RNN Comparison

In this section, you will implement and explore RNN-based models to forecast the weather conditions. Read the following instructions and include all your result in the report.

Data You will be using the same weather time-series dataset from the workshop. This time, we focus on multivariate time series forecasting with **3 features: air temperature, atmospheric pressure, and air density**.

Model You will be using the model described in the Part 1 of the tutorial, which forecasts single step multivariate time series. Other than the LSTM model, two types of RNNs: Simple RNN and GRU will be applied for the comparison.

Report Follow the instruction below and report your result.

- Load t he dataset and draw a plot f or t he features (air temperature, atmospheric pressure, and air density) across time. Briefly describe how each feature changes over time.
- Compare the performance of three RNN-based models: Simple RNN, LSTM, and GRU, and report their MAEs.
- Choose the model that performed better and explore the choice of parameters. (length of past history for training, the number of epochs, etc.) Report your result with a table containing a model specification and its MAE.