American-Made Net Load Forecasting Prize
Submission Summary – Team *BtM Pros*

- Methodologically, the net load data trace is disaggregated into estimated BTM solar and load traces, based on which separate predictors are then trained for solar generation and load forecasting exploiting their distinct natures, respectively. An efficient design of Transformer-based models for multivariate time series forecasting and self-supervised representation learning is employed.

- The disaggregation algorithm takes the net load data and other widely available environmental measurements as inputs, and disaggregates the net load traces into BTM solar generation and load traces. In a fully unsupervised fashion, the method effectively exploits the self-similarity of customer loads to achieve accurate BTM solar disaggregation.

[M. Jia, K. Pu and Y. Zhao, "Net load forecast based on behind-the-meter disaggregation of smart meter data," *Proc. the 57th Annual Conference on Information Sciences and Systems (CISS)*, 2023.]

[K. Pu and Y. Zhao, "An Unsupervised similarity-based method for estimating behind-the-meter solar generation," *Proc. IEEE Conference on Innovative Smart Grid Technologies (ISGT)*, 2023.]

[Y. Nie, NH Nguyen, P Sinthong, and J. Kalagnanam, "A Time Series is Worth 64 Words: Long-term Forecasting with Transformers," ICLR 2023]

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