```python
from google.colab import drive
drive.mount('/content/drive/')

Mounted at /content/drive/

import os
import pandas as pd
import numpy as np
import pickle
import matplotlib.pyplot as plt
import tensorflow as tf
from tensorflow.keras import layers
# import keras_tuner as kt
import seaborn as sns
from datetime import datetime
import optuna

os.chdir('drive/My Drive/Nbeats')

ipFiles = os.listdir('dataset50')
len(ipFiles)

50

with open('ipfiles.pickle','wb') as f:
  pickle.dump(ipFiles,f)

def oobsplit(pddata:pd.DataFrame):
  ''' splitting 75% for training and 25% for  testing'''
  splitSize = int(len(pddata)*0.75)
  data = pddata.iloc[:splitSize,:]
  oofdata = pddata.iloc[splitSize:,:]

  return data,oofdata

def make_window(data:pd.DataFrame):
  ''' creating columns with previous timestamp's values'''
  t2 = data.copy()
  t2 = t2[['value']]
  # Add windowed columns
  for i in range(50): # Shifting values for each step to create 50
subsequent cols.
    t2[f"value-{i+1}"] = t2["value"].shift(periods=i+1)
  return t2.dropna()

def WindowHorizon(data,WINDOW_SIZE,HORIZON):
  '''first breaking the training data into Train and
  validation data using split_size. Then using the window+horizon
number of
  columns from the 50 columns we have generated in make_window func'''
  split_size = int(len(data)*0.8)
```

```python
    data = data.iloc[:,:WINDOW_SIZE+HORIZON]

    xtr = data.iloc[:split_size,-WINDOW_SIZE:]
    ytr = data.iloc[:split_size,:HORIZON]
    xts = data.iloc[split_size:,-WINDOW_SIZE:]
    yts = data.iloc[split_size:,:HORIZON]

    return xtr,ytr,xts,yts



def
tensorize_data(xtr:pd.DataFrame,ytr:pd.DataFrame,xts:pd.DataFrame,yts:
pd.DataFrame,BATCH_SIZE):
    '''generating the tensor out of data to feed to neural network'''

    train_features_dataset = tf.data.Dataset.from_tensor_slices(xtr)
    train_labels_dataset = tf.data.Dataset.from_tensor_slices(ytr)

    test_features_dataset = tf.data.Dataset.from_tensor_slices(xts)
    test_labels_dataset = tf.data.Dataset.from_tensor_slices(yts)

    train_dataset = tf.data.Dataset.zip((train_features_dataset,
train_labels_dataset))
    test_dataset = tf.data.Dataset.zip((test_features_dataset,
test_labels_dataset))

    train_dataset =
train_dataset.batch(BATCH_SIZE).prefetch(tf.data.AUTOTUNE)
    test_dataset =
test_dataset.batch(BATCH_SIZE).prefetch(tf.data.AUTOTUNE)

    return train_dataset, test_dataset

def prep_data(data,WINDOW_SIZE,HORIZON,BATCH_SIZE):
    ''' calling all the 3 functions to prepare the data at
    one place'''
    data = make_window(data)
    xtr,ytr,xts,yts = WindowHorizon(data,WINDOW_SIZE,HORIZON)
    train_dataset, test_dataset =
tensorize_data(xtr,ytr,xts,yts,BATCH_SIZE)

    return train_dataset, test_dataset



class NBeatsBlock(tf.keras.layers.Layer):
    def __init__(self,
                 input_size: int,
                 theta_size: int,
```

```python
                horizon: int,
                n_neurons: int,
                n_layers: int,
                **kwargs):
    super().__init__(**kwargs)
    self.input_size = input_size
    self.theta_size = theta_size
    self.horizon = horizon
    self.n_neurons = n_neurons
    self.n_layers = n_layers

    # Block contains stack of 4 fully connected layers each has ReLU
activation
    self.dense_layers = [tf.keras.layers.Dense(n_neurons,
activation="relu") for _ in range(n_layers)]
    # Output of block is a theta layer with linear activation
    self.theta_layer = tf.keras.layers.Dense(theta_size,
activation="linear", name="theta")

  def call(self, inputs): # the call method is what runs when the
layer is called
    x = inputs
    for layer in self.dense_layers:
      x = layer(x)
    theta = self.theta_layer(x)
    # Output the backcast and forecast from theta
    backcast, forecast = theta[:, :self.input_size], theta[:, -
self.horizon:]
    return backcast, forecast

def make_preds(model, input_data):
   return tf.squeeze(model.predict(input_data))

def evaluate_preds(y_true, y_pred):
  # float32 for metric calculations
  y_true = tf.cast(y_true, dtype=tf.float32)
  y_pred = tf.cast(y_pred, dtype=tf.float32)

  # Calculate all the req metrics
  # mae = tf.keras.metrics.mean_absolute_error(y_true, y_pred)
  # mse = tf.keras.metrics.mean_squared_error(y_true, y_pred) # puts
and emphasis on outliers (all errors get squared)
  # rmse = tf.sqrt(mse)
  mape = tf.keras.metrics.mean_absolute_percentage_error(y_true,
y_pred).numpy().mean()

  return mape

  # return {"mae": mae.numpy(),
  #         "mse": mse.numpy(),
```

```python
#           "rmse": rmse.numpy(),
#           "mape": mape.numpy(),
#           }
def obj_func(trial,data):
  ''' defining the objective func for optuna study to minimize
  the loss returned'''


  WINDOW_SIZE= trial.suggest_int('WINDOW_SIZE',5,38,3)
  HORIZON = trial.suggest_int('HORIZON',1,5,1)

  N_EPOCHS = 1000
  N_NEURONS = trial.suggest_categorical('N_NEURONS',
[128,256,512,1024])
  N_LAYERS = 4
  N_STACKS = trial.suggest_categorical('N_STACKS',[10,20,30,40])
  BATCH_SIZE = 128

  INPUT_SIZE = WINDOW_SIZE
  THETA_SIZE = INPUT_SIZE + HORIZON
  INPUT_SIZE, THETA_SIZE


  tf.random.set_seed(5)

  data,_ = oobsplit(data)
  train_dataset,test_dataset =
prep_data(data,WINDOW_SIZE,HORIZON,BATCH_SIZE)



  #Nbeats architecture
  nbeats_block_layer = NBeatsBlock(input_size=INPUT_SIZE,
                                   theta_size=THETA_SIZE,
                                   horizon=HORIZON,
                                   n_neurons=N_NEURONS,
                                   n_layers=N_LAYERS,
                                   name="InitialBlock")

  stack_input = layers.Input(shape=(INPUT_SIZE), name="stack_input")

  backcast, forecast = nbeats_block_layer(stack_input)
  residuals = layers.subtract([stack_input, backcast],
name=f"subtract_00")

  for i, _ in enumerate(range(N_STACKS-1)): # first stack is already
creted in (3)
```

```python
    backcast, block_forecast = NBeatsBlock(
        input_size=INPUT_SIZE,
        theta_size=THETA_SIZE,
        horizon=HORIZON,
        n_neurons=N_NEURONS,
        n_layers=N_LAYERS,
        name=f"NBeatsBlock_{i}"
    )(residuals) # pass it in residuals (the backcast)

    residuals = layers.subtract([residuals, backcast],
name=f"subtract_{i}")
    forecast = layers.add([forecast, block_forecast], name=f"add_{i}")

  model = tf.keras.Model(inputs=stack_input,
                         outputs=forecast,
                         name="model_N-BEATS")

  model.compile(loss="mape",
                optimizer=tf.keras.optimizers.Adam(0.001),
                )

  model.fit(train_dataset,
            epochs=N_EPOCHS,
            validation_data=test_dataset,
            verbose=0,
            #
callbacks=[create_model_checkpoint(model_name=stack_model.name)] #
saving model every epoch takes too much time

callbacks=[tf.keras.callbacks.EarlyStopping(monitor="val_loss",
patience=20, restore_best_weights=True),

tf.keras.callbacks.ReduceLROnPlateau(monitor="val_loss", patience=10,
verbose=0),
                      #
tf.keras.callbacks.ModelCheckpoint(FILEPATH,
monitor='val_loss',verbose=0,save_best_only=True, mode='min') # need
to write a get_config method for this
                      ])


  preds = make_preds(model, test_dataset)
  _,_,_,ytrue = WindowHorizon(make_window(data),WINDOW_SIZE,HORIZON)


  return evaluate_preds(ytrue,preds)
```

```python
def hypertune(data,i,model_arr):
    '''hypertunning the window size, horizon size, neurons and
    number of stack to use for each dataset'''

    study_name = f'model_{i}'
    study =
optuna.create_study(study_name=study_name,storage=f'sqlite:///modeldb/
model_{i}.db',

pruner=optuna.pruners.MedianPruner(n_warmup_steps=10),load_if_exists=T
rue, direction="minimize")


    study.optimize(lambda trial :
obj_func(trial,data),gc_after_trial=True,timeout=1200, n_trials= 10)
    print(study.best_trial.params)
    model_arr.append(study.best_trial.params)#an array/list to store the
best values model wise
    with open('model_para_arr.pickle','wb') as f:
        pickle.dump(model_arr,f)

model_arr = []
for i,files in enumerate(ipFiles):
    pddata = pd.read_csv(f'dataset50/{files}',index_col = 0)
    hypertune(pddata,i,model_arr)
```

```
[I 2022-05-03 15:30:56,076] A new study created in RDB with name:
model_0
[I 2022-05-03 15:31:35,855] Trial 0 finished with value: 18034420.0
and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 5, 'N_NEURONS': 512,
'N_STACKS': 40}. Best is trial 0 with value: 18034420.0.
[I 2022-05-03 15:32:31,422] Trial 1 finished with value: 11455383.0
and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 2, 'N_NEURONS': 256,
'N_STACKS': 40}. Best is trial 1 with value: 11455383.0.
[I 2022-05-03 15:32:46,124] Trial 2 finished with value: 31890462.0
and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 2, 'N_NEURONS': 128,
'N_STACKS': 20}. Best is trial 1 with value: 11455383.0.
[I 2022-05-03 15:33:33,020] Trial 3 finished with value: 23291974.0
and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 2, 'N_NEURONS': 1024,
'N_STACKS': 40}. Best is trial 1 with value: 11455383.0.

WARNING:tensorflow:5 out of the last 5 calls to <function
Model.make_predict_function.<locals>.predict_function at
0x7f3087e40950> triggered tf.function retracing. Tracing is expensive
and the excessive number of tracings could be due to (1) creating
@tf.function repeatedly in a loop, (2) passing tensors with different
shapes, (3) passing Python objects instead of tensors. For (1), please
define your @tf.function outside of the loop. For (2), @tf.function
has experimental_relax_shapes=True option that relaxes argument shapes
```

that can avoid unnecessary retracing. For (3), please refer to
https://www.tensorflow.org/guide/function#controlling_retracing and
https://www.tensorflow.org/api_docs/python/tf/function for more
details.

[I 2022-05-03 15:33:48,810] Trial 4 finished with value: 577721.5 and
parameters: {'WINDOW_SIZE': 5, 'HORIZON': 3, 'N_NEURONS': 256,
'N_STACKS': 10}. Best is trial 4 with value: 577721.5.

WARNING:tensorflow:6 out of the last 6 calls to <function
Model.make_predict_function.<locals>.predict_function at
0x7f30ba46be60> triggered tf.function retracing. Tracing is expensive
and the excessive number of tracings could be due to (1) creating
@tf.function repeatedly in a loop, (2) passing tensors with different
shapes, (3) passing Python objects instead of tensors. For (1), please
define your @tf.function outside of the loop. For (2), @tf.function
has experimental_relax_shapes=True option that relaxes argument shapes
that can avoid unnecessary retracing. For (3), please refer to
https://www.tensorflow.org/guide/function#controlling_retracing and
https://www.tensorflow.org/api_docs/python/tf/function for more
details.

[I 2022-05-03 15:34:08,019] Trial 5 finished with value: 67545352.0
and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 1, 'N_NEURONS': 128,
'N_STACKS': 30}. Best is trial 4 with value: 577721.5.
[I 2022-05-03 15:34:35,489] Trial 6 finished with value: 54345300.0
and parameters: {'WINDOW_SIZE': 23, 'HORIZON': 2, 'N_NEURONS': 128,
'N_STACKS': 40}. Best is trial 4 with value: 577721.5.
[I 2022-05-03 15:35:23,281] Trial 7 finished with value: 25552072.0
and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 1, 'N_NEURONS': 1024,
'N_STACKS': 40}. Best is trial 4 with value: 577721.5.
[I 2022-05-03 15:35:30,448] Trial 8 finished with value: 16838068.0
and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 1, 'N_NEURONS': 256,
'N_STACKS': 10}. Best is trial 4 with value: 577721.5.
[I 2022-05-03 15:36:29,176] Trial 9 finished with value: 748348.125
and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 2, 'N_NEURONS': 512,
'N_STACKS': 40}. Best is trial 4 with value: 577721.5.

{'HORIZON': 3, 'N_NEURONS': 256, 'N_STACKS': 10, 'WINDOW_SIZE': 5}

[I 2022-05-03 15:36:30,516] A new study created in RDB with name:
model_1
[I 2022-05-03 15:36:41,874] Trial 0 finished with value:
0.6557193398475647 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 4,
'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 0 with value:
0.6557193398475647.
[I 2022-05-03 15:36:57,214] Trial 1 finished with value:
2.731217861175537 and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 1,
'N_NEURONS': 128, 'N_STACKS': 20}. Best is trial 0 with value:
0.6557193398475647.
[I 2022-05-03 15:37:53,625] Trial 2 finished with value:

0.6274402737617493 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 4, 'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 2 with value: 0.6274402737617493.
[I 2022-05-03 15:38:16,128] Trial 3 finished with value: 1.2038347721099854 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 3, 'N_NEURONS': 256, 'N_STACKS': 30}. Best is trial 2 with value: 0.6274402737617493.
[I 2022-05-03 15:38:50,281] Trial 4 finished with value: 1.1561100482940674 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 3, 'N_NEURONS': 128, 'N_STACKS': 30}. Best is trial 2 with value: 0.6274402737617493.
[I 2022-05-03 15:39:24,164] Trial 5 finished with value: 2.7002341747283936 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 1, 'N_NEURONS': 1024, 'N_STACKS': 30}. Best is trial 2 with value: 0.6274402737617493.
[I 2022-05-03 15:39:51,778] Trial 6 finished with value: 0.5693032741546631 and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 5, 'N_NEURONS': 1024, 'N_STACKS': 20}. Best is trial 6 with value: 0.5693032741546631.
[I 2022-05-03 15:40:11,682] Trial 7 finished with value: 0.605468213558197 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 4, 'N_NEURONS': 128, 'N_STACKS': 20}. Best is trial 6 with value: 0.5693032741546631.
[I 2022-05-03 15:40:38,704] Trial 8 finished with value: 0.5499362945556641 and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 2, 'N_NEURONS': 512, 'N_STACKS': 30}. Best is trial 8 with value: 0.5499362945556641.
[I 2022-05-03 15:41:07,799] Trial 9 finished with value: 0.658814549446106 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 2, 'N_NEURONS': 128, 'N_STACKS': 40}. Best is trial 8 with value: 0.5499362945556641.

{'HORIZON': 2, 'N_NEURONS': 512, 'N_STACKS': 30, 'WINDOW_SIZE': 35}

[I 2022-05-03 15:41:08,844] A new study created in RDB with name: model_2
[I 2022-05-03 15:41:42,123] Trial 0 finished with value: 0.04168660566210747 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 5, 'N_NEURONS': 512, 'N_STACKS': 30}. Best is trial 0 with value: 0.04168660566210747.
[I 2022-05-03 15:41:58,314] Trial 1 finished with value: 0.046082742512226105 and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 3, 'N_NEURONS': 128, 'N_STACKS': 20}. Best is trial 0 with value: 0.04168660566210747.
[I 2022-05-03 15:42:12,695] Trial 2 finished with value: 0.0419536754488945 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 3, 'N_NEURONS': 1024, 'N_STACKS': 10}. Best is trial 0 with value: 0.04168660566210747.
[I 2022-05-03 15:42:53,046] Trial 3 finished with value: 0.04064292460680008 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 2, 'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 3 with value:

0.04064292460680008.
[I 2022-05-03 15:43:22,295] Trial 4 finished with value:
0.04297078028321266 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 5,
'N_NEURONS': 128, 'N_STACKS': 40}. Best is trial 3 with value:
0.04064292460680008.
[I 2022-05-03 15:43:37,887] Trial 5 finished with value:
0.03843441605567932 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 4,
'N_NEURONS': 1024, 'N_STACKS': 10}. Best is trial 5 with value:
0.03843441605567932.
[I 2022-05-03 15:44:09,694] Trial 6 finished with value:
0.03825167566537857 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 5,
'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 6 with value:
0.03825167566537857.
[I 2022-05-03 15:44:32,179] Trial 7 finished with value:
0.03559667989611626 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 3,
'N_NEURONS': 128, 'N_STACKS': 30}. Best is trial 7 with value:
0.03559667989611626.
[I 2022-05-03 15:45:23,052] Trial 8 finished with value:
0.0387166403234005 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 3,
'N_NEURONS': 1024, 'N_STACKS': 40}. Best is trial 7 with value:
0.03559667989611626.
[I 2022-05-03 15:45:32,951] Trial 9 finished with value:
0.03764144331216812 and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 5,
'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 7 with value:
0.03559667989611626.

{'HORIZON': 3, 'N_NEURONS': 128, 'N_STACKS': 30, 'WINDOW_SIZE': 38}

[I 2022-05-03 15:45:33,884] A new study created in RDB with name:
model_3
[I 2022-05-03 15:45:57,860] Trial 0 finished with value:
0.15361183881759644 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 2,
'N_NEURONS': 512, 'N_STACKS': 30}. Best is trial 0 with value:
0.15361183881759644.
[I 2022-05-03 15:46:07,471] Trial 1 finished with value:
0.33066716790019928 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 4,
'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 0 with value:
0.15361183881759644.
[I 2022-05-03 15:46:21,826] Trial 2 finished with value:
0.5843232274055481 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 2,
'N_NEURONS': 128, 'N_STACKS': 20}. Best is trial 0 with value:
0.15361183881759644.
[I 2022-05-03 15:46:38,748] Trial 3 finished with value:
0.23314113914966583 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 4,
'N_NEURONS': 1024, 'N_STACKS': 10}. Best is trial 0 with value:
0.15361183881759644.
[I 2022-05-03 15:46:54,085] Trial 4 finished with value:
1.7435996532440186 and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 1,
'N_NEURONS': 512, 'N_STACKS': 30}. Best is trial 0 with value:
0.15361183881759644.
[I 2022-05-03 15:47:03,326] Trial 5 finished with value:

1.724186897277832 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 1, 'N_NEURONS': 1024, 'N_STACKS': 10}. Best is trial 0 with value: 0.15361183881759644.
[I 2022-05-03 15:47:13,906] Trial 6 finished with value: 1.79475998878479 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 1, 'N_NEURONS': 256, 'N_STACKS': 20}. Best is trial 0 with value: 0.15361183881759644.
[I 2022-05-03 15:47:41,648] Trial 7 finished with value: 0.321944922208786 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 3, 'N_NEURONS': 512, 'N_STACKS': 30}. Best is trial 0 with value: 0.15361183881759644.
[I 2022-05-03 15:48:09,269] Trial 8 finished with value: 0.4441545307636261 and parameters: {'WINDOW_SIZE': 23, 'HORIZON': 5, 'N_NEURONS': 128, 'N_STACKS': 40}. Best is trial 0 with value: 0.15361183881759644.
[I 2022-05-03 15:48:30,604] Trial 9 finished with value: 1.694453239440918 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 1, 'N_NEURONS': 1024, 'N_STACKS': 30}. Best is trial 0 with value: 0.15361183881759644.

{'HORIZON': 2, 'N_NEURONS': 512, 'N_STACKS': 30, 'WINDOW_SIZE': 5}

[I 2022-05-03 15:48:31,741] A new study created in RDB with name: model_4
[I 2022-05-03 15:49:01,258] Trial 0 finished with value: 0.4059370458126068 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 4, 'N_NEURONS': 128, 'N_STACKS': 10}. Best is trial 0 with value: 0.4059370458126068.
[I 2022-05-03 15:49:42,344] Trial 1 finished with value: 0.502907931804657 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 3, 'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 0 with value: 0.4059370458126068.
[I 2022-05-03 15:49:57,596] Trial 2 finished with value: 0.9809901714324951 and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 1, 'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 0 with value: 0.4059370458126068.
[I 2022-05-03 15:50:23,660] Trial 3 finished with value: 0.31689512729644775 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 4, 'N_NEURONS': 128, 'N_STACKS': 30}. Best is trial 3 with value: 0.31689512729644775.
[I 2022-05-03 15:50:53,412] Trial 4 finished with value: 0.5561128854751587 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 4, 'N_NEURONS': 1024, 'N_STACKS': 10}. Best is trial 3 with value: 0.31689512729644775.
[I 2022-05-03 15:52:18,902] Trial 5 finished with value: 1.0224394798278809 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 1, 'N_NEURONS': 1024, 'N_STACKS': 10}. Best is trial 3 with value: 0.31689512729644775.
[I 2022-05-03 15:53:49,785] Trial 6 finished with value: 0.9900441765785217 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 1, 'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 3 with value:

0.31689512729644775.
[I 2022-05-03 15:54:43,027] Trial 7 finished with value:
0.38253942131996155 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 4,
'N_NEURONS': 256, 'N_STACKS': 30}. Best is trial 3 with value:
0.31689512729644775.
[I 2022-05-03 15:55:23,821] Trial 8 finished with value:
0.3165452778339386 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 5,
'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 8 with value:
0.3165452778339386.
[I 2022-05-03 15:56:13,047] Trial 9 finished with value:
1.0038560628890991 and parameters: {'WINDOW_SIZE': 23, 'HORIZON': 1,
'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 8 with value:
0.3165452778339386.

{'HORIZON': 5, 'N_NEURONS': 512, 'N_STACKS': 40, 'WINDOW_SIZE': 32}

[I 2022-05-03 15:56:14,305] A new study created in RDB with name:
model_5
[I 2022-05-03 15:56:22,677] Trial 0 finished with value: 0.0 and
parameters: {'WINDOW_SIZE': 8, 'HORIZON': 4, 'N_NEURONS': 128,
'N_STACKS': 20}. Best is trial 0 with value: 0.0.
[I 2022-05-03 15:56:33,178] Trial 1 finished with value: 0.0 and
parameters: {'WINDOW_SIZE': 8, 'HORIZON': 3, 'N_NEURONS': 1024,
'N_STACKS': 20}. Best is trial 0 with value: 0.0.
[I 2022-05-03 15:56:45,923] Trial 2 finished with value: 0.0 and
parameters: {'WINDOW_SIZE': 14, 'HORIZON': 2, 'N_NEURONS': 128,
'N_STACKS': 30}. Best is trial 0 with value: 0.0.
[I 2022-05-03 15:57:06,151] Trial 3 finished with value: 0.0 and
parameters: {'WINDOW_SIZE': 26, 'HORIZON': 5, 'N_NEURONS': 1024,
'N_STACKS': 40}. Best is trial 0 with value: 0.0.
[I 2022-05-03 15:57:11,246] Trial 4 finished with value: 0.0 and
parameters: {'WINDOW_SIZE': 29, 'HORIZON': 2, 'N_NEURONS': 128,
'N_STACKS': 10}. Best is trial 0 with value: 0.0.
[I 2022-05-03 15:57:19,983] Trial 5 finished with value: 0.0 and
parameters: {'WINDOW_SIZE': 32, 'HORIZON': 5, 'N_NEURONS': 256,
'N_STACKS': 20}. Best is trial 0 with value: 0.0.
[I 2022-05-03 15:57:36,692] Trial 6 finished with value: 0.0 and
parameters: {'WINDOW_SIZE': 35, 'HORIZON': 3, 'N_NEURONS': 128,
'N_STACKS': 40}. Best is trial 0 with value: 0.0.
[I 2022-05-03 15:57:52,175] Trial 7 finished with value: 0.0 and
parameters: {'WINDOW_SIZE': 20, 'HORIZON': 5, 'N_NEURONS': 1024,
'N_STACKS': 30}. Best is trial 0 with value: 0.0.
[I 2022-05-03 15:58:01,076] Trial 8 finished with value: 0.0 and
parameters: {'WINDOW_SIZE': 11, 'HORIZON': 2, 'N_NEURONS': 256,
'N_STACKS': 20}. Best is trial 0 with value: 0.0.
[I 2022-05-03 15:58:09,854] Trial 9 finished with value: 0.0 and
parameters: {'WINDOW_SIZE': 32, 'HORIZON': 3, 'N_NEURONS': 128,
'N_STACKS': 20}. Best is trial 0 with value: 0.0.

{'HORIZON': 4, 'N_NEURONS': 128, 'N_STACKS': 20, 'WINDOW_SIZE': 8}

[I 2022-05-03 15:58:10,880] A new study created in RDB with name: model_6
[I 2022-05-03 15:58:23,574] Trial 0 finished with value: 9.459465980529785 and parameters: {'WINDOW_SIZE': 23, 'HORIZON': 3, 'N_NEURONS': 1024, 'N_STACKS': 20}. Best is trial 0 with value: 9.459465980529785.
[I 2022-05-03 15:58:38,454] Trial 1 finished with value: 11.274552345275879 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 4, 'N_NEURONS': 1024, 'N_STACKS': 20}. Best is trial 0 with value: 9.459465980529785.
[I 2022-05-03 15:58:57,527] Trial 2 finished with value: 9.8984375 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 4, 'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 0 with value: 9.459465980529785.
[I 2022-05-03 15:59:07,381] Trial 3 finished with value: 11.76369857788086 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 2, 'N_NEURONS': 256, 'N_STACKS': 20}. Best is trial 0 with value: 9.459465980529785.
[I 2022-05-03 15:59:23,665] Trial 4 finished with value: 11.825399398803711 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 3, 'N_NEURONS': 256, 'N_STACKS': 30}. Best is trial 0 with value: 9.459465980529785.
[I 2022-05-03 15:59:46,214] Trial 5 finished with value: 19.649513244628906 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 1, 'N_NEURONS': 128, 'N_STACKS': 40}. Best is trial 0 with value: 9.459465980529785.
[I 2022-05-03 15:59:52,697] Trial 6 finished with value: 12.79713249206543 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 5, 'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 0 with value: 9.459465980529785.
[I 2022-05-03 16:00:07,162] Trial 7 finished with value: 19.26774787902832 and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 1, 'N_NEURONS': 1024, 'N_STACKS': 20}. Best is trial 0 with value: 9.459465980529785.
[I 2022-05-03 16:00:36,758] Trial 8 finished with value: 13.44145393371582 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 4, 'N_NEURONS': 1024, 'N_STACKS': 40}. Best is trial 0 with value: 9.459465980529785.
[I 2022-05-03 16:00:55,634] Trial 9 finished with value: 19.701152801513672 and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 1, 'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 0 with value: 9.459465980529785.

{'HORIZON': 3, 'N_NEURONS': 1024, 'N_STACKS': 20, 'WINDOW_SIZE': 23}

[I 2022-05-03 16:00:56,807] A new study created in RDB with name: model_7
[I 2022-05-03 16:01:25,241] Trial 0 finished with value: 0.06610734760761261 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 3, 'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 0 with value: 0.06610734760761261.
[I 2022-05-03 16:01:40,354] Trial 1 finished with value:

0.06796126812696457 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 2, 'N_NEURONS': 128, 'N_STACKS': 20}. Best is trial 0 with value: 0.06610734760761261.
[I 2022-05-03 16:01:46,277] Trial 2 finished with value: 0.12582692503929138 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 1, 'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 0 with value: 0.06610734760761261.
[I 2022-05-03 16:01:55,548] Trial 3 finished with value: 0.0776786282658577 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 5, 'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 0 with value: 0.06610734760761261.
[I 2022-05-03 16:02:20,475] Trial 4 finished with value: 0.044502776116132736 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 2, 'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 4 with value: 0.044502776116132736.
[I 2022-05-03 16:02:28,387] Trial 5 finished with value: 0.12073280662298203 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 1, 'N_NEURONS': 512, 'N_STACKS': 10}. Best is trial 4 with value: 0.044502776116132736.
[I 2022-05-03 16:03:01,259] Trial 6 finished with value: 0.08120714873075485 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 5, 'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 4 with value: 0.044502776116132736.
[I 2022-05-03 16:03:42,483] Trial 7 finished with value: 0.06985815614461899 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 4, 'N_NEURONS': 1024, 'N_STACKS': 30}. Best is trial 4 with value: 0.044502776116132736.
[I 2022-05-03 16:04:10,079] Trial 8 finished with value: 0.05893811210989952 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 4, 'N_NEURONS': 128, 'N_STACKS': 40}. Best is trial 4 with value: 0.044502776116132736.
[I 2022-05-03 16:04:39,369] Trial 9 finished with value: 0.059397924691438675 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 5, 'N_NEURONS': 128, 'N_STACKS': 40}. Best is trial 4 with value: 0.044502776116132736.

{'HORIZON': 2, 'N_NEURONS': 256, 'N_STACKS': 40, 'WINDOW_SIZE': 5}

[I 2022-05-03 16:04:40,551] A new study created in RDB with name: model_8
[I 2022-05-03 16:05:02,635] Trial 0 finished with value: 3573689.5 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 3, 'N_NEURONS': 128, 'N_STACKS': 20}. Best is trial 0 with value: 3573689.5.
[I 2022-05-03 16:05:34,450] Trial 1 finished with value: 212752.234375 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 3, 'N_NEURONS': 512, 'N_STACKS': 20}. Best is trial 1 with value: 212752.234375.
[I 2022-05-03 16:06:29,855] Trial 2 finished with value: 1984340.125 and parameters: {'WINDOW_SIZE': 23, 'HORIZON': 4, 'N_NEURONS': 1024, 'N_STACKS': 40}. Best is trial 1 with value: 212752.234375.
[I 2022-05-03 16:07:06,485] Trial 3 finished with value: 182242.0625 and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 4, 'N_NEURONS': 256,

'N_STACKS': 10}. Best is trial 3 with value: 182242.0625.
[I 2022-05-03 16:07:33,091] Trial 4 finished with value: 1416617.0 and
parameters: {'WINDOW_SIZE': 17, 'HORIZON': 5, 'N_NEURONS': 256,
'N_STACKS': 20}. Best is trial 3 with value: 182242.0625.
[I 2022-05-03 16:07:59,317] Trial 5 finished with value: 74865.8125
and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 3, 'N_NEURONS': 128,
'N_STACKS': 20}. Best is trial 5 with value: 74865.8125.
[I 2022-05-03 16:08:38,367] Trial 6 finished with value: 2836440.0 and
parameters: {'WINDOW_SIZE': 14, 'HORIZON': 5, 'N_NEURONS': 128,
'N_STACKS': 40}. Best is trial 5 with value: 74865.8125.
[I 2022-05-03 16:09:02,035] Trial 7 finished with value: 10162810.0
and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 1, 'N_NEURONS': 128,
'N_STACKS': 30}. Best is trial 5 with value: 74865.8125.
[I 2022-05-03 16:10:17,808] Trial 8 finished with value:
29095.69140625 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 5,
'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 8 with value:
29095.69140625.
[I 2022-05-03 16:10:49,664] Trial 9 finished with value: 3142964.75
and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 5, 'N_NEURONS': 128,
'N_STACKS': 20}. Best is trial 8 with value: 29095.69140625.

{'HORIZON': 5, 'N_NEURONS': 256, 'N_STACKS': 40, 'WINDOW_SIZE': 5}

[I 2022-05-03 16:10:50,687] A new study created in RDB with name:
model_9
[I 2022-05-03 16:11:02,930] Trial 0 finished with value:
0.3162439465522766 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 2,
'N_NEURONS': 1024, 'N_STACKS': 10}. Best is trial 0 with value:
0.3162439465522766.
[I 2022-05-03 16:11:21,048] Trial 1 finished with value:
0.315444678068161 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 5,
'N_NEURONS': 512, 'N_STACKS': 20}. Best is trial 1 with value:
0.315444678068161.
[I 2022-05-03 16:11:37,486] Trial 2 finished with value:
0.32280489802360535 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 4,
'N_NEURONS': 256, 'N_STACKS': 20}. Best is trial 1 with value:
0.315444678068161.
[I 2022-05-03 16:11:55,856] Trial 3 finished with value:
0.3048226535320282 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 5,
'N_NEURONS': 512, 'N_STACKS': 20}. Best is trial 3 with value:
0.3048226535320282.
[I 2022-05-03 16:12:07,830] Trial 4 finished with value:
0.29961222410202026 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 1,
'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 4 with value:
0.29961222410202026.
[I 2022-05-03 16:12:25,132] Trial 5 finished with value:
0.308841735124588 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 2,
'N_NEURONS': 256, 'N_STACKS': 20}. Best is trial 4 with value:
0.29961222410202026.
[I 2022-05-03 16:12:44,824] Trial 6 finished with value:
0.3069816827774048 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 1,

'N_NEURONS': 512, 'N_STACKS': 30}. Best is trial 4 with value:
0.29961222410202026.
[I 2022-05-03 16:12:53,673] Trial 7 finished with value:
0.3071835935115814 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 4,
'N_NEURONS': 512, 'N_STACKS': 10}. Best is trial 4 with value:
0.29961222410202026.
[I 2022-05-03 16:13:17,675] Trial 8 finished with value:
0.31840306520462036 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 5,
'N_NEURONS': 512, 'N_STACKS': 30}. Best is trial 4 with value:
0.29961222410202026.
[I 2022-05-03 16:13:26,285] Trial 9 finished with value:
0.31263673305511475 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 4,
'N_NEURONS': 128, 'N_STACKS': 10}. Best is trial 4 with value:
0.29961222410202026.

{'HORIZON': 1, 'N_NEURONS': 256, 'N_STACKS': 10, 'WINDOW_SIZE': 32}

[I 2022-05-03 16:13:27,254] A new study created in RDB with name:
model_10
[I 2022-05-03 16:13:50,368] Trial 0 finished with value:
0.8909211754798889 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 5,
'N_NEURONS': 512, 'N_STACKS': 30}. Best is trial 0 with value:
0.8909211754798889.
[I 2022-05-03 16:13:59,610] Trial 1 finished with value:
1.3642847537994385 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 5,
'N_NEURONS': 128, 'N_STACKS': 10}. Best is trial 0 with value:
0.8909211754798889.
[I 2022-05-03 16:14:23,012] Trial 2 finished with value:
0.9437439441680908 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 5,
'N_NEURONS': 256, 'N_STACKS': 30}. Best is trial 0 with value:
0.8909211754798889.
[I 2022-05-03 16:14:57,932] Trial 3 finished with value:
1.4617818593978882 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 3,
'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 0 with value:
0.8909211754798889.
[I 2022-05-03 16:15:18,921] Trial 4 finished with value:
1.0127758979797363 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 5,
'N_NEURONS': 128, 'N_STACKS': 30}. Best is trial 0 with value:
0.8909211754798889.
[I 2022-05-03 16:15:32,823] Trial 5 finished with value:
1.6400511264801025 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 4,
'N_NEURONS': 128, 'N_STACKS': 20}. Best is trial 0 with value:
0.8909211754798889.
[I 2022-05-03 16:15:58,768] Trial 6 finished with value:
1.4071682691574097 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 5,
'N_NEURONS': 512, 'N_STACKS': 30}. Best is trial 0 with value:
0.8909211754798889.
[I 2022-05-03 16:16:24,713] Trial 7 finished with value:
0.8680793046951294 and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 2,
'N_NEURONS': 512, 'N_STACKS': 30}. Best is trial 7 with value:
0.8680793046951294.

[I 2022-05-03 16:16:56,949] Trial 8 finished with value:
1.6138920783996582 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 4,
'N_NEURONS': 128, 'N_STACKS': 40}. Best is trial 7 with value:
0.8680793046951294.
[I 2022-05-03 16:17:06,105] Trial 9 finished with value:
1.3194727897644043 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 2,
'N_NEURONS': 512, 'N_STACKS': 10}. Best is trial 7 with value:
0.8680793046951294.

{'HORIZON': 2, 'N_NEURONS': 512, 'N_STACKS': 30, 'WINDOW_SIZE': 35}

[I 2022-05-03 16:17:07,059] A new study created in RDB with name:
model_11
[I 2022-05-03 16:17:30,880] Trial 0 finished with value:
11.774579048156738 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 2,
'N_NEURONS': 512, 'N_STACKS': 30}. Best is trial 0 with value:
11.774579048156738.
[I 2022-05-03 16:17:51,691] Trial 1 finished with value:
378.30853271484375 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 1,
'N_NEURONS': 256, 'N_STACKS': 30}. Best is trial 0 with value:
11.774579048156738.
[I 2022-05-03 16:18:06,009] Trial 2 finished with value:
12.621405601501465 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 2,
'N_NEURONS': 512, 'N_STACKS': 20}. Best is trial 0 with value:
11.774579048156738.
[I 2022-05-03 16:18:18,378] Trial 3 finished with value:
13.651084899902344 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 5,
'N_NEURONS': 256, 'N_STACKS': 20}. Best is trial 0 with value:
11.774579048156738.
[I 2022-05-03 16:18:46,090] Trial 4 finished with value:
16.40202522277832 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 3,
'N_NEURONS': 128, 'N_STACKS': 40}. Best is trial 0 with value:
11.774579048156738.
[I 2022-05-03 16:19:02,115] Trial 5 finished with value:
10.814654350280762 and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 5,
'N_NEURONS': 512, 'N_STACKS': 20}. Best is trial 5 with value:
10.814654350280762.
[I 2022-05-03 16:19:18,847] Trial 6 finished with value:
22.955612182617188 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 5,
'N_NEURONS': 128, 'N_STACKS': 30}. Best is trial 5 with value:
10.814654350280762.
[I 2022-05-03 16:19:26,488] Trial 7 finished with value:
11.34251594543457 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 2,
'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 5 with value:
10.814654350280762.
[I 2022-05-03 16:19:32,685] Trial 8 finished with value:
13.011165618896484 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 2,
'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 5 with value:
10.814654350280762.
[I 2022-05-03 16:19:56,729] Trial 9 finished with value:
11.987656593322754 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 2,

'N_NEURONS': 512, 'N_STACKS': 30}. Best is trial 5 with value:
10.814654350280762.

{'HORIZON': 5, 'N_NEURONS': 512, 'N_STACKS': 20, 'WINDOW_SIZE': 29}

[I 2022-05-03 16:19:57,857] A new study created in RDB with name:
model_12
[I 2022-05-03 16:20:37,529] Trial 0 finished with value:
0.2034430354833603 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 2,
'N_NEURONS': 1024, 'N_STACKS': 10}. Best is trial 0 with value:
0.2034430354833603.
[I 2022-05-03 16:21:06,999] Trial 1 finished with value:
0.2152373194694519 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 2,
'N_NEURONS': 256, 'N_STACKS': 30}. Best is trial 0 with value:
0.2034430354833603.
[I 2022-05-03 16:21:42,237] Trial 2 finished with value:
1.1144287586212158 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 1,
'N_NEURONS': 128, 'N_STACKS': 30}. Best is trial 0 with value:
0.2034430354833603.
[I 2022-05-03 16:22:11,542] Trial 3 finished with value:
0.99563550094909668 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 1,
'N_NEURONS': 128, 'N_STACKS': 10}. Best is trial 0 with value:
0.2034430354833603.
[I 2022-05-03 16:23:05,382] Trial 4 finished with value:
0.39701613783836365 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 5,
'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 0 with value:
0.2034430354833603.
[I 2022-05-03 16:23:39,158] Trial 5 finished with value:
1.1442402601242065 and parameters: {'WINDOW_SIZE': 23, 'HORIZON': 1,
'N_NEURONS': 256, 'N_STACKS': 30}. Best is trial 0 with value:
0.2034430354833603.
[I 2022-05-03 16:23:47,281] Trial 6 finished with value:
0.9269038438796997 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 1,
'N_NEURONS': 1024, 'N_STACKS': 10}. Best is trial 0 with value:
0.2034430354833603.
[I 2022-05-03 16:24:28,761] Trial 7 finished with value:
0.5302353501319885 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 3,
'N_NEURONS': 128, 'N_STACKS': 10}. Best is trial 0 with value:
0.2034430354833603.
[I 2022-05-03 16:25:00,484] Trial 8 finished with value:
1.117060661315918 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 1,
'N_NEURONS': 128, 'N_STACKS': 20}. Best is trial 0 with value:
0.2034430354833603.
[I 2022-05-03 16:25:32,669] Trial 9 finished with value:
0.5279313325881958 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 4,
'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 0 with value:
0.2034430354833603.

{'HORIZON': 2, 'N_NEURONS': 1024, 'N_STACKS': 10, 'WINDOW_SIZE': 38}

[I 2022-05-03 16:25:33,637] A new study created in RDB with name:
model_13
[I 2022-05-03 16:26:07,445] Trial 0 finished with value:
0.42602407932281494 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 2,
'N_NEURONS': 128, 'N_STACKS': 30}. Best is trial 0 with value:
0.42602407932281494.
[I 2022-05-03 16:26:18,804] Trial 1 finished with value:
1.2746870517730713 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 1,
'N_NEURONS': 1024, 'N_STACKS': 10}. Best is trial 0 with value:
0.42602407932281494.
[I 2022-05-03 16:26:38,961] Trial 2 finished with value:
1.2533862590789795 and parameters: {'WINDOW_SIZE': 23, 'HORIZON': 1,
'N_NEURONS': 128, 'N_STACKS': 20}. Best is trial 0 with value:
0.42602407932281494.
[I 2022-05-03 16:26:50,955] Trial 3 finished with value:
0.6920090317726135 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 4,
'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 0 with value:
0.42602407932281494.
[I 2022-05-03 16:27:01,581] Trial 4 finished with value:
0.6522308588027954 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 4,
'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 0 with value:
0.42602407932281494.
[I 2022-05-03 16:27:18,168] Trial 5 finished with value:
1.09727942943573 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 1,
'N_NEURONS': 1024, 'N_STACKS': 20}. Best is trial 0 with value:
0.42602407932281494.
[I 2022-05-03 16:27:37,341] Trial 6 finished with value:
1.2530663013458252 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 1,
'N_NEURONS': 256, 'N_STACKS': 30}. Best is trial 0 with value:
0.42602407932281494.
[I 2022-05-03 16:27:56,569] Trial 7 finished with value:
0.37495553493499756 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 3,
'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 7 with value:
0.37495553493499756.
[I 2022-05-03 16:28:42,465] Trial 8 finished with value:
0.5744502544403076 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 4,
'N_NEURONS': 128, 'N_STACKS': 20}. Best is trial 7 with value:
0.37495553493499756.
[I 2022-05-03 16:30:00,554] Trial 9 finished with value:
0.632595419883728 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 4,
'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 7 with value:
0.37495553493499756.

{'HORIZON': 3, 'N_NEURONS': 256, 'N_STACKS': 10, 'WINDOW_SIZE': 38}

[I 2022-05-03 16:30:01,794] A new study created in RDB with name:
model_14
[I 2022-05-03 16:30:37,374] Trial 0 finished with value:
0.09914984554052353 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 1,
'N_NEURONS': 256, 'N_STACKS': 30}. Best is trial 0 with value:
0.09914984554052353.

[I 2022-05-03 16:30:58,189] Trial 1 finished with value:
0.10493852943181992 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 5,
'N_NEURONS': 256, 'N_STACKS': 20}. Best is trial 0 with value:
0.09914984554052353.
[I 2022-05-03 16:31:14,768] Trial 2 finished with value:
0.10288438200950623 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 5,
'N_NEURONS': 128, 'N_STACKS': 20}. Best is trial 0 with value:
0.09914984554052353.
[I 2022-05-03 16:31:28,341] Trial 3 finished with value:
0.08330105990171432 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 2,
'N_NEURONS': 512, 'N_STACKS': 10}. Best is trial 3 with value:
0.08330105990171432.
[I 2022-05-03 16:31:39,371] Trial 4 finished with value:
0.08733168244361877 and parameters: {'WINDOW_SIZE': 23, 'HORIZON': 4,
'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 3 with value:
0.08330105990171432.
[I 2022-05-03 16:32:20,323] Trial 5 finished with value:
0.09277127683162689 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 5,
'N_NEURONS': 128, 'N_STACKS': 40}. Best is trial 3 with value:
0.08330105990171432.
[I 2022-05-03 16:32:42,964] Trial 6 finished with value:
0.09978949278593063 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 5,
'N_NEURONS': 1024, 'N_STACKS': 10}. Best is trial 3 with value:
0.08330105990171432.
[I 2022-05-03 16:33:10,933] Trial 7 finished with value:
0.10973789542913437 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 5,
'N_NEURONS': 512, 'N_STACKS': 30}. Best is trial 3 with value:
0.08330105990171432.
[I 2022-05-03 16:33:37,642] Trial 8 finished with value:
0.09848355501890182 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 2,
'N_NEURONS': 128, 'N_STACKS': 30}. Best is trial 3 with value:
0.08330105990171432.
[I 2022-05-03 16:34:02,824] Trial 9 finished with value:
0.09610679000616074 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 3,
'N_NEURONS': 1024, 'N_STACKS': 20}. Best is trial 3 with value:
0.08330105990171432.

{'HORIZON': 2, 'N_NEURONS': 512, 'N_STACKS': 10, 'WINDOW_SIZE': 38}

[I 2022-05-03 16:34:03,848] A new study created in RDB with name:
model_15
[I 2022-05-03 16:34:12,984] Trial 0 finished with value:
6.248811721801758 and parameters: {'WINDOW_SIZE': 23, 'HORIZON': 3,
'N_NEURONS': 512, 'N_STACKS': 10}. Best is trial 0 with value:
6.248811721801758.
[I 2022-05-03 16:34:39,160] Trial 1 finished with value:
6.336737155914307 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 5,
'N_NEURONS': 1024, 'N_STACKS': 20}. Best is trial 0 with value:
6.248811721801758.
[I 2022-05-03 16:34:50,411] Trial 2 finished with value:
6.576838970184326 and parameters: {'WINDOW_SIZE': 23, 'HORIZON': 5,

'N_NEURONS': 1024, 'N_STACKS': 10}. Best is trial 0 with value:
6.248811721801758.
[I 2022-05-03 16:35:24,281] Trial 3 finished with value:
5.642266273498535 and parameters: {'WINDOW_SIZE': 23, 'HORIZON': 2,
'N_NEURONS': 1024, 'N_STACKS': 30}. Best is trial 3 with value:
5.642266273498535.
[I 2022-05-03 16:36:10,218] Trial 4 finished with value:
8.673388481140137 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 4,
'N_NEURONS': 1024, 'N_STACKS': 40}. Best is trial 3 with value:
5.642266273498535.
[I 2022-05-03 16:36:19,634] Trial 5 finished with value:
352.3657531738281 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 1,
'N_NEURONS': 1024, 'N_STACKS': 10}. Best is trial 3 with value:
5.642266273498535.
[I 2022-05-03 16:36:44,588] Trial 6 finished with value:
6.765555381774902 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 2,
'N_NEURONS': 512, 'N_STACKS': 30}. Best is trial 3 with value:
5.642266273498535.
[I 2022-05-03 16:36:57,628] Trial 7 finished with value:
7.136073589324951 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 2,
'N_NEURONS': 128, 'N_STACKS': 20}. Best is trial 3 with value:
5.642266273498535.
[I 2022-05-03 16:37:09,447] Trial 8 finished with value:
15.407957077026367 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 5,
'N_NEURONS': 128, 'N_STACKS': 10}. Best is trial 3 with value:
5.642266273498535.
[I 2022-05-03 16:37:35,964] Trial 9 finished with value:
11.013944625854492 and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 5,
'N_NEURONS': 128, 'N_STACKS': 40}. Best is trial 3 with value:
5.642266273498535.

{'HORIZON': 2, 'N_NEURONS': 1024, 'N_STACKS': 30, 'WINDOW_SIZE': 23}

[I 2022-05-03 16:37:37,174] A new study created in RDB with name:
model_16
[I 2022-05-03 16:39:08,661] Trial 0 finished with value:
0.19585977494716644 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 4,
'N_NEURONS': 1024, 'N_STACKS': 30}. Best is trial 0 with value:
0.19585977494716644.
[I 2022-05-03 16:40:24,562] Trial 1 finished with value:
0.1687324494123459 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 2,
'N_NEURONS': 1024, 'N_STACKS': 40}. Best is trial 1 with value:
0.1687324494123459.
[I 2022-05-03 16:40:33,174] Trial 2 finished with value:
0.21452271938323975 and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 4,
'N_NEURONS': 512, 'N_STACKS': 10}. Best is trial 1 with value:
0.1687324494123459.
[I 2022-05-03 16:41:05,968] Trial 3 finished with value:
0.20544874668121338 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 5,
'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 1 with value:
0.1687324494123459.

[I 2022-05-03 16:41:14,073] Trial 4 finished with value:
0.9586478471755981 and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 1,
'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 1 with value:
0.1687324494123459.
[I 2022-05-03 16:43:10,098] Trial 5 finished with value:
0.21243400871753693 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 5,
'N_NEURONS': 1024, 'N_STACKS': 40}. Best is trial 1 with value:
0.1687324494123459.
[I 2022-05-03 16:43:58,621] Trial 6 finished with value:
0.2728380560874939 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 4,
'N_NEURONS': 128, 'N_STACKS': 10}. Best is trial 1 with value:
0.1687324494123459.
[I 2022-05-03 16:44:07,550] Trial 7 finished with value:
0.20217999815940857 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 2,
'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 1 with value:
0.1687324494123459.
[I 2022-05-03 16:44:16,494] Trial 8 finished with value:
0.283458411693573 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 2,
'N_NEURONS': 128, 'N_STACKS': 10}. Best is trial 1 with value:
0.1687324494123459.
[I 2022-05-03 16:45:01,822] Trial 9 finished with value:
0.19550511240959167 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 3,
'N_NEURONS': 1024, 'N_STACKS': 40}. Best is trial 1 with value:
0.1687324494123459.

{'HORIZON': 2, 'N_NEURONS': 1024, 'N_STACKS': 40, 'WINDOW_SIZE': 20}

[I 2022-05-03 16:45:03,019] A new study created in RDB with name:
model_17
[I 2022-05-03 16:45:31,894] Trial 0 finished with value:
3.440796136856079 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 2,
'N_NEURONS': 1024, 'N_STACKS': 30}. Best is trial 0 with value:
3.440796136856079.
[I 2022-05-03 16:45:40,136] Trial 1 finished with value:
50.86073684692383 and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 1,
'N_NEURONS': 512, 'N_STACKS': 10}. Best is trial 0 with value:
3.440796136856079.
[I 2022-05-03 16:46:04,671] Trial 2 finished with value:
3.9946517944335938 and parameters: {'WINDOW_SIZE': 23, 'HORIZON': 2,
'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 0 with value:
3.440796136856079.
[I 2022-05-03 16:46:21,034] Trial 3 finished with value:
6.074017524719238 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 2,
'N_NEURONS': 256, 'N_STACKS': 20}. Best is trial 0 with value:
3.440796136856079.
[I 2022-05-03 16:46:52,529] Trial 4 finished with value:
4.020294666290283 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 2,
'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 0 with value:
3.440796136856079.
[I 2022-05-03 16:47:31,647] Trial 5 finished with value:
6.308670520782471 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 2,

'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 0 with value:
3.440796136856079.
[I 2022-05-03 16:47:59,466] Trial 6 finished with value:
4.677757263183594 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 5,
'N_NEURONS': 512, 'N_STACKS': 30}. Best is trial 0 with value:
3.440796136856079.
[I 2022-05-03 16:48:25,814] Trial 7 finished with value:
50.97382736206055 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 1,
'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 0 with value:
3.440796136856079.
[I 2022-05-03 16:48:38,047] Trial 8 finished with value:
4.032517910003662 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 3,
'N_NEURONS': 1024, 'N_STACKS': 10}. Best is trial 0 with value:
3.440796136856079.
[I 2022-05-03 16:49:00,458] Trial 9 finished with value:
4.019219398498535 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 3,
'N_NEURONS': 512, 'N_STACKS': 30}. Best is trial 0 with value:
3.440796136856079.

{'HORIZON': 2, 'N_NEURONS': 1024, 'N_STACKS': 30, 'WINDOW_SIZE': 26}

[I 2022-05-03 16:49:01,618] A new study created in RDB with name:
model_18
[I 2022-05-03 16:50:01,829] Trial 0 finished with value:
6.436384201049805 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 4,
'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 0 with value:
6.436384201049805.
[I 2022-05-03 16:50:36,743] Trial 1 finished with value:
49.74700164794922 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 1,
'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 0 with value:
6.436384201049805.
[I 2022-05-03 16:50:43,130] Trial 2 finished with value:
44.880393981933594 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 3,
'N_NEURONS': 512, 'N_STACKS': 10}. Best is trial 0 with value:
6.436384201049805.
[I 2022-05-03 16:51:12,663] Trial 3 finished with value:
13.194713592529297 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 4,
'N_NEURONS': 1024, 'N_STACKS': 30}. Best is trial 0 with value:
6.436384201049805.
[I 2022-05-03 16:51:36,407] Trial 4 finished with value:
17.872783660888672 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 4,
'N_NEURONS': 1024, 'N_STACKS': 10}. Best is trial 0 with value:
6.436384201049805.
[I 2022-05-03 16:53:35,597] Trial 5 finished with value:
15.544102668762207 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 2,
'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 0 with value:
6.436384201049805.
[I 2022-05-03 16:54:12,382] Trial 6 finished with value:
7.718740463256836 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 5,
'N_NEURONS': 128, 'N_STACKS': 30}. Best is trial 0 with value:
6.436384201049805.

[I 2022-05-03 16:54:32,957] Trial 7 finished with value:
47.67930603027344 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 2,
'N_NEURONS': 128, 'N_STACKS': 40}. Best is trial 0 with value:
6.436384201049805.
[I 2022-05-03 16:55:16,745] Trial 8 finished with value:
9.851725578308105 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 2,
'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 0 with value:
6.436384201049805.
[I 2022-05-03 16:55:30,683] Trial 9 finished with value:
50.73591613769531 and parameters: {'WINDOW_SIZE': 23, 'HORIZON': 1,
'N_NEURONS': 1024, 'N_STACKS': 10}. Best is trial 0 with value:
6.436384201049805.

{'HORIZON': 4, 'N_NEURONS': 256, 'N_STACKS': 40, 'WINDOW_SIZE': 14}

[I 2022-05-03 16:55:31,840] A new study created in RDB with name:
model_19
[I 2022-05-03 16:56:14,178] Trial 0 finished with value:
1.5668247938156128 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 3,
'N_NEURONS': 1024, 'N_STACKS': 40}. Best is trial 0 with value:
1.5668247938156128.
[I 2022-05-03 16:56:20,415] Trial 1 finished with value:
1.9869415760040283 and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 1,
'N_NEURONS': 512, 'N_STACKS': 10}. Best is trial 0 with value:
1.5668247938156128.
[I 2022-05-03 16:56:50,714] Trial 2 finished with value:
1.5510333776474 and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 3,
'N_NEURONS': 512, 'N_STACKS': 30}. Best is trial 2 with value:
1.5510333776474.
[I 2022-05-03 16:57:08,651] Trial 3 finished with value:
1.423319697380066 and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 2,
'N_NEURONS': 128, 'N_STACKS': 30}. Best is trial 3 with value:
1.423319697380066.
[I 2022-05-03 16:57:19,169] Trial 4 finished with value:
1.8127098083496094 and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 5,
'N_NEURONS': 512, 'N_STACKS': 10}. Best is trial 3 with value:
1.423319697380066.
[I 2022-05-03 16:57:32,111] Trial 5 finished with value:
2.014613151550293 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 1,
'N_NEURONS': 256, 'N_STACKS': 20}. Best is trial 3 with value:
1.423319697380066.
[I 2022-05-03 16:59:03,966] Trial 6 finished with value:
0.9191409945487976 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 4,
'N_NEURONS': 1024, 'N_STACKS': 20}. Best is trial 6 with value:
0.9191409945487976.
[I 2022-05-03 16:59:47,682] Trial 7 finished with value:
1.0794144868850708 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 4,
'N_NEURONS': 512, 'N_STACKS': 20}. Best is trial 6 with value:
0.9191409945487976.
[I 2022-05-03 17:00:12,269] Trial 8 finished with value:
1.6503430604934692 and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 4,

'N_NEURONS': 512, 'N_STACKS': 30}. Best is trial 6 with value:
0.9191409945487976.
[I 2022-05-03 17:00:40,968] Trial 9 finished with value:
1.0013389587402344 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 4,
'N_NEURONS': 256, 'N_STACKS': 30}. Best is trial 6 with value:
0.9191409945487976.

{'HORIZON': 4, 'N_NEURONS': 1024, 'N_STACKS': 20, 'WINDOW_SIZE': 5}

[I 2022-05-03 17:00:42,160] A new study created in RDB with name:
model_20
[I 2022-05-03 17:01:07,347] Trial 0 finished with value:
0.2592214345932007 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 2,
'N_NEURONS': 512, 'N_STACKS': 10}. Best is trial 0 with value:
0.2592214345932007.
[I 2022-05-03 17:02:02,780] Trial 1 finished with value:
0.5697900652885437 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 4,
'N_NEURONS': 128, 'N_STACKS': 10}. Best is trial 0 with value:
0.2592214345932007.
[I 2022-05-03 17:02:58,404] Trial 2 finished with value:
0.30404993891716003 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 4,
'N_NEURONS': 128, 'N_STACKS': 30}. Best is trial 0 with value:
0.2592214345932007.
[I 2022-05-03 17:04:57,425] Trial 3 finished with value:
0.33188673853874207 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 2,
'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 0 with value:
0.2592214345932007.
[I 2022-05-03 17:06:43,134] Trial 4 finished with value:
0.4579628109931946 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 5,
'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 0 with value:
0.2592214345932007.
[I 2022-05-03 17:07:06,917] Trial 5 finished with value:
0.675031840801239 and parameters: {'WINDOW_SIZE': 23, 'HORIZON': 1,
'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 0 with value:
0.2592214345932007.
[I 2022-05-03 17:07:32,184] Trial 6 finished with value:
0.6355319619178772 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 1,
'N_NEURONS': 128, 'N_STACKS': 40}. Best is trial 0 with value:
0.2592214345932007.
[I 2022-05-03 17:08:51,646] Trial 7 finished with value:
0.32685673236846924 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 2,
'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 0 with value:
0.2592214345932007.
[I 2022-05-03 17:10:06,942] Trial 8 finished with value:
0.22476185858249664 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 2,
'N_NEURONS': 1024, 'N_STACKS': 20}. Best is trial 8 with value:
0.22476185858249664.
[I 2022-05-03 17:10:51,693] Trial 9 finished with value:
0.3103327453136444 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 5,
'N_NEURONS': 512, 'N_STACKS': 10}. Best is trial 8 with value:
0.22476185858249664.

{'HORIZON': 2, 'N_NEURONS': 1024, 'N_STACKS': 20, 'WINDOW_SIZE': 32}

[I 2022-05-03 17:10:52,772] A new study created in RDB with name:
model_21
[I 2022-05-03 17:11:12,998] Trial 0 finished with value:
9.625594139099121 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 4,
'N_NEURONS': 256, 'N_STACKS': 30}. Best is trial 0 with value:
9.625594139099121.
[I 2022-05-03 17:11:45,983] Trial 1 finished with value:
374.3522033691406 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 1,
'N_NEURONS': 1024, 'N_STACKS': 30}. Best is trial 0 with value:
9.625594139099121.
[I 2022-05-03 17:12:12,108] Trial 2 finished with value:
7.928728103637695 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 2,
'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 2 with value:
7.928728103637695.
[I 2022-05-03 17:12:31,842] Trial 3 finished with value:
7.240924835205078 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 3,
'N_NEURONS': 256, 'N_STACKS': 30}. Best is trial 3 with value:
7.240924835205078.
[I 2022-05-03 17:12:56,509] Trial 4 finished with value:
7.140395641326904 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 2,
'N_NEURONS': 256, 'N_STACKS': 30}. Best is trial 4 with value:
7.140395641326904.
[I 2022-05-03 17:13:19,310] Trial 5 finished with value:
5.208775520324707 and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 2,
'N_NEURONS': 1024, 'N_STACKS': 20}. Best is trial 5 with value:
5.208775520324707.
[I 2022-05-03 17:13:26,333] Trial 6 finished with value:
374.9313049316406 and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 1,
'N_NEURONS': 128, 'N_STACKS': 10}. Best is trial 5 with value:
5.208775520324707.
[I 2022-05-03 17:13:37,103] Trial 7 finished with value:
374.0186767578125 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 1,
'N_NEURONS': 1024, 'N_STACKS': 10}. Best is trial 5 with value:
5.208775520324707.
[I 2022-05-03 17:13:45,105] Trial 8 finished with value:
374.86834716796875 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 1,
'N_NEURONS': 512, 'N_STACKS': 10}. Best is trial 5 with value:
5.208775520324707.
[I 2022-05-03 17:13:58,259] Trial 9 finished with value:
374.92083740234375 and parameters: {'WINDOW_SIZE': 23, 'HORIZON': 1,
'N_NEURONS': 256, 'N_STACKS': 20}. Best is trial 5 with value:
5.208775520324707.

{'HORIZON': 2, 'N_NEURONS': 1024, 'N_STACKS': 20, 'WINDOW_SIZE': 29}

[I 2022-05-03 17:13:59,388] A new study created in RDB with name:
model_22
[I 2022-05-03 17:14:15,270] Trial 0 finished with value:
0.03621375933289528 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 3,

'N_NEURONS': 1024, 'N_STACKS': 10}. Best is trial 0 with value:
0.03621375933289528.
[I 2022-05-03 17:14:28,895] Trial 1 finished with value:
0.028100792318582535 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 2,
'N_NEURONS': 1024, 'N_STACKS': 10}. Best is trial 1 with value:
0.028100792318582535.
[I 2022-05-03 17:14:41,024] Trial 2 finished with value:
0.056227318942546844 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 5,
'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 1 with value:
0.028100792318582535.
[I 2022-05-03 17:15:18,558] Trial 3 finished with value:
0.04416365176439285 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 5,
'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 1 with value:
0.028100792318582535.
[I 2022-05-03 17:15:50,826] Trial 4 finished with value:
0.044741179794073105 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 4,
'N_NEURONS': 256, 'N_STACKS': 30}. Best is trial 1 with value:
0.028100792318582535.
[I 2022-05-03 17:16:52,402] Trial 5 finished with value:
0.05931811407208443 and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 4,
'N_NEURONS': 1024, 'N_STACKS': 40}. Best is trial 1 with value:
0.028100792318582535.
[I 2022-05-03 17:17:07,035] Trial 6 finished with value:
0.06627988070249557 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 4,
'N_NEURONS': 128, 'N_STACKS': 20}. Best is trial 1 with value:
0.028100792318582535.
[I 2022-05-03 17:17:27,051] Trial 7 finished with value:
0.058592431247234344 and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 1,
'N_NEURONS': 256, 'N_STACKS': 30}. Best is trial 1 with value:
0.028100792318582535.
[I 2022-05-03 17:18:27,874] Trial 8 finished with value:
0.030751598998904228 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 3,
'N_NEURONS': 1024, 'N_STACKS': 40}. Best is trial 1 with value:
0.028100792318582535.
[I 2022-05-03 17:18:59,574] Trial 9 finished with value:
0.04248541221022606 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 2,
'N_NEURONS': 512, 'N_STACKS': 30}. Best is trial 1 with value:
0.028100792318582535.

{'HORIZON': 2, 'N_NEURONS': 1024, 'N_STACKS': 10, 'WINDOW_SIZE': 5}

[I 2022-05-03 17:19:00,789] A new study created in RDB with name:
model_23
[I 2022-05-03 17:19:11,939] Trial 0 finished with value:
3.8251729011535645 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 2,
'N_NEURONS': 1024, 'N_STACKS': 10}. Best is trial 0 with value:
3.8251729011535645.
[I 2022-05-03 17:19:28,730] Trial 1 finished with value:
4.288223743438721 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 1,
'N_NEURONS': 512, 'N_STACKS': 20}. Best is trial 0 with value:
3.8251729011535645.

[I 2022-05-03 17:19:50,028] Trial 2 finished with value:
4.515081405639648 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 1,
'N_NEURONS': 256, 'N_STACKS': 30}. Best is trial 0 with value:
3.8251729011535645.
[I 2022-05-03 17:20:05,490] Trial 3 finished with value:
4.555343151092529 and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 3,
'N_NEURONS': 512, 'N_STACKS': 20}. Best is trial 0 with value:
3.8251729011535645.
[I 2022-05-03 17:21:01,705] Trial 4 finished with value:
3.308958053588867 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 4,
'N_NEURONS': 1024, 'N_STACKS': 30}. Best is trial 4 with value:
3.308958053588867.
[I 2022-05-03 17:21:17,380] Trial 5 finished with value:
4.23164701461792 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 5,
'N_NEURONS': 1024, 'N_STACKS': 10}. Best is trial 4 with value:
3.308958053588867.
[I 2022-05-03 17:21:36,606] Trial 6 finished with value:
4.621152877807617 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 2,
'N_NEURONS': 1024, 'N_STACKS': 20}. Best is trial 4 with value:
3.308958053588867.
[I 2022-05-03 17:21:50,140] Trial 7 finished with value:
4.26077938079834 and parameters: {'WINDOW_SIZE': 23, 'HORIZON': 2,
'N_NEURONS': 1024, 'N_STACKS': 10}. Best is trial 4 with value:
3.308958053588867.
[I 2022-05-03 17:21:58,089] Trial 8 finished with value:
5.6258039474487305 and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 2,
'N_NEURONS': 128, 'N_STACKS': 10}. Best is trial 4 with value:
3.308958053588867.
[I 2022-05-03 17:22:06,440] Trial 9 finished with value:
5.293834209442139 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 5,
'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 4 with value:
3.308958053588867.

{'HORIZON': 4, 'N_NEURONS': 1024, 'N_STACKS': 30, 'WINDOW_SIZE': 5}

[I 2022-05-03 17:22:07,538] A new study created in RDB with name:
model_24
[I 2022-05-03 17:22:41,377] Trial 0 finished with value:
4.834476470947266 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 5,
'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 0 with value:
4.834476470947266.
[I 2022-05-03 17:23:09,694] Trial 1 finished with value:
5.456198692321777 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 2,
'N_NEURONS': 128, 'N_STACKS': 40}. Best is trial 0 with value:
4.834476470947266.
[I 2022-05-03 17:23:36,066] Trial 2 finished with value:
4.522946357727051 and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 4,
'N_NEURONS': 512, 'N_STACKS': 30}. Best is trial 2 with value:
4.522946357727051.
[I 2022-05-03 17:23:57,728] Trial 3 finished with value:
10.634784698486328 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 5,

'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 2 with value:
4.522946357727051.
[I 2022-05-03 17:24:05,499] Trial 4 finished with value:
9.25460433959961 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 3,
'N_NEURONS': 512, 'N_STACKS': 10}. Best is trial 2 with value:
4.522946357727051.
[I 2022-05-03 17:24:13,981] Trial 5 finished with value:
4.477850437164307 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 2,
'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 5 with value:
4.477850437164307.
[I 2022-05-03 17:24:44,579] Trial 6 finished with value:
4.813944339752197 and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 3,
'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 5 with value:
4.477850437164307.
[I 2022-05-03 17:25:10,432] Trial 7 finished with value:
5.315270900726318 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 2,
'N_NEURONS': 128, 'N_STACKS': 40}. Best is trial 5 with value:
4.477850437164307.
[I 2022-05-03 17:25:22,782] Trial 8 finished with value:
14.443680763244629 and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 1,
'N_NEURONS': 256, 'N_STACKS': 20}. Best is trial 5 with value:
4.477850437164307.
[I 2022-05-03 17:25:36,390] Trial 9 finished with value:
4.915811061859131 and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 3,
'N_NEURONS': 128, 'N_STACKS': 20}. Best is trial 5 with value:
4.477850437164307.

{'HORIZON': 2, 'N_NEURONS': 256, 'N_STACKS': 10, 'WINDOW_SIZE': 32}

[I 2022-05-03 17:25:37,355] A new study created in RDB with name:
model_25
[I 2022-05-03 17:26:03,555] Trial 0 finished with value:
0.3240261673927307 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 2,
'N_NEURONS': 256, 'N_STACKS': 20}. Best is trial 0 with value:
0.3240261673927307.
[I 2022-05-03 17:26:58,731] Trial 1 finished with value:
0.44039973616600037 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 4,
'N_NEURONS': 1024, 'N_STACKS': 20}. Best is trial 0 with value:
0.3240261673927307.
[I 2022-05-03 17:27:21,409] Trial 2 finished with value:
0.35153812170028687 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 5,
'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 0 with value:
0.3240261673927307.
[I 2022-05-03 17:27:56,033] Trial 3 finished with value:
0.26259878277778625 and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 3,
'N_NEURONS': 512, 'N_STACKS': 10}. Best is trial 3 with value:
0.26259878277778625.
[I 2022-05-03 17:28:20,166] Trial 4 finished with value:
0.29002946615219116 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 3,
'N_NEURONS': 128, 'N_STACKS': 20}. Best is trial 3 with value:
0.26259878277778625.

[I 2022-05-03 17:28:52,934] Trial 5 finished with value: 0.318133145570755 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 5, 'N_NEURONS': 128, 'N_STACKS': 30}. Best is trial 3 with value: 0.26259878277778625.
[I 2022-05-03 17:29:26,044] Trial 6 finished with value: 0.29825127124786377 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 4, 'N_NEURONS': 128, 'N_STACKS': 40}. Best is trial 3 with value: 0.26259878277778625.
[I 2022-05-03 17:29:36,830] Trial 7 finished with value: 0.9353511333465576 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 1, 'N_NEURONS': 512, 'N_STACKS': 20}. Best is trial 3 with value: 0.26259878277778625.
[I 2022-05-03 17:30:06,810] Trial 8 finished with value: 0.43993428349494934 and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 5, 'N_NEURONS': 128, 'N_STACKS': 10}. Best is trial 3 with value: 0.26259878277778625.
[I 2022-05-03 17:31:03,863] Trial 9 finished with value: 0.3942607343196869 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 4, 'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 3 with value: 0.26259878277778625.

{'HORIZON': 3, 'N_NEURONS': 512, 'N_STACKS': 10, 'WINDOW_SIZE': 29}

[I 2022-05-03 17:31:05,918] A new study created in RDB with name: model_26
[I 2022-05-03 17:31:25,352] Trial 0 finished with value: 7.596617698669434 and parameters: {'WINDOW_SIZE': 23, 'HORIZON': 5, 'N_NEURONS': 256, 'N_STACKS': 30}. Best is trial 0 with value: 7.596617698669434.
[I 2022-05-03 17:31:40,047] Trial 1 finished with value: 25.065135955810547 and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 1, 'N_NEURONS': 128, 'N_STACKS': 20}. Best is trial 0 with value: 7.596617698669434.
[I 2022-05-03 17:32:03,388] Trial 2 finished with value: 7.732648849487305 and parameters: {'WINDOW_SIZE': 23, 'HORIZON': 3, 'N_NEURONS': 128, 'N_STACKS': 30}. Best is trial 0 with value: 7.596617698669434.
[I 2022-05-03 17:32:39,962] Trial 3 finished with value: 6.673355579376221 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 2, 'N_NEURONS': 1024, 'N_STACKS': 30}. Best is trial 3 with value: 6.673355579376221.
[I 2022-05-03 17:32:51,377] Trial 4 finished with value: 7.066519737243652 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 4, 'N_NEURONS': 128, 'N_STACKS': 10}. Best is trial 3 with value: 6.673355579376221.
[I 2022-05-03 17:33:09,103] Trial 5 finished with value: 6.69329833984375 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 2, 'N_NEURONS': 256, 'N_STACKS': 20}. Best is trial 3 with value: 6.673355579376221.
[I 2022-05-03 17:33:35,780] Trial 6 finished with value: 7.191669940948486 and parameters: {'WINDOW_SIZE': 23, 'HORIZON': 5,

'N_NEURONS': 512, 'N_STACKS': 30}. Best is trial 3 with value:
6.673355579376221.
[I 2022-05-03 17:34:31,313] Trial 7 finished with value:
6.475408554077148 and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 2,
'N_NEURONS': 1024, 'N_STACKS': 40}. Best is trial 7 with value:
6.475408554077148.
[I 2022-05-03 17:34:50,719] Trial 8 finished with value:
25.577144622802734 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 1,
'N_NEURONS': 512, 'N_STACKS': 20}. Best is trial 7 with value:
6.475408554077148.
[I 2022-05-03 17:35:23,306] Trial 9 finished with value:
25.7293758392334 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 1,
'N_NEURONS': 128, 'N_STACKS': 40}. Best is trial 7 with value:
6.475408554077148.

{'HORIZON': 2, 'N_NEURONS': 1024, 'N_STACKS': 40, 'WINDOW_SIZE': 35}

[I 2022-05-03 17:35:24,664] A new study created in RDB with name:
model_27
[I 2022-05-03 17:35:34,462] Trial 0 finished with value:
58.867103576660156 and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 4,
'N_NEURONS': 128, 'N_STACKS': 20}. Best is trial 0 with value:
58.867103576660156.
[I 2022-05-03 17:36:05,083] Trial 1 finished with value:
156.2288360595703 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 1,
'N_NEURONS': 1024, 'N_STACKS': 40}. Best is trial 0 with value:
58.867103576660156.
[I 2022-05-03 17:36:16,214] Trial 2 finished with value:
139.0068817138672 and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 1,
'N_NEURONS': 512, 'N_STACKS': 20}. Best is trial 0 with value:
58.867103576660156.
[I 2022-05-03 17:36:30,694] Trial 3 finished with value:
41.767513275146484 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 2,
'N_NEURONS': 256, 'N_STACKS': 30}. Best is trial 3 with value:
41.767513275146484.
[I 2022-05-03 17:36:58,973] Trial 4 finished with value:
149.85040283203125 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 1,
'N_NEURONS': 1024, 'N_STACKS': 40}. Best is trial 3 with value:
41.767513275146484.
[I 2022-05-03 17:37:07,473] Trial 5 finished with value:
40.89058303833008 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 2,
'N_NEURONS': 1024, 'N_STACKS': 10}. Best is trial 5 with value:
40.89058303833008.
[I 2022-05-03 17:37:27,422] Trial 6 finished with value:
43.125221252441406 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 2,
'N_NEURONS': 128, 'N_STACKS': 40}. Best is trial 5 with value:
40.89058303833008.
[I 2022-05-03 17:37:40,931] Trial 7 finished with value:
55.654052734375 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 5,
'N_NEURONS': 1024, 'N_STACKS': 20}. Best is trial 5 with value:
40.89058303833008.

[I 2022-05-03 17:37:47,480] Trial 8 finished with value:
43.244022369384766 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 2,
'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 5 with value:
40.89058303833008.
[I 2022-05-03 17:38:02,560] Trial 9 finished with value:
45.821353912353516 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 3,
'N_NEURONS': 1024, 'N_STACKS': 20}. Best is trial 5 with value:
40.89058303833008.

{'HORIZON': 2, 'N_NEURONS': 1024, 'N_STACKS': 10, 'WINDOW_SIZE': 38}

[I 2022-05-03 17:38:03,700] A new study created in RDB with name:
model_28
[I 2022-05-03 17:39:13,926] Trial 0 finished with value:
1.1004242897033691 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 5,
'N_NEURONS': 128, 'N_STACKS': 20}. Best is trial 0 with value:
1.1004242897033691.
[I 2022-05-03 17:39:45,209] Trial 1 finished with value:
0.6612207889556885 and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 5,
'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 1 with value:
0.6612207889556885.
[I 2022-05-03 17:40:17,255] Trial 2 finished with value:
0.6217445135116577 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 3,
'N_NEURONS': 128, 'N_STACKS': 40}. Best is trial 2 with value:
0.6217445135116577.
[I 2022-05-03 17:41:31,618] Trial 3 finished with value:
0.3673192858695984 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 2,
'N_NEURONS': 1024, 'N_STACKS': 20}. Best is trial 3 with value:
0.3673192858695984.
[I 2022-05-03 17:42:33,184] Trial 4 finished with value:
0.516200840473175 and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 3,
'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 3 with value:
0.3673192858695984.
[I 2022-05-03 17:43:15,087] Trial 5 finished with value:
0.647508442401886 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 5,
'N_NEURONS': 256, 'N_STACKS': 30}. Best is trial 3 with value:
0.3673192858695984.
[I 2022-05-03 17:43:35,435] Trial 6 finished with value:
0.6412138342857361 and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 4,
'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 3 with value:
0.3673192858695984.
[I 2022-05-03 17:46:22,422] Trial 7 finished with value:
2.997415542602539 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 1,
'N_NEURONS': 1024, 'N_STACKS': 30}. Best is trial 3 with value:
0.3673192858695984.
[I 2022-05-03 17:47:43,294] Trial 8 finished with value:
3.0716381072998047 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 1,
'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 3 with value:
0.3673192858695984.
[I 2022-05-03 17:48:28,615] Trial 9 finished with value:
0.5994859933853149 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 5,

'N_NEURONS': 256, 'N_STACKS': 20}. Best is trial 3 with value:
0.3673192858695984.

{'HORIZON': 2, 'N_NEURONS': 1024, 'N_STACKS': 20, 'WINDOW_SIZE': 14}

[I 2022-05-03 17:48:29,610] A new study created in RDB with name:
model_29
[I 2022-05-03 17:49:09,199] Trial 0 finished with value:
354.78411865234375 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 1,
'N_NEURONS': 1024, 'N_STACKS': 40}. Best is trial 0 with value:
354.78411865234375.
[I 2022-05-03 17:49:45,742] Trial 1 finished with value:
6.8299455642700195 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 3,
'N_NEURONS': 1024, 'N_STACKS': 30}. Best is trial 1 with value:
6.8299455642700195.
[I 2022-05-03 17:50:23,530] Trial 2 finished with value:
6.944554805755615 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 5,
'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 1 with value:
6.8299455642700195.
[I 2022-05-03 17:51:12,160] Trial 3 finished with value:
352.1007995605469 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 1,
'N_NEURONS': 1024, 'N_STACKS': 40}. Best is trial 1 with value:
6.8299455642700195.
[I 2022-05-03 17:51:46,815] Trial 4 finished with value:
6.080897331237793 and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 3,
'N_NEURONS': 1024, 'N_STACKS': 30}. Best is trial 4 with value:
6.080897331237793.
[I 2022-05-03 17:52:01,950] Trial 5 finished with value:
8.810657501220703 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 5,
'N_NEURONS': 256, 'N_STACKS': 20}. Best is trial 4 with value:
6.080897331237793.
[I 2022-05-03 17:52:29,913] Trial 6 finished with value:
9.527884483337402 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 4,
'N_NEURONS': 1024, 'N_STACKS': 20}. Best is trial 4 with value:
6.080897331237793.
[I 2022-05-03 17:52:44,778] Trial 7 finished with value:
355.36322021484375 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 1,
'N_NEURONS': 512, 'N_STACKS': 20}. Best is trial 4 with value:
6.080897331237793.
[I 2022-05-03 17:53:11,569] Trial 8 finished with value:
7.034636974334717 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 4,
'N_NEURONS': 512, 'N_STACKS': 30}. Best is trial 4 with value:
6.080897331237793.
[I 2022-05-03 17:53:34,943] Trial 9 finished with value:
7.254694938659668 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 5,
'N_NEURONS': 1024, 'N_STACKS': 20}. Best is trial 4 with value:
6.080897331237793.

{'HORIZON': 3, 'N_NEURONS': 1024, 'N_STACKS': 30, 'WINDOW_SIZE': 29}

[I 2022-05-03 17:53:36,089] A new study created in RDB with name:
model_30
[I 2022-05-03 17:53:42,298] Trial 0 finished with value:
6.247832298278809 and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 1,
'N_NEURONS': 512, 'N_STACKS': 10}. Best is trial 0 with value:
6.247832298278809.
[I 2022-05-03 17:53:58,999] Trial 1 finished with value:
4.030544757843018 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 2,
'N_NEURONS': 128, 'N_STACKS': 30}. Best is trial 1 with value:
4.030544757843018.
[I 2022-05-03 17:54:06,540] Trial 2 finished with value:
3.205853223800659 and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 5,
'N_NEURONS': 128, 'N_STACKS': 10}. Best is trial 2 with value:
3.205853223800659.
[I 2022-05-03 17:54:22,132] Trial 3 finished with value:
3.3112502098083496 and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 5,
'N_NEURONS': 1024, 'N_STACKS': 20}. Best is trial 2 with value:
3.205853223800659.
[I 2022-05-03 17:54:39,979] Trial 4 finished with value:
3.986090660095215 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 2,
'N_NEURONS': 128, 'N_STACKS': 30}. Best is trial 2 with value:
3.205853223800659.
[I 2022-05-03 17:54:55,071] Trial 5 finished with value:
4.0451555252075195 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 2,
'N_NEURONS': 1024, 'N_STACKS': 20}. Best is trial 2 with value:
3.205853223800659.
[I 2022-05-03 17:55:24,430] Trial 6 finished with value:
6.275275707244873 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 1,
'N_NEURONS': 1024, 'N_STACKS': 40}. Best is trial 2 with value:
3.205853223800659.
[I 2022-05-03 17:55:37,885] Trial 7 finished with value:
3.5705692768096924 and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 2,
'N_NEURONS': 1024, 'N_STACKS': 20}. Best is trial 2 with value:
3.205853223800659.
[I 2022-05-03 17:56:02,284] Trial 8 finished with value:
3.5696730613708496 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 3,
'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 2 with value:
3.205853223800659.
[I 2022-05-03 17:56:25,854] Trial 9 finished with value:
6.567140579223633 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 1,
'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 2 with value:
3.205853223800659.

{'HORIZON': 5, 'N_NEURONS': 128, 'N_STACKS': 10, 'WINDOW_SIZE': 35}

[I 2022-05-03 17:56:27,280] A new study created in RDB with name:
model_31
[I 2022-05-03 17:56:37,472] Trial 0 finished with value:
0.3483784794807434 and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 4,
'N_NEURONS': 128, 'N_STACKS': 10}. Best is trial 0 with value:
0.3483784794807434.

[I 2022-05-03 17:56:58,187] Trial 1 finished with value: 0.2407907247543335 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 2, 'N_NEURONS': 1024, 'N_STACKS': 20}. Best is trial 1 with value: 0.2407907247543335.
[I 2022-05-03 17:58:29,844] Trial 2 finished with value: 0.6110610961914062 and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 1, 'N_NEURONS': 1024, 'N_STACKS': 40}. Best is trial 1 with value: 0.2407907247543335.
[I 2022-05-03 17:58:58,755] Trial 3 finished with value: 0.6072216629981995 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 1, 'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 1 with value: 0.2407907247543335.
[I 2022-05-03 17:59:27,289] Trial 4 finished with value: 0.21485461294651031 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 2, 'N_NEURONS': 128, 'N_STACKS': 30}. Best is trial 4 with value: 0.21485461294651031.
[I 2022-05-03 18:00:47,283] Trial 5 finished with value: 0.2534947693347931 and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 5, 'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 4 with value: 0.21485461294651031.
[I 2022-05-03 18:02:38,785] Trial 6 finished with value: 0.176045224070549 and parameters: {'WINDOW_SIZE': 23, 'HORIZON': 2, 'N_NEURONS': 1024, 'N_STACKS': 30}. Best is trial 6 with value: 0.176045224070549.
[I 2022-05-03 18:03:25,818] Trial 7 finished with value: 0.2142602950334549 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 3, 'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 6 with value: 0.176045224070549.
[I 2022-05-03 18:05:15,731] Trial 8 finished with value: 0.20537027716636658 and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 3, 'N_NEURONS': 1024, 'N_STACKS': 40}. Best is trial 6 with value: 0.176045224070549.
[I 2022-05-03 18:05:45,270] Trial 9 finished with value: 0.2576618790626526 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 3, 'N_NEURONS': 256, 'N_STACKS': 20}. Best is trial 6 with value: 0.176045224070549.

{'HORIZON': 2, 'N_NEURONS': 1024, 'N_STACKS': 30, 'WINDOW_SIZE': 23}

[I 2022-05-03 18:05:46,383] A new study created in RDB with name: model_32
[I 2022-05-03 18:06:07,765] Trial 0 finished with value: 6.201539516448975 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 5, 'N_NEURONS': 128, 'N_STACKS': 20}. Best is trial 0 with value: 6.201539516448975.
[I 2022-05-03 18:06:15,509] Trial 1 finished with value: 6.399641036987305 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 3, 'N_NEURONS': 128, 'N_STACKS': 10}. Best is trial 0 with value: 6.201539516448975.
[I 2022-05-03 18:06:29,286] Trial 2 finished with value: 8.884419441223145 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 4,

'N_NEURONS': 512, 'N_STACKS': 10}. Best is trial 0 with value:
6.201539516448975.
[I 2022-05-03 18:06:37,660] Trial 3 finished with value:
5.92648983001709 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 2,
'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 3 with value:
5.92648983001709.
[I 2022-05-03 18:06:47,743] Trial 4 finished with value:
5.0243072509765625 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 2,
'N_NEURONS': 128, 'N_STACKS': 10}. Best is trial 4 with value:
5.0243072509765625.
[I 2022-05-03 18:07:15,852] Trial 5 finished with value:
5.88518762588501 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 2,
'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 4 with value:
5.0243072509765625.
[I 2022-05-03 18:07:33,065] Trial 6 finished with value:
5.207295894622803 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 2,
'N_NEURONS': 256, 'N_STACKS': 20}. Best is trial 4 with value:
5.0243072509765625.
[I 2022-05-03 18:07:43,378] Trial 7 finished with value:
5.489480972290039 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 5,
'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 4 with value:
5.0243072509765625.
[I 2022-05-03 18:07:57,864] Trial 8 finished with value:
7.523508548736572 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 2,
'N_NEURONS': 256, 'N_STACKS': 20}. Best is trial 4 with value:
5.0243072509765625.
[I 2022-05-03 18:08:34,311] Trial 9 finished with value:
7.040533065795898 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 4,
'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 4 with value:
5.0243072509765625.

{'HORIZON': 2, 'N_NEURONS': 128, 'N_STACKS': 10, 'WINDOW_SIZE': 8}

[I 2022-05-03 18:08:35,734] A new study created in RDB with name:
model_33
[I 2022-05-03 18:09:05,221] Trial 0 finished with value:
2.9328694343566895 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 4,
'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 0 with value:
2.9328694343566895.
[I 2022-05-03 18:09:28,164] Trial 1 finished with value:
2.999377965927124 and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 5,
'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 0 with value:
2.9328694343566895.
[I 2022-05-03 18:09:39,015] Trial 2 finished with value:
2.8233492374420166 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 4,
'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 2 with value:
2.8233492374420166.
[I 2022-05-03 18:10:01,641] Trial 3 finished with value:
2.9463300704956055 and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 5,
'N_NEURONS': 1024, 'N_STACKS': 30}. Best is trial 2 with value:
2.8233492374420166.

[I 2022-05-03 18:10:16,996] Trial 4 finished with value: 3.0351202487945557 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 3, 'N_NEURONS': 512, 'N_STACKS': 20}. Best is trial 2 with value: 2.8233492374420166.
[I 2022-05-03 18:10:28,648] Trial 5 finished with value: 3.419884443283081 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 1, 'N_NEURONS': 512, 'N_STACKS': 20}. Best is trial 2 with value: 2.8233492374420166.
[I 2022-05-03 18:10:41,419] Trial 6 finished with value: 2.992098331451416 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 3, 'N_NEURONS': 256, 'N_STACKS': 20}. Best is trial 2 with value: 2.8233492374420166.
[I 2022-05-03 18:11:10,488] Trial 7 finished with value: 3.0256032943725586 and parameters: {'WINDOW_SIZE': 23, 'HORIZON': 5, 'N_NEURONS': 128, 'N_STACKS': 40}. Best is trial 2 with value: 2.8233492374420166.
[I 2022-05-03 18:11:31,713] Trial 8 finished with value: 2.9558825492858887 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 5, 'N_NEURONS': 512, 'N_STACKS': 30}. Best is trial 2 with value: 2.8233492374420166.
[I 2022-05-03 18:11:39,139] Trial 9 finished with value: 3.192962884902954 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 5, 'N_NEURONS': 128, 'N_STACKS': 10}. Best is trial 2 with value: 2.8233492374420166.

{'HORIZON': 4, 'N_NEURONS': 256, 'N_STACKS': 10, 'WINDOW_SIZE': 38}

[I 2022-05-03 18:11:40,359] A new study created in RDB with name: model_34
[I 2022-05-03 18:12:31,034] Trial 0 finished with value: 1.0285851955413818 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 4, 'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 0 with value: 1.0285851955413818.
[I 2022-05-03 18:13:02,193] Trial 1 finished with value: 0.9748371839523315 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 5, 'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 1 with value: 0.9748371839523315.
[I 2022-05-03 18:14:50,467] Trial 2 finished with value: 0.38725540041923523 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 4, 'N_NEURONS': 256, 'N_STACKS': 20}. Best is trial 2 with value: 0.38725540041923523.
[I 2022-05-03 18:15:00,088] Trial 3 finished with value: 1.0198715925216675 and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 4, 'N_NEURONS': 512, 'N_STACKS': 10}. Best is trial 2 with value: 0.38725540041923523.
[I 2022-05-03 18:15:34,275] Trial 4 finished with value: 0.7212560772895813 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 4, 'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 2 with value: 0.38725540041923523.
[I 2022-05-03 18:17:24,023] Trial 5 finished with value: 0.4829726815223694 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 2,

'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 2 with value:
0.38725540041923523.
[I 2022-05-03 18:17:33,231] Trial 6 finished with value:
0.889647364616394 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 3,
'N_NEURONS': 512, 'N_STACKS': 10}. Best is trial 2 with value:
0.38725540041923523.
[I 2022-05-03 18:18:10,365] Trial 7 finished with value:
2.424412250518799 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 1,
'N_NEURONS': 128, 'N_STACKS': 10}. Best is trial 2 with value:
0.38725540041923523.
[I 2022-05-03 18:18:47,120] Trial 8 finished with value:
2.2772514820098877 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 1,
'N_NEURONS': 512, 'N_STACKS': 20}. Best is trial 2 with value:
0.38725540041923523.
[I 2022-05-03 18:19:18,547] Trial 9 finished with value:
0.6729416251182556 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 4,
'N_NEURONS': 256, 'N_STACKS': 20}. Best is trial 2 with value:
0.38725540041923523.

{'HORIZON': 4, 'N_NEURONS': 256, 'N_STACKS': 20, 'WINDOW_SIZE': 5}

[I 2022-05-03 18:19:19,647] A new study created in RDB with name:
model_35
[I 2022-05-03 18:21:00,965] Trial 0 finished with value:
2.45923113822937 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 1,
'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 0 with value:
2.45923113822937.
[I 2022-05-03 18:22:27,614] Trial 1 finished with value:
0.7237467169761658 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 5,
'N_NEURONS': 256, 'N_STACKS': 30}. Best is trial 1 with value:
0.7237467169761658.
[I 2022-05-03 18:22:42,493] Trial 2 finished with value:
0.8941636085510254 and parameters: {'WINDOW_SIZE': 23, 'HORIZON': 3,
'N_NEURONS': 128, 'N_STACKS': 20}. Best is trial 1 with value:
0.7237467169761658.
[I 2022-05-03 18:23:05,865] Trial 3 finished with value:
0.8278038501739502 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 2,
'N_NEURONS': 128, 'N_STACKS': 30}. Best is trial 1 with value:
0.7237467169761658.
[I 2022-05-03 18:23:12,406] Trial 4 finished with value:
0.7253806591033936 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 2,
'N_NEURONS': 128, 'N_STACKS': 10}. Best is trial 1 with value:
0.7237467169761658.
[I 2022-05-03 18:23:28,454] Trial 5 finished with value:
1.0361554622650146 and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 5,
'N_NEURONS': 256, 'N_STACKS': 20}. Best is trial 1 with value:
0.7237467169761658.
[I 2022-05-03 18:25:09,816] Trial 6 finished with value:
0.5403996706008911 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 4,
'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 6 with value:
0.5403996706008911.

[I 2022-05-03 18:25:24,594] Trial 7 finished with value: 2.259619951248169 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 1, 'N_NEURONS': 512, 'N_STACKS': 20}. Best is trial 6 with value: 0.5403996706008911.
[I 2022-05-03 18:26:16,177] Trial 8 finished with value: 0.593428373336792 and parameters: {'WINDOW_SIZE': 23, 'HORIZON': 2, 'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 6 with value: 0.5403996706008911.
[I 2022-05-03 18:27:14,531] Trial 9 finished with value: 0.5437178611755371 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 4, 'N_NEURONS': 1024, 'N_STACKS': 10}. Best is trial 6 with value: 0.5403996706008911.

{'HORIZON': 4, 'N_NEURONS': 512, 'N_STACKS': 40, 'WINDOW_SIZE': 5}

[I 2022-05-03 18:27:15,519] A new study created in RDB with name: model_36
[I 2022-05-03 18:27:31,693] Trial 0 finished with value: 2.3582708835601807 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 4, 'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 0 with value: 2.3582708835601807.
[I 2022-05-03 18:27:53,565] Trial 1 finished with value: 2.671207904815674 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 5, 'N_NEURONS': 128, 'N_STACKS': 10}. Best is trial 0 with value: 2.3582708835601807.
[I 2022-05-03 18:28:16,031] Trial 2 finished with value: 2.173818826675415 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 3, 'N_NEURONS': 512, 'N_STACKS': 20}. Best is trial 2 with value: 2.173818826675415.
[I 2022-05-03 18:28:52,847] Trial 3 finished with value: 2.076028347015381 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 5, 'N_NEURONS': 1024, 'N_STACKS': 40}. Best is trial 3 with value: 2.076028347015381.
[I 2022-05-03 18:29:08,078] Trial 4 finished with value: 3.3069379329681396 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 2, 'N_NEURONS': 256, 'N_STACKS': 30}. Best is trial 3 with value: 2.076028347015381.
[I 2022-05-03 18:29:36,316] Trial 5 finished with value: 1.9266990423202515 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 4, 'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 5 with value: 1.9266990423202515.
[I 2022-05-03 18:29:51,359] Trial 6 finished with value: 12.582663536071777 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 1, 'N_NEURONS': 512, 'N_STACKS': 20}. Best is trial 5 with value: 1.9266990423202515.
[I 2022-05-03 18:30:20,028] Trial 7 finished with value: 2.0443201065063477 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 4, 'N_NEURONS': 1024, 'N_STACKS': 30}. Best is trial 5 with value: 1.9266990423202515.
[I 2022-05-03 18:30:49,453] Trial 8 finished with value: 12.678986549377441 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 1,

'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 5 with value:
1.9266990423202515.
[I 2022-05-03 18:30:57,792] Trial 9 finished with value:
1.979514479637146 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 5,
'N_NEURONS': 512, 'N_STACKS': 10}. Best is trial 5 with value:
1.9266990423202515.

{'HORIZON': 4, 'N_NEURONS': 512, 'N_STACKS': 40, 'WINDOW_SIZE': 26}

[I 2022-05-03 18:30:58,890] A new study created in RDB with name:
model_37
[I 2022-05-03 18:31:48,578] Trial 0 finished with value:
0.15055260062217712 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 5,
'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 0 with value:
0.15055260062217712.
[I 2022-05-03 18:32:19,146] Trial 1 finished with value:
0.17585347592830658 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 4,
'N_NEURONS': 512, 'N_STACKS': 20}. Best is trial 0 with value:
0.15055260062217712.
[I 2022-05-03 18:33:56,434] Trial 2 finished with value:
0.4575757384300232 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 4,
'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 0 with value:
0.15055260062217712.
[I 2022-05-03 18:34:48,066] Trial 3 finished with value:
0.5689352750778198 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 5,
'N_NEURONS': 128, 'N_STACKS': 20}. Best is trial 0 with value:
0.15055260062217712.
[I 2022-05-03 18:35:30,259] Trial 4 finished with value:
0.3550560176372528 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 3,
'N_NEURONS': 512, 'N_STACKS': 10}. Best is trial 0 with value:
0.15055260062217712.
[I 2022-05-03 18:36:40,624] Trial 5 finished with value:
1.1611027717590332 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 1,
'N_NEURONS': 1024, 'N_STACKS': 30}. Best is trial 0 with value:
0.15055260062217712.
[I 2022-05-03 18:37:10,907] Trial 6 finished with value:
0.369457870721817 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 3,
'N_NEURONS': 512, 'N_STACKS': 10}. Best is trial 0 with value:
0.15055260062217712.
[I 2022-05-03 18:37:34,291] Trial 7 finished with value:
0.199491485953331 and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 4,
'N_NEURONS': 256, 'N_STACKS': 30}. Best is trial 0 with value:
0.15055260062217712.
[I 2022-05-03 18:38:32,354] Trial 8 finished with value:
0.3026546835899353 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 2,
'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 0 with value:
0.15055260062217712.
[I 2022-05-03 18:39:36,592] Trial 9 finished with value:
0.28959089517593384 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 4,
'N_NEURONS': 1024, 'N_STACKS': 10}. Best is trial 0 with value:
0.15055260062217712.

{'HORIZON': 5, 'N_NEURONS': 512, 'N_STACKS': 40, 'WINDOW_SIZE': 38}

[I 2022-05-03 18:39:37,678] A new study created in RDB with name: model_38
[I 2022-05-03 18:40:01,962] Trial 0 finished with value: 11.016071319580078 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 3, 'N_NEURONS': 1024, 'N_STACKS': 30}. Best is trial 0 with value: 11.016071319580078.
[I 2022-05-03 18:40:09,772] Trial 1 finished with value: 9.451454162597656 and parameters: {'WINDOW_SIZE': 23, 'HORIZON': 4, 'N_NEURONS': 512, 'N_STACKS': 10}. Best is trial 1 with value: 9.451454162597656.
[I 2022-05-03 18:40:42,674] Trial 2 finished with value: 11.250704765319824 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 5, 'N_NEURONS': 1024, 'N_STACKS': 30}. Best is trial 1 with value: 9.451454162597656.
[I 2022-05-03 18:40:51,919] Trial 3 finished with value: 11.09083366394043 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 5, 'N_NEURONS': 512, 'N_STACKS': 10}. Best is trial 1 with value: 9.451454162597656.
[I 2022-05-03 18:40:59,472] Trial 4 finished with value: 9.488354682922363 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 4, 'N_NEURONS': 128, 'N_STACKS': 10}. Best is trial 1 with value: 9.451454162597656.
[I 2022-05-03 18:41:21,187] Trial 5 finished with value: 11.69854736328125 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 5, 'N_NEURONS': 128, 'N_STACKS': 40}. Best is trial 1 with value: 9.451454162597656.
[I 2022-05-03 18:41:58,311] Trial 6 finished with value: 11.83023452758789 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 4, 'N_NEURONS': 1024, 'N_STACKS': 40}. Best is trial 1 with value: 9.451454162597656.
[I 2022-05-03 18:42:10,081] Trial 7 finished with value: 11.811657905578613 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 4, 'N_NEURONS': 128, 'N_STACKS': 20}. Best is trial 1 with value: 9.451454162597656.
[I 2022-05-03 18:42:37,493] Trial 8 finished with value: 257.1433410644531 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 1, 'N_NEURONS': 1024, 'N_STACKS': 20}. Best is trial 1 with value: 9.451454162597656.
[I 2022-05-03 18:43:05,497] Trial 9 finished with value: 11.054760932922363 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 5, 'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 1 with value: 9.451454162597656.

{'HORIZON': 4, 'N_NEURONS': 512, 'N_STACKS': 10, 'WINDOW_SIZE': 23}

[I 2022-05-03 18:43:06,759] A new study created in RDB with name: model_39
[I 2022-05-03 18:43:30,906] Trial 0 finished with value: 0.7534631490707397 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 1,

'N_NEURONS': 128, 'N_STACKS': 20}. Best is trial 0 with value:
0.7534631490707397.
[I 2022-05-03 18:44:24,621] Trial 1 finished with value:
0.7370370030403137 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 3,
'N_NEURONS': 512, 'N_STACKS': 20}. Best is trial 1 with value:
0.7370370030403137.
[I 2022-05-03 18:44:39,582] Trial 2 finished with value:
0.7184251546859741 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 3,
'N_NEURONS': 256, 'N_STACKS': 20}. Best is trial 2 with value:
0.7184251546859741.
[I 2022-05-03 18:44:57,636] Trial 3 finished with value:
0.6937121748924255 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 5,
'N_NEURONS': 512, 'N_STACKS': 20}. Best is trial 3 with value:
0.6937121748924255.
[I 2022-05-03 18:45:08,256] Trial 4 finished with value:
0.7265300750732422 and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 1,
'N_NEURONS': 256, 'N_STACKS': 20}. Best is trial 3 with value:
0.6937121748924255.
[I 2022-05-03 18:45:19,939] Trial 5 finished with value:
0.7330728769302368 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 1,
'N_NEURONS': 256, 'N_STACKS': 20}. Best is trial 3 with value:
0.6937121748924255.
[I 2022-05-03 18:45:26,565] Trial 6 finished with value:
0.6722416877746582 and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 2,
'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 6 with value:
0.6722416877746582.
[I 2022-05-03 18:45:33,874] Trial 7 finished with value:
0.6737157702445984 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 2,
'N_NEURONS': 512, 'N_STACKS': 10}. Best is trial 6 with value:
0.6722416877746582.
[I 2022-05-03 18:46:07,137] Trial 8 finished with value:
0.7551670074462891 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 3,
'N_NEURONS': 1024, 'N_STACKS': 30}. Best is trial 6 with value:
0.6722416877746582.
[I 2022-05-03 18:46:17,365] Trial 9 finished with value:
0.7097989320755005 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 3,
'N_NEURONS': 128, 'N_STACKS': 10}. Best is trial 6 with value:
0.6722416877746582.

{'HORIZON': 2, 'N_NEURONS': 256, 'N_STACKS': 10, 'WINDOW_SIZE': 35}

[I 2022-05-03 18:46:18,463] A new study created in RDB with name:
model_40
[I 2022-05-03 18:46:30,022] Trial 0 finished with value:
0.026254937052726746 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 1,
'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 0 with value:
0.026254937052726746.
[I 2022-05-03 18:47:18,879] Trial 1 finished with value:
0.015133592300117016 and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 2,
'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 1 with value:
0.015133592300117016.

[I 2022-05-03 18:47:32,141] Trial 2 finished with value: 0.023908264935016632 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 4, 'N_NEURONS': 512, 'N_STACKS': 10}. Best is trial 1 with value: 0.015133592300117016.
[I 2022-05-03 18:47:56,901] Trial 3 finished with value: 0.023991508409380913 and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 4, 'N_NEURONS': 256, 'N_STACKS': 30}. Best is trial 1 with value: 0.015133592300117016.
[I 2022-05-03 18:48:07,377] Trial 4 finished with value: 0.024642162024974823 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 2, 'N_NEURONS': 512, 'N_STACKS': 10}. Best is trial 1 with value: 0.015133592300117016.
[I 2022-05-03 18:48:55,625] Trial 5 finished with value: 0.025416767224669456 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 1, 'N_NEURONS': 1024, 'N_STACKS': 40}. Best is trial 1 with value: 0.015133592300117016.
[I 2022-05-03 18:49:25,307] Trial 6 finished with value: 0.025029581040143967 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 4, 'N_NEURONS': 512, 'N_STACKS': 30}. Best is trial 1 with value: 0.015133592300117016.
[I 2022-05-03 18:49:38,341] Trial 7 finished with value: 0.025052521377801895 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 1, 'N_NEURONS': 1024, 'N_STACKS': 10}. Best is trial 1 with value: 0.015133592300117016.
[I 2022-05-03 18:50:11,775] Trial 8 finished with value: 0.020278166979551315 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 5, 'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 1 with value: 0.015133592300117016.
[I 2022-05-03 18:50:23,005] Trial 9 finished with value: 0.0258852057158947 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 4, 'N_NEURONS': 512, 'N_STACKS': 10}. Best is trial 1 with value: 0.015133592300117016.

{'HORIZON': 2, 'N_NEURONS': 512, 'N_STACKS': 40, 'WINDOW_SIZE': 29}

[I 2022-05-03 18:50:24,061] A new study created in RDB with name: model_41
[I 2022-05-03 18:51:03,834] Trial 0 finished with value: 0.27462369203567505 and parameters: {'WINDOW_SIZE': 23, 'HORIZON': 2, 'N_NEURONS': 128, 'N_STACKS': 30}. Best is trial 0 with value: 0.27462369203567505.
[I 2022-05-03 18:51:30,860] Trial 1 finished with value: 0.2711764872074127 and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 1, 'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 1 with value: 0.2711764872074127.
[I 2022-05-03 18:51:53,583] Trial 2 finished with value: 0.28414323925971985 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 4, 'N_NEURONS': 256, 'N_STACKS': 30}. Best is trial 1 with value: 0.2711764872074127.
[I 2022-05-03 18:52:07,332] Trial 3 finished with value: 0.28430506587028503 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 1,

'N_NEURONS': 512, 'N_STACKS': 20}. Best is trial 1 with value:
0.2711764872074127.
[I 2022-05-03 18:52:44,567] Trial 4 finished with value:
0.2775294780731201 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 2,
'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 1 with value:
0.2711764872074127.
[I 2022-05-03 18:53:23,908] Trial 5 finished with value:
0.29138824343681335 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 5,
'N_NEURONS': 128, 'N_STACKS': 40}. Best is trial 1 with value:
0.2711764872074127.
[I 2022-05-03 18:53:37,924] Trial 6 finished with value:
0.2740902602672577 and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 5,
'N_NEURONS': 256, 'N_STACKS': 20}. Best is trial 1 with value:
0.2711764872074127.
[I 2022-05-03 18:54:15,469] Trial 7 finished with value:
0.27605533599853516 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 3,
'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 1 with value:
0.2711764872074127.
[I 2022-05-03 18:54:42,428] Trial 8 finished with value:
0.2675771117210388 and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 3,
'N_NEURONS': 1024, 'N_STACKS': 20}. Best is trial 8 with value:
0.2675771117210388.
[I 2022-05-03 18:55:24,504] Trial 9 finished with value:
0.2718762755393982 and parameters: {'WINDOW_SIZE': 23, 'HORIZON': 2,
'N_NEURONS': 1024, 'N_STACKS': 40}. Best is trial 8 with value:
0.2675771117210388.

{'HORIZON': 3, 'N_NEURONS': 1024, 'N_STACKS': 20, 'WINDOW_SIZE': 29}

[I 2022-05-03 18:55:25,798] A new study created in RDB with name:
model_42
[I 2022-05-03 18:57:05,415] Trial 0 finished with value:
0.16151131689548492 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 3,
'N_NEURONS': 1024, 'N_STACKS': 30}. Best is trial 0 with value:
0.16151131689548492.
[I 2022-05-03 18:57:41,826] Trial 1 finished with value:
0.4531794488430023 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 1,
'N_NEURONS': 128, 'N_STACKS': 30}. Best is trial 0 with value:
0.16151131689548492.
[I 2022-05-03 18:58:10,179] Trial 2 finished with value:
0.4101819396018982 and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 1,
'N_NEURONS': 128, 'N_STACKS': 40}. Best is trial 0 with value:
0.16151131689548492.
[I 2022-05-03 18:59:01,455] Trial 3 finished with value:
0.1557539850473404 and parameters: {'WINDOW_SIZE': 23, 'HORIZON': 5,
'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 3 with value:
0.1557539850473404.
[I 2022-05-03 18:59:10,293] Trial 4 finished with value:
0.4357530474662781 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 1,
'N_NEURONS': 128, 'N_STACKS': 10}. Best is trial 3 with value:
0.1557539850473404.

[I 2022-05-03 19:00:34,504] Trial 5 finished with value:
0.1441473364830017 and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 5,
'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 5 with value:
0.1441473364830017.
[I 2022-05-03 19:01:07,117] Trial 6 finished with value:
0.16488420963287354 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 2,
'N_NEURONS': 256, 'N_STACKS': 20}. Best is trial 5 with value:
0.1441473364830017.
[I 2022-05-03 19:01:13,996] Trial 7 finished with value:
0.32038968801498413 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 3,
'N_NEURONS': 128, 'N_STACKS': 10}. Best is trial 5 with value:
0.1441473364830017.
[I 2022-05-03 19:02:00,215] Trial 8 finished with value:
0.1958538293838501 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 4,
'N_NEURONS': 1024, 'N_STACKS': 10}. Best is trial 5 with value:
0.1441473364830017.
[I 2022-05-03 19:02:48,880] Trial 9 finished with value:
0.19812095165252686 and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 5,
'N_NEURONS': 1024, 'N_STACKS': 30}. Best is trial 5 with value:
0.1441473364830017.

{'HORIZON': 5, 'N_NEURONS': 512, 'N_STACKS': 40, 'WINDOW_SIZE': 29}

[I 2022-05-03 19:02:50,139] A new study created in RDB with name:
model_43
[I 2022-05-03 19:03:40,232] Trial 0 finished with value:
425.3958435058594 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 1,
'N_NEURONS': 1024, 'N_STACKS': 40}. Best is trial 0 with value:
425.3958435058594.
[I 2022-05-03 19:04:07,103] Trial 1 finished with value:
422.6060791015625 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 1,
'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 1 with value:
422.6060791015625.
[I 2022-05-03 19:04:35,014] Trial 2 finished with value:
16.22391128540039 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 2,
'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 2 with value:
16.22391128540039.
[I 2022-05-03 19:05:19,692] Trial 3 finished with value:
10.93425464630127 and parameters: {'WINDOW_SIZE': 23, 'HORIZON': 2,
'N_NEURONS': 1024, 'N_STACKS': 40}. Best is trial 3 with value:
10.93425464630127.
[I 2022-05-03 19:05:30,567] Trial 4 finished with value:
12.268362998962402 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 2,
'N_NEURONS': 1024, 'N_STACKS': 10}. Best is trial 3 with value:
10.93425464630127.
[I 2022-05-03 19:05:43,868] Trial 5 finished with value:
428.2545166015625 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 1,
'N_NEURONS': 512, 'N_STACKS': 20}. Best is trial 3 with value:
10.93425464630127.
[I 2022-05-03 19:06:22,224] Trial 6 finished with value:
422.8116149902344 and parameters: {'WINDOW_SIZE': 23, 'HORIZON': 1,

'N_NEURONS': 1024, 'N_STACKS': 30}. Best is trial 3 with value:
10.93425464630127.
[I 2022-05-03 19:06:35,891] Trial 7 finished with value:
424.1395263671875 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 1,
'N_NEURONS': 256, 'N_STACKS': 20}. Best is trial 3 with value:
10.93425464630127.
[I 2022-05-03 19:06:43,695] Trial 8 finished with value:
14.0098237991333 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 4,
'N_NEURONS': 128, 'N_STACKS': 10}. Best is trial 3 with value:
10.93425464630127.
[I 2022-05-03 19:06:56,857] Trial 9 finished with value:
14.154108047485352 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 2,
'N_NEURONS': 256, 'N_STACKS': 20}. Best is trial 3 with value:
10.93425464630127.

{'HORIZON': 2, 'N_NEURONS': 1024, 'N_STACKS': 40, 'WINDOW_SIZE': 23}

[I 2022-05-03 19:06:58,004] A new study created in RDB with name:
model_44
[I 2022-05-03 19:07:40,350] Trial 0 finished with value: 2913736.25
and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 1, 'N_NEURONS': 1024,
'N_STACKS': 40}. Best is trial 0 with value: 2913736.25.
[I 2022-05-03 19:10:50,496] Trial 1 finished with value: 367847.9375
and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 5, 'N_NEURONS': 1024,
'N_STACKS': 30}. Best is trial 1 with value: 367847.9375.
[I 2022-05-03 19:11:04,989] Trial 2 finished with value: 378326.875
and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 5, 'N_NEURONS': 256,
'N_STACKS': 10}. Best is trial 1 with value: 367847.9375.
[I 2022-05-03 19:11:31,291] Trial 3 finished with value:
4779.81689453125 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 4,
'N_NEURONS': 1024, 'N_STACKS': 10}. Best is trial 3 with value:
4779.81689453125.
[I 2022-05-03 19:12:15,321] Trial 4 finished with value:
57035.53515625 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 3,
'N_NEURONS': 512, 'N_STACKS': 20}. Best is trial 3 with value:
4779.81689453125.
[I 2022-05-03 19:12:38,470] Trial 5 finished with value: 323710.03125
and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 3, 'N_NEURONS': 128,
'N_STACKS': 20}. Best is trial 3 with value: 4779.81689453125.
[I 2022-05-03 19:12:56,983] Trial 6 finished with value: 934887.9375
and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 3, 'N_NEURONS': 512,
'N_STACKS': 20}. Best is trial 3 with value: 4779.81689453125.
[I 2022-05-03 19:13:05,710] Trial 7 finished with value: 949872.1875
and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 2, 'N_NEURONS': 256,
'N_STACKS': 10}. Best is trial 3 with value: 4779.81689453125.
[I 2022-05-03 19:13:47,257] Trial 8 finished with value: 1058276.125
and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 5, 'N_NEURONS': 1024,
'N_STACKS': 30}. Best is trial 3 with value: 4779.81689453125.
[I 2022-05-03 19:14:16,358] Trial 9 finished with value: 1920961.75
and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 5, 'N_NEURONS': 256,
'N_STACKS': 30}. Best is trial 3 with value: 4779.81689453125.

{'HORIZON': 4, 'N_NEURONS': 1024, 'N_STACKS': 10, 'WINDOW_SIZE': 8}

[I 2022-05-03 19:14:17,590] A new study created in RDB with name: model_45
[I 2022-05-03 19:14:45,638] Trial 0 finished with value: 0.054880283772945404 and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 2, 'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 0 with value: 0.054880283772945404.
[I 2022-05-03 19:14:54,722] Trial 1 finished with value: 0.043262653052806854 and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 2, 'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 1 with value: 0.043262653052806854.
[I 2022-05-03 19:15:11,378] Trial 2 finished with value: 0.04323556274175644 and parameters: {'WINDOW_SIZE': 23, 'HORIZON': 4, 'N_NEURONS': 512, 'N_STACKS': 20}. Best is trial 2 with value: 0.04323556274175644.
[I 2022-05-03 19:15:20,782] Trial 3 finished with value: 0.04641638696193695 and parameters: {'WINDOW_SIZE': 23, 'HORIZON': 5, 'N_NEURONS': 128, 'N_STACKS': 10}. Best is trial 2 with value: 0.04323556274175644.
[I 2022-05-03 19:15:34,133] Trial 4 finished with value: 0.04219290241599083 and parameters: {'WINDOW_SIZE': 23, 'HORIZON': 4, 'N_NEURONS': 1024, 'N_STACKS': 10}. Best is trial 4 with value: 0.04219290241599083.
[I 2022-05-03 19:15:57,436] Trial 5 finished with value: 0.05333109200000763 and parameters: {'WINDOW_SIZE': 23, 'HORIZON': 5, 'N_NEURONS': 128, 'N_STACKS': 30}. Best is trial 4 with value: 0.04219290241599083.
[I 2022-05-03 19:16:38,967] Trial 6 finished with value: 0.04888879135251045 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 3, 'N_NEURONS': 1024, 'N_STACKS': 40}. Best is trial 4 with value: 0.04219290241599083.
[I 2022-05-03 19:17:07,273] Trial 7 finished with value: 0.05036778748035431 and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 3, 'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 4 with value: 0.04219290241599083.
[I 2022-05-03 19:17:30,323] Trial 8 finished with value: 0.049521304666996 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 4, 'N_NEURONS': 256, 'N_STACKS': 30}. Best is trial 4 with value: 0.04219290241599083.
[I 2022-05-03 19:17:43,843] Trial 9 finished with value: 0.11450137943029404 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 1, 'N_NEURONS': 1024, 'N_STACKS': 20}. Best is trial 4 with value: 0.04219290241599083.

{'HORIZON': 4, 'N_NEURONS': 1024, 'N_STACKS': 10, 'WINDOW_SIZE': 23}

[I 2022-05-03 19:17:44,989] A new study created in RDB with name: model_46
[I 2022-05-03 19:18:05,719] Trial 0 finished with value: 3.7089412212371826 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 4,

'N_NEURONS': 1024, 'N_STACKS': 20}. Best is trial 0 with value:
3.7089412212371826.
[I 2022-05-03 19:18:23,143] Trial 1 finished with value:
2.901660442352295 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 2,
'N_NEURONS': 256, 'N_STACKS': 30}. Best is trial 1 with value:
2.901660442352295.
[I 2022-05-03 19:18:59,672] Trial 2 finished with value:
2.653423309326172 and parameters: {'WINDOW_SIZE': 23, 'HORIZON': 2,
'N_NEURONS': 1024, 'N_STACKS': 40}. Best is trial 2 with value:
2.653423309326172.
[I 2022-05-03 19:19:13,509] Trial 3 finished with value:
2.5468485355377197 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 2,
'N_NEURONS': 512, 'N_STACKS': 20}. Best is trial 3 with value:
2.5468485355377197.
[I 2022-05-03 19:19:21,709] Trial 4 finished with value:
2.875869035720825 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 2,
'N_NEURONS': 512, 'N_STACKS': 10}. Best is trial 3 with value:
2.5468485355377197.
[I 2022-05-03 19:19:28,072] Trial 5 finished with value:
3.19634246826617188 and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 3,
'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 3 with value:
2.5468485355377197.
[I 2022-05-03 19:19:34,780] Trial 6 finished with value:
2.707839250564575 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 3,
'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 3 with value:
2.5468485355377197.
[I 2022-05-03 19:19:56,338] Trial 7 finished with value:
24.87030029296875 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 1,
'N_NEURONS': 128, 'N_STACKS': 40}. Best is trial 3 with value:
2.5468485355377197.
[I 2022-05-03 19:20:26,158] Trial 8 finished with value:
6.516463756561279 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 5,
'N_NEURONS': 1024, 'N_STACKS': 20}. Best is trial 3 with value:
2.5468485355377197.
[I 2022-05-03 19:20:55,407] Trial 9 finished with value:
5.31090784072876 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 3,
'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 3 with value:
2.5468485355377197.

{'HORIZON': 2, 'N_NEURONS': 512, 'N_STACKS': 20, 'WINDOW_SIZE': 32}

[I 2022-05-03 19:20:56,710] A new study created in RDB with name:
model_47
[I 2022-05-03 19:21:15,954] Trial 0 finished with value:
3.4709959030151367 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 3,
'N_NEURONS': 128, 'N_STACKS': 30}. Best is trial 0 with value:
3.4709959030151367.
[I 2022-05-03 19:21:34,023] Trial 1 finished with value:
3.283173084259033 and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 3,
'N_NEURONS': 256, 'N_STACKS': 30}. Best is trial 1 with value:
3.283173084259033.

[I 2022-05-03 19:21:46,934] Trial 2 finished with value:
6.595535755157471 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 5,
'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 1 with value:
3.283173084259033.
[I 2022-05-03 19:22:11,976] Trial 3 finished with value:
3.4816763401031494 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 3,
'N_NEURONS': 128, 'N_STACKS': 40}. Best is trial 1 with value:
3.283173084259033.
[I 2022-05-03 19:22:38,922] Trial 4 finished with value:
3.414057731628418 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 4,
'N_NEURONS': 1024, 'N_STACKS': 30}. Best is trial 1 with value:
3.283173084259033.
[I 2022-05-03 19:23:12,754] Trial 5 finished with value:
3.9061763286590576 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 5,
'N_NEURONS': 256, 'N_STACKS': 40}. Best is trial 1 with value:
3.283173084259033.
[I 2022-05-03 19:23:42,331] Trial 6 finished with value:
3.265436887741089 and parameters: {'WINDOW_SIZE': 14, 'HORIZON': 4,
'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 6 with value:
3.265436887741089.
[I 2022-05-03 19:24:04,714] Trial 7 finished with value:
3.026813268661499 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 4,
'N_NEURONS': 1024, 'N_STACKS': 20}. Best is trial 7 with value:
3.026813268661499.
[I 2022-05-03 19:24:30,153] Trial 8 finished with value:
5.125941753387451 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 4,
'N_NEURONS': 512, 'N_STACKS': 20}. Best is trial 7 with value:
3.026813268661499.
[I 2022-05-03 19:24:57,648] Trial 9 finished with value:
3.378535509109497 and parameters: {'WINDOW_SIZE': 32, 'HORIZON': 5,
'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 7 with value:
3.026813268661499.

{'HORIZON': 4, 'N_NEURONS': 1024, 'N_STACKS': 20, 'WINDOW_SIZE': 17}

[I 2022-05-03 19:24:58,991] A new study created in RDB with name:
model_48
[I 2022-05-03 19:25:05,946] Trial 0 finished with value:
10.76737117767334 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 4,
'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 0 with value:
10.76737117767334.
[I 2022-05-03 19:25:18,689] Trial 1 finished with value:
8.798286437988281 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 5,
'N_NEURONS': 256, 'N_STACKS': 20}. Best is trial 1 with value:
8.798286437988281.
[I 2022-05-03 19:26:03,506] Trial 2 finished with value:
7.3372063636779785 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 4,
'N_NEURONS': 1024, 'N_STACKS': 40}. Best is trial 2 with value:
7.3372063636779785.
[I 2022-05-03 19:26:23,010] Trial 3 finished with value:
7.70209264755249 and parameters: {'WINDOW_SIZE': 29, 'HORIZON': 3,

'N_NEURONS': 512, 'N_STACKS': 30}. Best is trial 2 with value:
7.3372063636779785.
[I 2022-05-03 19:26:45,428] Trial 4 finished with value:
8.243721008300781 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 5,
'N_NEURONS': 1024, 'N_STACKS': 20}. Best is trial 2 with value:
7.3372063636779785.
[I 2022-05-03 19:27:07,690] Trial 5 finished with value:
10.849380493164062 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 3,
'N_NEURONS': 256, 'N_STACKS': 30}. Best is trial 2 with value:
7.3372063636779785.
[I 2022-05-03 19:27:20,359] Trial 6 finished with value:
9.042031288146973 and parameters: {'WINDOW_SIZE': 38, 'HORIZON': 4,
'N_NEURONS': 128, 'N_STACKS': 20}. Best is trial 2 with value:
7.3372063636779785.
[I 2022-05-03 19:27:49,442] Trial 7 finished with value:
7.015315055847168 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 2,
'N_NEURONS': 512, 'N_STACKS': 40}. Best is trial 7 with value:
7.015315055847168.
[I 2022-05-03 19:28:02,587] Trial 8 finished with value:
7.659597396850586 and parameters: {'WINDOW_SIZE': 35, 'HORIZON': 2,
'N_NEURONS': 128, 'N_STACKS': 20}. Best is trial 7 with value:
7.015315055847168.
[I 2022-05-03 19:28:35,598] Trial 9 finished with value:
7.989812850952148 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 2,
'N_NEURONS': 1024, 'N_STACKS': 30}. Best is trial 7 with value:
7.015315055847168.

{'HORIZON': 2, 'N_NEURONS': 512, 'N_STACKS': 40, 'WINDOW_SIZE': 26}

[I 2022-05-03 19:28:36,907] A new study created in RDB with name:
model_49
[I 2022-05-03 19:29:05,778] Trial 0 finished with value: 135920.8125
and parameters: {'WINDOW_SIZE': 20, 'HORIZON': 4, 'N_NEURONS': 128,
'N_STACKS': 10}. Best is trial 0 with value: 135920.8125.
[I 2022-05-03 19:29:34,629] Trial 1 finished with value:
114934.5234375 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 1,
'N_NEURONS': 128, 'N_STACKS': 30}. Best is trial 1 with value:
114934.5234375.
[I 2022-05-03 19:29:51,422] Trial 2 finished with value:
29216.60546875 and parameters: {'WINDOW_SIZE': 11, 'HORIZON': 5,
'N_NEURONS': 512, 'N_STACKS': 10}. Best is trial 2 with value:
29216.60546875.
[I 2022-05-03 19:30:05,141] Trial 3 finished with value:
5157.17236328125 and parameters: {'WINDOW_SIZE': 5, 'HORIZON': 4,
'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 3 with value:
5157.17236328125.
[I 2022-05-03 19:30:18,772] Trial 4 finished with value:
39644.44140625 and parameters: {'WINDOW_SIZE': 8, 'HORIZON': 4,
'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 3 with value:
5157.17236328125.
[I 2022-05-03 19:31:03,371] Trial 5 finished with value: 292005.28125

and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 5, 'N_NEURONS': 1024, 'N_STACKS': 40}. Best is trial 3 with value: 5157.17236328125.
[I 2022-05-03 19:32:09,577] Trial 6 finished with value: 4834.1982421875 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 4, 'N_NEURONS': 512, 'N_STACKS': 20}. Best is trial 6 with value: 4834.1982421875.
[I 2022-05-03 19:32:30,798] Trial 7 finished with value: 647278.6875 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 5, 'N_NEURONS': 256, 'N_STACKS': 30}. Best is trial 6 with value: 4834.1982421875.
[I 2022-05-03 19:32:58,604] Trial 8 finished with value: 22170.54296875 and parameters: {'WINDOW_SIZE': 17, 'HORIZON': 5, 'N_NEURONS': 256, 'N_STACKS': 10}. Best is trial 6 with value: 4834.1982421875.
[I 2022-05-03 19:33:11,241] Trial 9 finished with value: 25244.12890625 and parameters: {'WINDOW_SIZE': 26, 'HORIZON': 1, 'N_NEURONS': 512, 'N_STACKS': 10}. Best is trial 6 with value: 4834.1982421875.

{'HORIZON': 4, 'N_NEURONS': 512, 'N_STACKS': 20, 'WINDOW_SIZE': 17}