Table S2. Search space of parameters for the SeqNetQuake model.

Modules	Parameters	Search Space
CNN	number of layers	hp.choice("num_cnn_layers", [2, 3, 4]
	number of filters	hp.choice("num_filters_cnn", [2, 3, 4])
	size of kernel	hp.choice("size_kernel_cnn", [2, 3])
	activation function	hp.choice("activation_cnn", ["relu", "tanh", "sigmoid"])
LSTM	number of layers	hp.choice("num_lstm_layers", [1, 2, 3, 4, 5])
	number of units for each layer	hp.choice("units_lstm_layers", [64, 128, 256, 512])
Fully Connected (FC)	number of layers	hp.choice("num_fc_layers", [2, 3, 4, 5, 6])
	number of units for each layer	hp.choice("units_fc_layers", [64, 128, 256, 512])
	activation function	hp.choice("activation_fc", ["relu", "tanh", "sigmoid"])
Common	batch_size	hp.choice("batch_size", [10, 20, 40, 60, 80, 100])
	number of epochs	hp.choice("nb_epochs", [10, 50, 100])
	dropout	hp.choice("dropout", [0.25, 0.5, 0.75])
	scale	hp.choice(scale', [0, 1])
	normalize	hp.choice('normalize', [0, 1])

For more details on the search spaces in the table, please refer to the Hyperopt document available at (http://hyperopt.github.io/hyperopt/getting-started/search_spaces/).

hp.choice (label, options) returns one of the options, which should be a list or tuple.