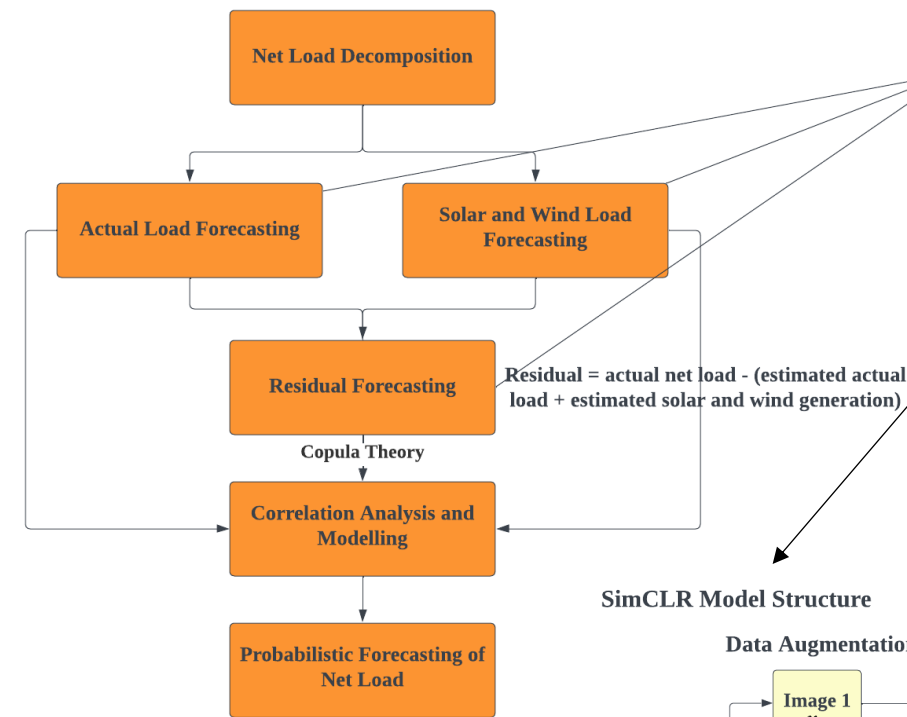
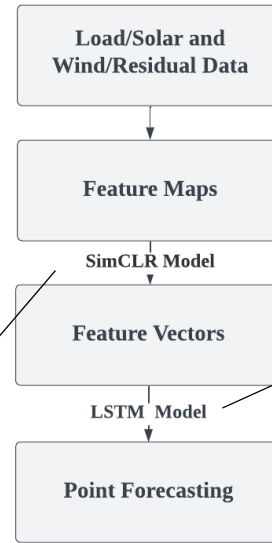


A Copula-based Probabilistic Net Load Forecasting Method using Contrastive Learning

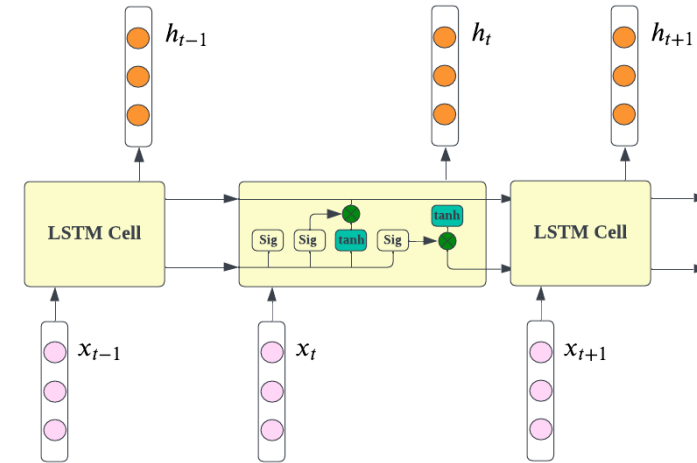
Flow Chart of Net Load Forecasting



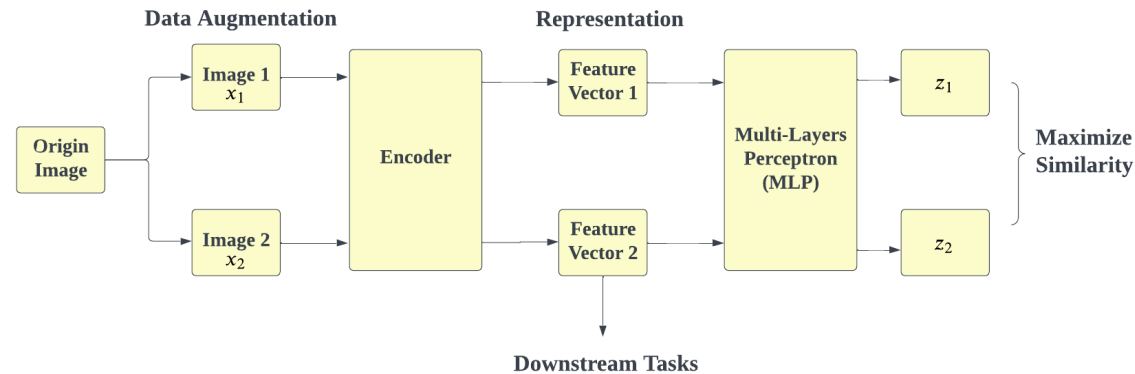
Forecasting Method



LSTM Model Structure



SimCLR Model Structure



Summary:

In this competition, we propose a Copula-based probabilistic net load forecasting based on the Solar Forecast Arbiter (SFA) Platform.

- The first step is to decompose net load into actual load and solar and wind generation, and forecast each of them separately.
- Then we can generate residual forecasting using actual net load, estimated load and estimated wind and solar generation using a contrastive and deep learning model which has shown superior results recently.
- The correlation between the three outcomes mentioned above can be analyzed.
- A Copula-based probabilistic forecasting of net load can be subsequently obtained.
- All of this work will be based on SFA Platform.