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01: import sagemaker
02: sagemaker_session = sagemaker.Session()
03: region = sagemaker_session.boto_region_name
04: role = sagemaker.get_execution_role()
05: image_name = sagemaker.image_uris.retrieve("forecasting-deepar", region)
06:
07: output_path = "s3://{}/{}/output".format(s3_bucket, deepar_prefix)
08:
09: # 学習期間を14日、予測期間を4日とする。
10: # ポイント数でデータ長を指定する必要があるので、freq の幅に応じて指定する。
11: train_len = int(14 * 24 * (60/freq)) # 14d * 24h * 60min/30min
12: pred_len = int(4 * 24 * (60/freq)) # 4d * 24h * 60min/30min
13:
14: estimator = sagemaker.estimator.Estimator(
15:     image_name,
16:     sagemaker_session=sagemaker_session,
17:     role=role,
18:     instance_count=1,
19:     instance_type='ml.c4.xlarge',
20:     base_job_name='cqpub-deepar',
21:     output_path=output_path
22: )
23:
24: # 学習のパラメータ設定
25: hyperparameters = {
26:     "time_freq": str(freq) + 'min',
27:     "epochs": "500",
28:     "early_stopping_patience": "10",
29:     "mini_batch_size": "64",
30:     "learning_rate": "1E-4",
31:     "context_length": str(train_len),
32:     "prediction_length": str(pred_len)
33: }
34: estimator.set_hyperparameters(**hyperparameters)
35:
36: # 先ほど一時保存したデータを指定
37: data_channels = {
38:     "train": f's3://{s3_bucket}/{deepar_prefix}/{train_path}',
39:     "test": f's3://{s3_bucket}/{deepar_prefix}/{test_path}'
40: }
41:
42: # 学習の実行
43: estimator.fit(inputs=data_channels, wait=True)
```

