

ABSTRACT

This Final Paper aims to model a solar power system using the Internet of Things (IoT) and Bidirectional Long Short-Term Memory (BiLSTM) Neural Networks. The system is designed to improve the accuracy of prediction and optimize solar power production through solar panels. The methodology integrates IoT technology to collect environmental data, namely global solar radiation (GSR), temperature, and relative humidity (RH). These data are then analyzed using the BiLSTM algorithm. The expected outcome of this model is to provide more accurate predictions of solar energy output, thereby supporting the optimization of solar power production efficiency compared to conventional methods.

Keywords: solar power, internet of things, BiLSTM, neural networks, prediction.