Figure 44-5. *Cloud MLE training output*

Deploy Trained Model

The best model trial with the lowest **objectiveValue** is deployed for inference on Cloud MLE:

- Display content of selected trained model directory.

```
%%bash
gsutil ls gs://${BUCKET}/jobs/superconductor_181222_040429/4/
export/superconductor/1545452450
```

```
'Output':
gs://superconductor/jobs/superconductor_181222_040429/4/export/
superconductor/1545452450/
gs://superconductor/jobs/superconductor_181222_040429/4/export/
superconductor/1545452450/saved_model.pb
gs://superconductor/jobs/superconductor_181222_040429/4/export/
superconductor/1545452450/variables/
```

- Deploy the model.

```bash
%%bash
MODEL_NAME="superconductor"
MODEL_VERSION="v1"
MODEL_LOCATION=gs://$bucket_name/jobs/
superconductor_181222_040429/4/export/superconductor/1545452450

echo "Deploying model $MODEL_NAME $MODEL_VERSION"
gcloud ai-platform models create ${MODEL_NAME} --regions us-central1
gcloud ai-platform versions create ${MODEL_VERSION} --model
${MODEL_NAME} --origin ${MODEL_LOCATION} --runtime-version ${tf_
version}
```

Batch Prediction

The following code carries out inference on the deployed model:

- Submit a batch prediction job.

```bash
%%bash
JOB_NAME=superconductor_prediction
MODEL_NAME=superconductor
MODEL_VERSION=v1
TEST_FILE=gs://$bucket_name/preproc_csv/data/eval-00-of-01.csv
OUTPUT_DIR=gs://$bucket_name/jobs/$JOB_NAME/predictions

echo $OUTPUT_DIR

# submit a batched job
gcloud ai-platform jobs submit prediction $JOB_NAME \
        --model $MODEL_NAME \
        --version $MODEL_VERSION \
        --data-format TEXT \
        --region $region \
        --input-paths $TEST_FILE \
                --output-path $OUTPUT_DIR
```