

Summary of Model Performance (LOSO Cross-Validation)

Model	Approach	N	F1 (fixed)	F1 (val τ)	Acc (fixed)	Acc (val τ)
CNN-LSTM (Supervised)	Supervised	20	0.474	0.570	0.967	0.962
CNN-LSTM (Swapped labels)	Supervised	20	0.983	0.983	0.968	0.967
TS2Vec+Humidity (Self-supervised)	Self-supervised	18	0.652	0.652	0.955	0.955
TS2Vec IMU-only (Self-supervised)	Self-supervised	18	0.556	0.556	0.937	0.937