

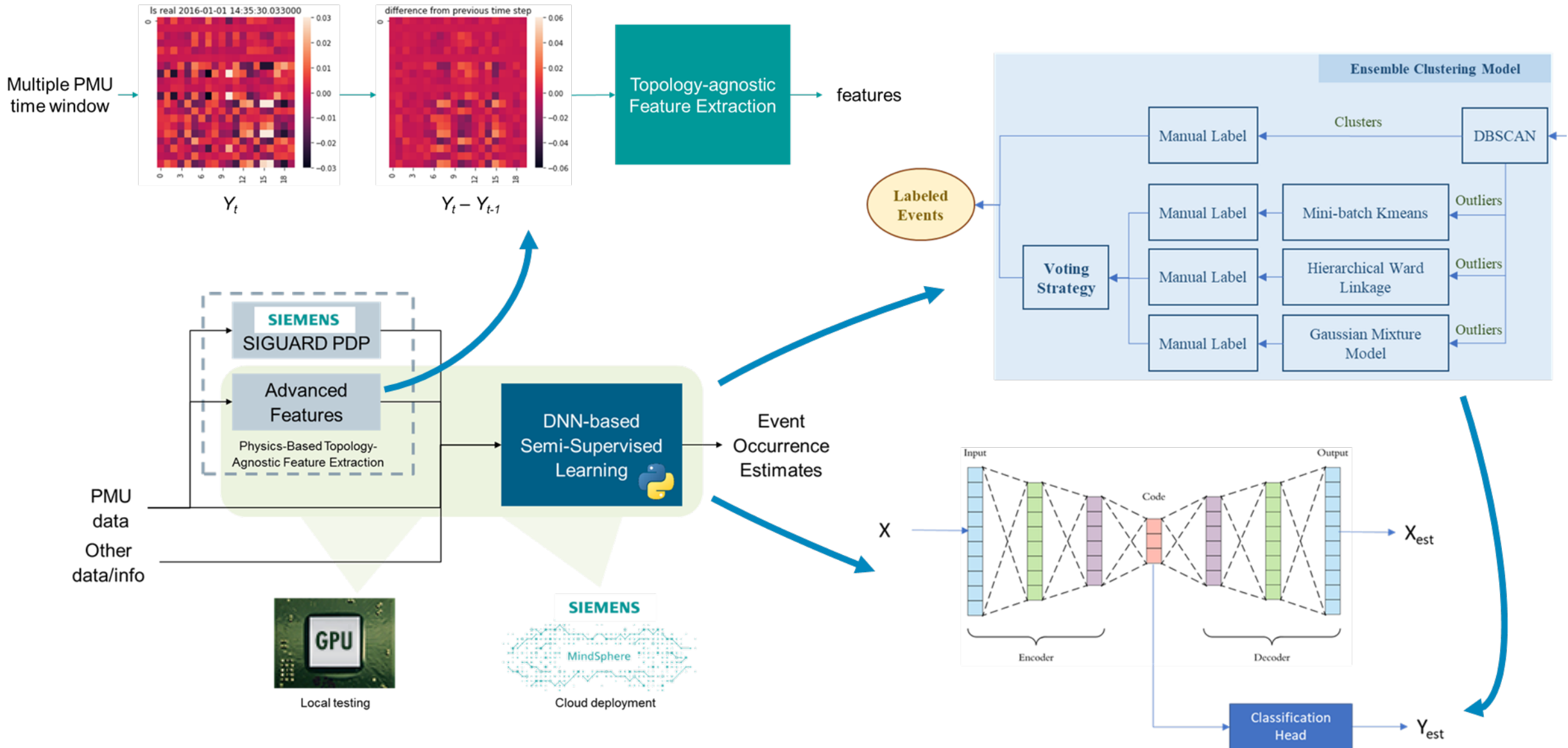
MindSynchro – FOA 1861

Bruno Leao (bruno.leao@siemens.com)

Siemens Technology US

Project Partners: Siemens Digital Grid, Siemens Process Automation, Southern Methodist University, Temple University

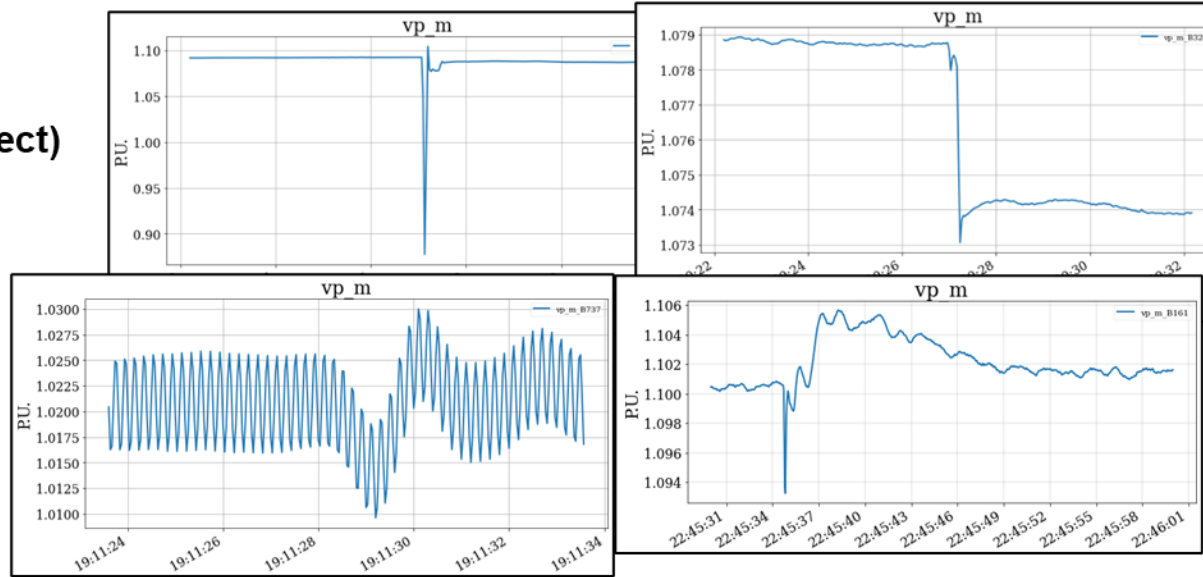
MindSynchro Project Overview – A Data-centric AI Approach



MindSynchro Project - Results

Final Patterns from UL

- Line trip (direct/indirect)
- Short circuit (direct/indirect)
- Auto-reclosure
- Loss of generation
- Load disconnection
- Sustained oscillation
- Damped oscillation
- Transient
- Noise
- Normal
- Unknown

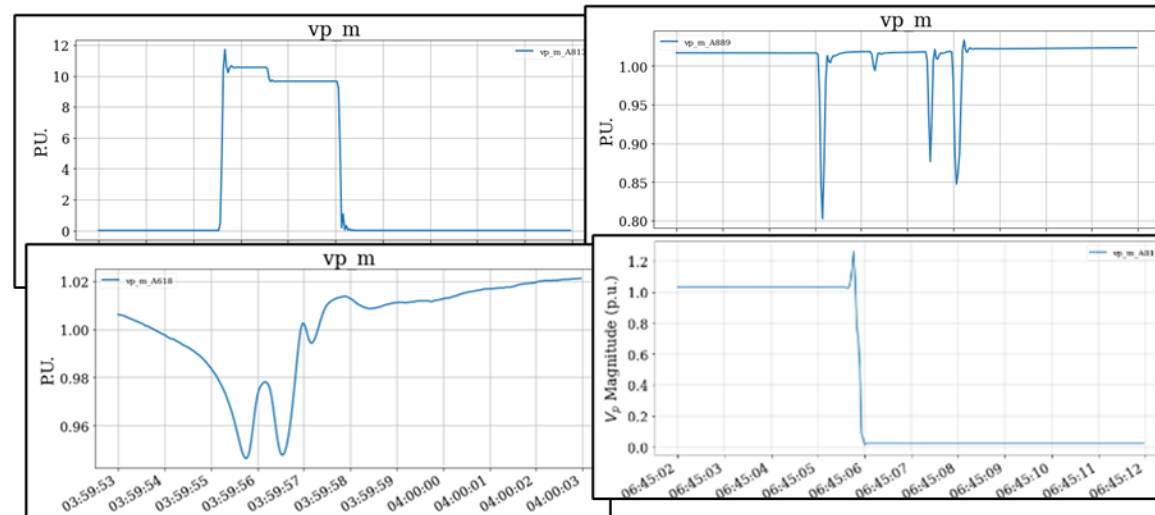


DSSL Model Results

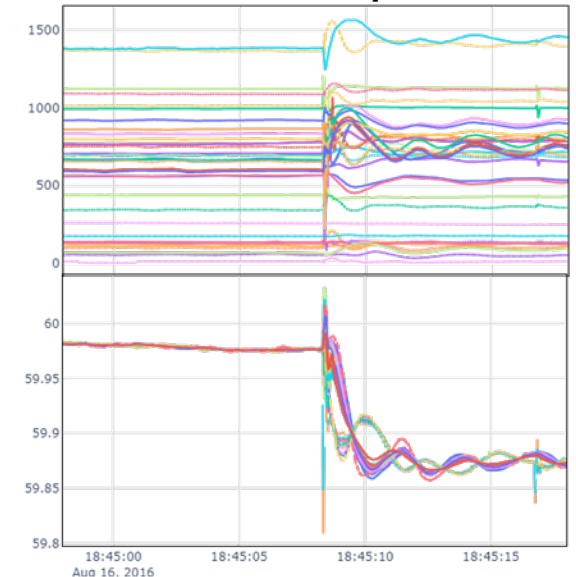
Model	#Labeled (P/N)	Accuracy
Short circuit (SC)	1878 / 296898	99.83%
SC with features	1983 / 284876	99.87%
Trip no SC	6258 / 271117	99.12%
Loss of gen.	11226 / 302824	>99.99%

Event Identification

Test Dataset	Number of events detected (UL general)
Texas IC (A)	3,661
Western IC (B)	2,583
Eastern IC (C)	9,476



In NERC report



| Contact

Bruno Leao

Siemens Corporation, Siemens Technology
755 College Road East
Princeton, NJ 08540
USA

E-Mail: bruno.leao@siemens.com

Web: <https://www.siemens.com/research>