

```

--job-dir $GCS_JOB_DIR \
--module-name trainer.task \
--package-path trainer/ \
--region us-central1 \
-- \
--train-files $TRAIN_FILE \
--eval-files $EVAL_FILE \
--train-steps 5000 \
--eval-steps 100

```

hptuning_config.yaml File

This file contains the hyper-parameter and the ranges we wish to explore in tuning our training job on Cloud MLE. The goal of the tuning job is to ‘MAXIMIZE’ the ‘accuracy’ metric.

trainingInput:

hyperparameters:

goal: MAXIMIZE

hyperparameterMetricTag: accuracy

maxTrials: 4

maxParallelTrials: 2

params:

- parameterName: learning-rate

type: DOUBLE

minValue: 0.00001

maxValue: 0.005

scaleType: UNIT_LOG_SCALE

- parameterName: first-layer-size

type: INTEGER

minValue: 50

maxValue: 500

scaleType: UNIT_LINEAR_SCALE

- parameterName: num-layers

type: INTEGER

minValue: 1

```

maxValue: 15
scaleType: UNIT_LINEAR_SCALE
- parameterName: scale-factor
  type: DOUBLE
  minValue: 0.1
  maxValue: 1.0
  scaleType: UNIT_REVERSE_LOG_SCALE

```

Execute Training Job with Hyper-parameter Tuning

Run the following code on the terminal to launch a distributed training job.

```
source ./scripts/hyper-tune.sh
```

```
gs://iris-dataset/jobs/iris_20181114_190121
```

```
Job [iris_20181114_190121] submitted successfully.
```

```

INFO    2018-11-14 12:41:07 -0500    service    Validating job
requirements...

INFO    2018-11-14 12:41:07 -0500    service    Job creation request
has been successfully
validated.

INFO    2018-11-14 12:41:08 -0500    service    Job iris_20181114_190121 is
queued.

INFO    2018-11-14 12:41:18 -0500    service    Waiting for job to be
provisioned.

INFO    2018-11-14 12:41:18 -0500    service    Waiting for job to be
provisioned.

...

INFO    2018-11-14 12:56:38 -0500    service    Finished tearing down
training program.

INFO    2018-11-14 12:56:45 -0500    service    Finished tearing down
training program.

INFO    2018-11-14 12:57:37 -0500    service    Job completed successfully.
INFO    2018-11-14 12:57:43 -0500    service    Job completed successfully.
endTime: '2018-11-14T13:04:34'
jobId: iris_20181114_190121

```