

ABSTRACT

Indoor air pollution is an increasing global concern, due to its negative impact on human health. Air quality is strongly influenced by the concentration of air pollutants such as Total Volatile Organic Compounds (TVOC) and carbon dioxide (CO₂) levels, air quality monitoring becomes critical to identify potential risks and take necessary precautions. IAQI is a composite index model that represents the percentage of users who are satisfied with selected indoor air pollutant concentrations and their impact on user dissatisfaction. In this study, IAQI air pollutant concentrations were detected in time series using the Long Short Term Memory method. The results of this study show that the Long Short Term Memory model built successfully predicts IAQI air concentrations in the form of time series for testing against three categories (Good, Moderate, and Hazardous). The model evaluation results show accuracy and loss, which indicates that the model is suitable for identifying or predicting IAQI air concentrations in the form of time series.

Kata Kunci: LSTM, CO₂, TVOC, Air Pollution, IAQI.