Time Series Prediction by Using AutoEncoder

Combination of Data and Expert Knowledge

Datasets: CIF and NN5

Evaluation criteria: SMAPE (Symmetric Mean Absolute Percentage Error)

Dataset	Method	SMAPE
CIF	**Only Data** • 3 Layer conv Network	12.603
	Combination of Data and Expert Knowledge • Using Autoencoder on Expert Knowledge • 3 Layer conv Network	**11.804**
NN5	**Only Data (75%)** • 3 Layer conv Network	23.098
	Only Data (100%) • 3 Layer conv Network	22.936
	Combination of Data and Expert Knowledge • Using Autoencoder on Expert Knowledge • 3 Layer conv Network	22.220
	Only Data (100%) • **Training the Network with Whole Data** • 3 Layer conv Network	21.690
	Combination of Data and Expert Knowledge • **Training the Network with Whole Data** • Using Autoencoder on Expert Knowledge • 3 Layer conv Network	**20.671**