

Features	Methods	Configuration of layers
off-the-shelf	DNN-ELM	3 x FCN (256) + ELM
	LSTM-ELM	2 x LSTM (128) + ELM
raw waveform	1D-CNN-LSTM	CNN (80) + CNN (800) + 2 x LSTM (128) CNN (80) + CNN (800) + 2 x LSTM (256)
log-spectrogram	2D-CNN-LSTM	2 x CNN (2 x 2) + 2 x LSTM (128) 2 x CNN (2 x 32) + 2 x LSTM (128) 2 x CNN (2 x 128) + 2 x LSTM (128)
		2D-CNN-LSTM-DNN
		2 x CNN (2 x 2) + 2 x LSTM (128) + 2 x FCN (512) 2 x CNN (2 x 32) + 2 x LSTM (128) + 2 x FCN (512) 2 x CNN (2 x 128) + 2 x LSTM (128) + 2 x FCN (512)
	3D-CNN-DNN (proposed)	2 x CNN (2 x 2 x [2, 32, 128]) + 2 x FCN (512) 3 x CNN (2 x 2 x 2) + 2 x FCN (512) 3 x CNN (2 x 2 x 32) + 2 x FCN (512) 3 x CNN (2 x 2 x 128) + 2 x FCN (512)
		3D-CNN-DNN-ELM (proposed)
		2 x CNN (2 x 2 x [2, 32, 128]) + 2 x FCN (512) 3 x CNN (2 x 2 x 2) + 2 x FCN (512) 3 x CNN (2 x 2 x 32) + 2 x FCN (512) 3 x CNN (2 x 2 x 128) + 2 x FCN (512)