Microgrid Model with UDE/BNODE Injection Points

Inputs

u(t)

$$\dot{x}_1 = f_1(x_1, x_2, u, d)$$

d(t)

Storage Energy

P_gen(t)

Physics: η_charge, η_discharge, γ, damping

P_load(t)

UDE

$$\dot{x}_2 = f_2(x_1, x_2, u, d)$$

$\beta \cdot P\_gen \to f\_\theta(P\_gen)$

Net Power/Frequency

BNODE

Learn entire vector field