```
                              --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
```

The following executes a distributed training job.

```
source ./scripts/distributed-training.sh
```

Running a Distributed Training Job with Hyper-parameter Tuning

To run a training job with hyper-parameter tuning, add the '- -config' attribute and link to the '.yaml' hyper-parameter configuration file. The code for running the job is the same, but with the attribute '- -config' added. Change the bucket names accordingly.

```
export SCALE_TIER=STANDARD_1 # BASIC | BASIC_GPU | STANDARD_1 | PREMIUM_1 |
BASIC_TPU
DATE=`date '+%Y%m%d_%H%M%S'`
export JOB_NAME=iris_$DATE
export HPTUNING_CONFIG=hptuning_config.yaml
export GCS_JOB_DIR=gs://iris-dataset/jobs/$JOB_NAME
export TRAIN_FILE=gs://iris-dataset/train_data.csv
export EVAL_FILE=gs://iris-dataset/test_data.csv

echo $GCS_JOB_DIR

gcloud ai-platform jobs submit training $JOB_NAME \
                              --stream-logs \
                              --scale-tier $SCALE_TIER \
                              --runtime-version 1.8 \
                              --config $HPTUNING_CONFIG \
```

```
                                    --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
```