Distribution Network Intelligence

Approach Summary

Our team will develop a state estimation tool for unbalanced three-phase distribution networks, with the following features:

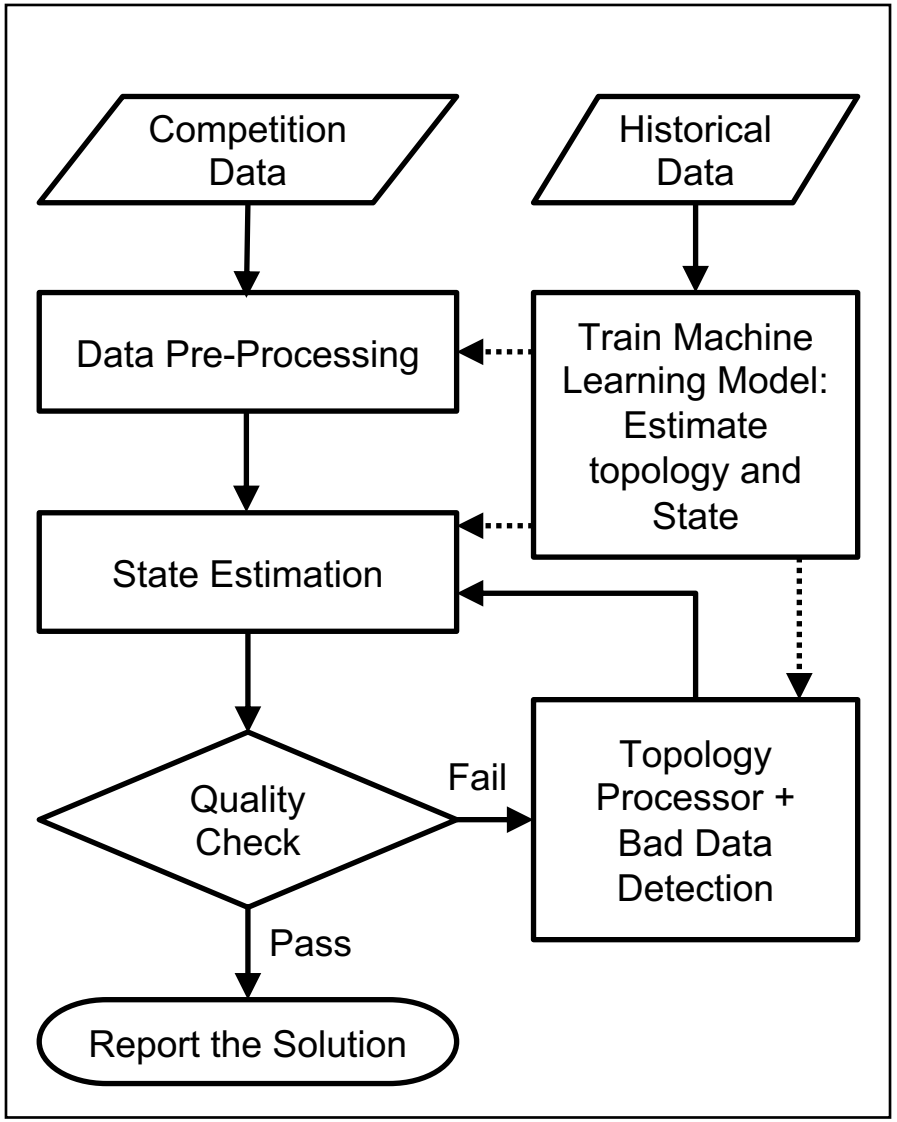
- Bad data detection: our algorithm will have a bad data detection and eliminates detected bad data,
- Topology processor: this feature will detect any topology changes for more accurate estimation,
- Machine-learning assistance: machine learning will be used to enhance the performance of our model. We will use the provided data (possibly with additional synthetic data) to train the model.

Team Members

Mostafa Ardakani is an associate professor at the University o Utah with a PhD in energy engineering and specializes in **power systems optimization**.

Mojtaba Ardakani is a software engineer at Google Research with a PhD in Electrical Engineering and MS in Statistics from UCLA. He specializes in **machine learning and optimization**.

Algorithm Overview



Distribution Network Intelligence: Empowering Physics-Based State Estimation with Data