20 epoch

model = tf.keras.Sequential()

model.add(tf.keras.layers.Masking(mask\_value=-99., input\_shape=(sequence\_length, train\_array.shape[2])))

model.add(tf.keras.layers.LSTM(32, activation='tanh'))

# model.add(tf.keras.layers.Dropout(0.2))

model.add(tf.keras.layers.Dense(1))

train set RMSE:32.57142639160156, R2:0.7432354538051418

test set RMSE:29.800750732421875, R2:0.485725697048491

# Defining LSTM model

model = tf.keras.Sequential()

model.add(tf.keras.layers.Masking(mask\_value=-99., input\_shape=(sequence\_length, train\_array.shape[2])))

model.add(tf.keras.layers.LSTM(64, activation='tanh'))

# model.add(tf.keras.layers.Dropout(0.1))

model.add(tf.keras.layers.Dense(1))

train set RMSE:33.03456115722656, R2:0.7358816551057931

test set RMSE:27.481775283813477, R2:0.562649056121662

model = tf.keras.Sequential()

model.add(tf.keras.layers.Masking(mask\_value=-99., input\_shape=(sequence\_length, train\_array.shape[2])))

model.add(tf.keras.layers.LSTM(128, activation='tanh'))

# model.add(tf.keras.layers.Dropout(0.1))

model.add(tf.keras.layers.Dense(1))

train set RMSE:32.19434356689453, R2:0.7491462239353969

test set RMSE:29.070037841796875, R2:0.5106363678254227

# Defining LSTM model

model = tf.keras.Sequential()

model.add(tf.keras.layers.Masking(mask\_value=-99., input\_shape=(sequence\_length, train\_array.shape[2])))

model.add(tf.keras.layers.LSTM(64, activation='tanh'))

model.add(tf.keras.layers.Dropout(0.1))

model.add(tf.keras.layers.Dense(1))

train set RMSE:33.02170181274414, R2:0.7360872817230838

test set RMSE:28.92201042175293, R2:0.5156075222577718

10 epoch

model = tf.keras.Sequential()

model.add(tf.keras.layers.Masking(mask\_value=-99., input\_shape=(sequence\_length, train\_array.shape[2])))

model.add(tf.keras.layers.LSTM(128, activation='tanh'))

# model.add(tf.keras.layers.Dropout(0.1))

model.add(tf.keras.layers.Dense(1))

train set RMSE:36.3021240234375, R2:0.6810478754111042

test set RMSE:24.720911026000977, R2:0.6461091214086401

model = tf.keras.Sequential()

model.add(tf.keras.layers.Masking(mask\_value=-99., input\_shape=(sequence\_length, train\_array.shape[2])))

model.add(tf.keras.layers.LSTM(32, activation='tanh'))

# model.add(tf.keras.layers.Dropout(0.1))

model.add(tf.keras.layers.Dense(1))

train set RMSE:42.61544418334961, R2:0.5604629745077878

test set RMSE:18.745237350463867, R2:0.7965197024318217

model = tf.keras.Sequential()

model.add(tf.keras.layers.Masking(mask\_value=-99., input\_shape=(sequence\_length, train\_array.shape[2])))

model.add(tf.keras.layers.LSTM(32, activation='tanh'))

model.add(tf.keras.layers.Dropout(0.2))

model.add(tf.keras.layers.Dense(1))

train set RMSE:42.73553466796875, R2:0.5579822329207917

test set RMSE:17.23444366455078, R2:0.8279974121179458