amount of rainfall is decreasing due to overall emission escalation. According to the data linearity found in CO2 emission in burning natural gas and Solid Fuel, a regression model is built based on these features. It successfully predicts the emission with significantly low RMSE. However, rainfall is not affected by the CO2 emission as the Correlation matrix does not provide any meaningful information. Instead, decreasing of Forest and Agricultural land have an impact on the emission. The effect of the overgrowing population in the last few decades has exponentially increased in CO2.

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Index Terms

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