

CO2 EMISSION

2023

SUNDAY

DECEMBER 3RD

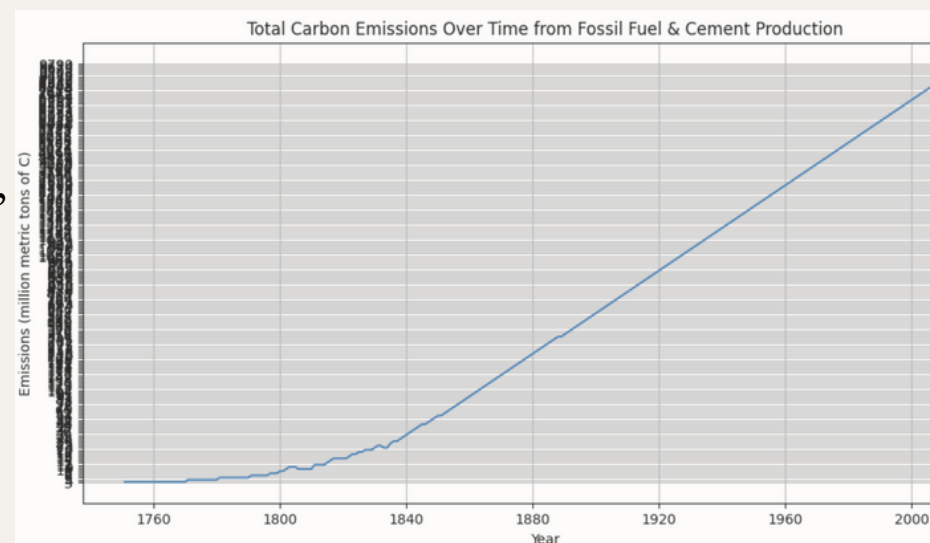


2. DATA SOURCE AND COMPOSITION:

Our source, "Global, Regional, and National Fossil-Fuel CO2 Emissions: 1751-2017," is a comprehensive compilation capturing CO2 emissions on a global, regional, and national scale from 1751 to 2017. It meticulously records emissions from fossil fuel consumption, cement production, gas flaring, and other key sources, providing a comprehensive view of historical emissions trends across various geographic levels. This expansive dataset enables a detailed analysis of CO2 emission patterns, crucial for our comprehensive assessment and predictive modeling.

1.INTRODUCTION:

Our project aims to analyze the trends and predict the future rise of CO2 emissions, considering their significant impact on the environment and climate change. The escalating levels of CO2 emission from various sources have raised concerns about their adverse effects on our planet, urging a deeper understanding and predictive measures.



3.LIBRARIES & DATA

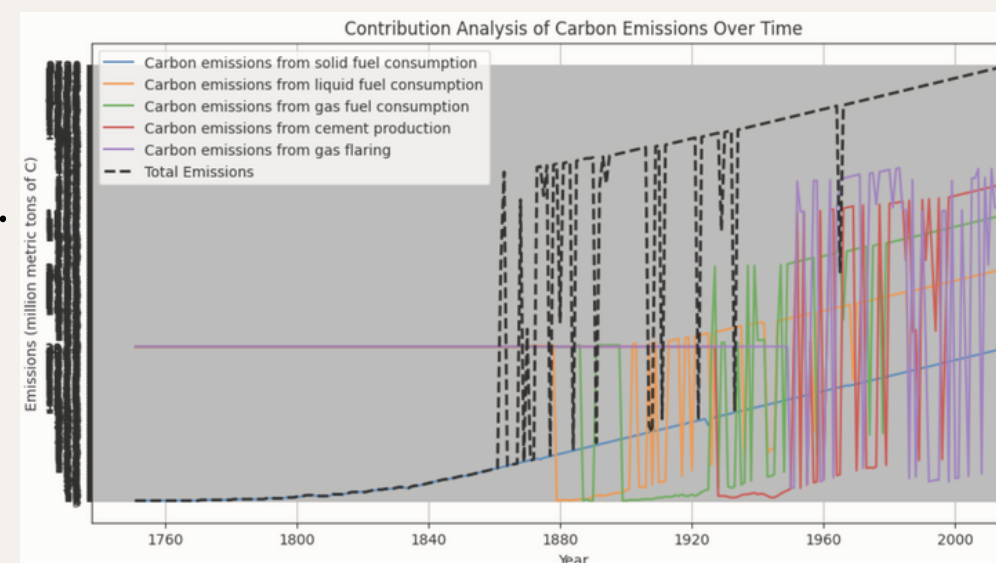
PROCESSING:

The Python libraries—Pandas, NumPy, Matplotlib, Seaborn, scikit-learn, and TensorFlow (Keras)—are instrumental in our analysis. Pandas and NumPy streamline data manipulation, Matplotlib and Seaborn aid in visualizing emission trends, while scikit-learn supports statistical analysis. TensorFlow (Keras) is pivotal in developing our LSTM model for accurate future CO2 emission forecasts. For the data, processing, it was just setting index, and removing top row as it was already cleaned



4. DATA ANALYSIS:

Our analysis unveiled compelling insights into the trends of CO2 emissions over time. Graphical representations showcased the contribution analysis of different emission sources, highlighting the shifting patterns and magnitudes of these contributions across years. Additionally, visualizations demonstrated the overall trajectory of total carbon emissions, affirming a noticeable increase over time.



5. MODEL PREDICTION

AND CONCLUSION:

Our predictive model forecasts a significant increase in CO2 emissions up to 2050. This prediction signals a worrisome trend, suggesting that without intervention, CO2 levels will continue to rise sharply. Such an upward trajectory could intensify climate change, leading to severe environmental repercussions. This highlights the urgency for proactive measures to mitigate CO2 emissions and address the potential adverse impacts on our planet's health and stability.

