

## **Abstract**

Air temperature is one of the main factors for describing the weather behaviour in the earth. Since Indonesia is located on and near equator, then monitoring the air temperature is needed to determine either global climate change occurs or not. Climate change can have an impact on biological growth in various fields. For instance, climate change can affect the quality of production and growth of animal and plants. Therefore, air temperature prediction is important to meteorologists and Indonesian government to provide information in many sectors. Various prediction algorithms have been used to predict temperature and produce different accuracy. In this study, the deep learning method with Long Short-Term Memory (LSTM) model is used to predict air temperature. Here, the results show that LSTM model with one layer and Adaptive Moment Estimation (ADAM) optimizer produce accuracy which is 32% of R<sup>2</sup>, 0.068 of MAE and 0.99 of RMSE. Moreover, here, ADAM optimizer is found better than Stochastic Gradient Descent (SGD) optimizer.