

LSTM Programming

In this workshop, you will be training Long Short-Term Memory (LSTM) to forecast the weather condition. Read the following instructions and include all your result in the report.

Data You will be downloading a weather time-series dataset recorded by the Max Planck Institute for Biogeochemistry. The dataset consists of 14 different features such as air temperature, atmospheric pressure, and humidity. These were collected every 10 minutes and you will be using data collected between 2009 and 2016. Visit <https://www.bgc-jena.mpg.de/wetter/> for more information.

Model You will use the basic LSTM model, described in the time-series forecasting tutorial from Tensorflow.org. The model is designed to train **univariate** and **multivariate data** and evaluated with Mean Absolute Error (MAE).

Report Follow the tutorial "W7S1_LSTM_forecast.ipynb" to conduct an experiment. Your task here is to understand overall process of the time series forecasting task, from preparing time-series data to forecasting the future. (Link: https://www.tensorflow.org/tutorials/structured_data/time_series)

- Submit your Jupyter notebook as a report, including all the results obtained from the tutorial.

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