Comparison of different methods under three distinct battery datasets using 1/10 of data size for training

Method	Public dataset 1 (18650HG2)		Public dataset 2 (18650PF)		Exp. dataset (BYD Battery)	
	MAE	RMSE	MAE	RMSE	MAE	RMSE
CNN	0.050	0.064	0.024	0.033	0.109	0.140
RNN	0.055	0.067	0.021	0.028	0.145	0.178
LSTM	0.053	0.065	0.021	0.027	0.101	0.114
SVR	0.035	0.042	0.037	0.047	0.285	0.344
RF	0.020	0.026	0.022	0.030	0.125	0.154
TDSPIN	0.019	0.026	0.020	0.027	0.105	0.106

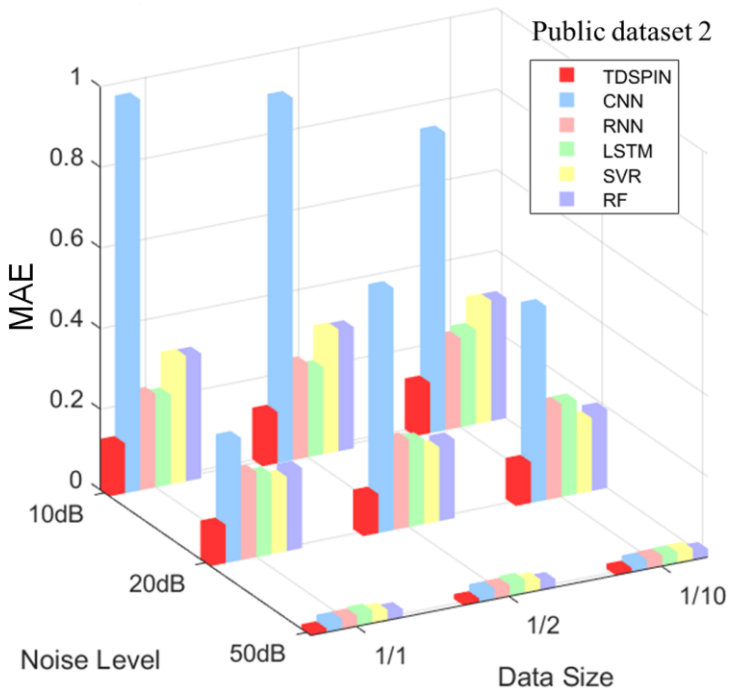
Comparison of different methods under three distinct battery datasets under noise interference (50 db snr)

Method	Public dataset 1 (18650HG2)		Public dataset 2 (18650PF)		Exp. dataset (BYD Battery)	
	MAE	RMSE	MAE	RMSE	MAE	RMSE
CNN	0.033	0.039	0.028	0.037	0.215	0.246
RNN	0.064	0.072	0.029	0.038	0.093	0.123
LSTM	0.060	0.074	0.033	0.043	0.102	0.117
SVR	0.028	0.037	0.028	0.038	0.115	0.135
RF	0.034	0.044	0.022	0.030	0.133	0.157
TDSPIN	0.028	0.033	0.022	0.028	0.038	0.049

Comparison of different methods under three distinct battery datasets under noise interference (10 db snr)

Method	Public dataset 1 (18650HG2)		Public dataset 2 (18650PF)		Exp. dataset (BYD Battery)	
	MAE	RMSE	MAE	RMSE	MAE	RMSE
CNN	1.081	1.488	0.970	1.389	1.066	1.074
RNN	0.252	0.277	0.233	0.271	0.251	0.295
LSTM	0.217	0.239	0.223	0.259	0.258	0.304
SVR	0.311	0.373	0.311	0.379	0.286	0.346
RF	0.308	0.368	0.309	0.376	0.285	0.344
TDSPIN	0.195	0.256	0.188	0.244	0.089	0.107

Comparison among the proposed TDSPIN and five existing methods under different data sizes and noise levels using the Panasonic 18650PF battery dataset.



*(*Note: All parameters' values are rounded to 3 decimal places.)*