

Solarc Entry

Using Long Short-Term Memory (LSTM) networks for analyzing voltage and phase data over 15-minute periods

Objective: To accurately estimate voltage magnitudes and phase angles for each 15-minute interval in a 12-hour period, detect anomalies, and identify network topology changes.

- Using the information flow control native to LSTMs through gated information channels, Solarc will enhance the accuracy and efficiency of its distribution state estimation system.
- Solarc will efficiently manage and discard outdated or irrelevant information, ensuring that only pertinent data is retained over time. This prevents the accumulation of noise and enhances the stability of state estimations.
- Solarc will produce outputs that are dynamically adjusted based on the current and past information, allowing for more accurate predictions of voltage magnitudes and phase angles at each 15-minute interval.
- Solarc will benefit from LSTM's capability to continuously learn and adapt from real-time data, providing timely and accurate state estimations for the distribution network.