Purpose

It's used to compare the performance of tensorflow-mkl and legacy tensorflow.
The legacy tensorflow also could be optimized for Intel CPU.

- tensorflow in PIP is optimized by OpenBLAS.
- tensorflow in Conda is optimized by Intel-MKL.*

We recommend to use PIP's tensorflow as legacy, or you build your own tensorflow to disable such optimize method.
In Windows 10, the tf-mkl is increased about 10-20% than legacy tensorflow by PIP (optimized by OpenBLAS)

Usage

(This example of tensorflow needn't to download dataset from internet.)
run in tf-mkl

```
python fully_connected_feed.py --mkl=1
```

run in legacy tf

```
python fully_connected_feed.py --mkl=0
```

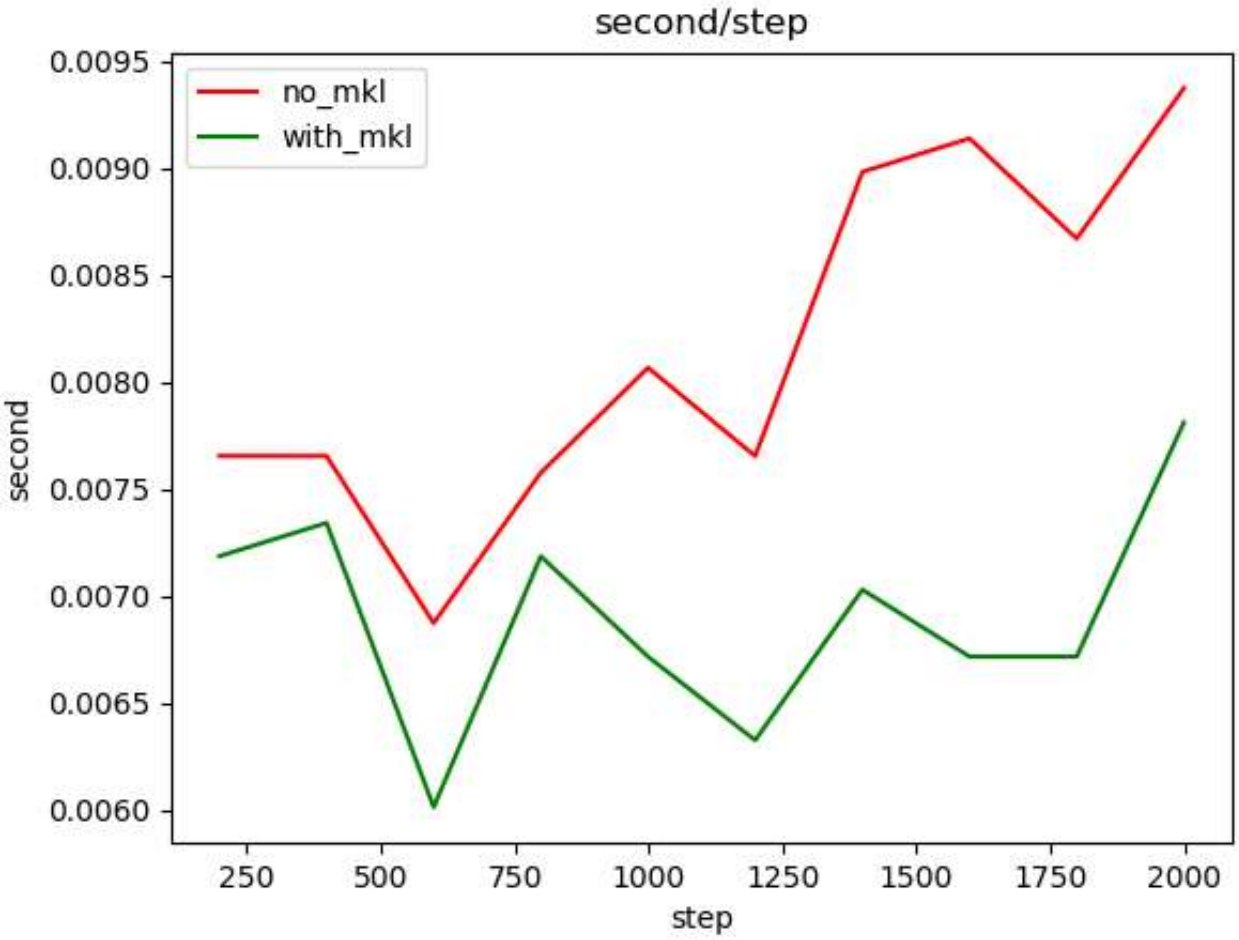
Steps

Both actions below should be executed in same folder.
They will share the result of each other and show them.

1.run in legacy tf

```
python fully_connected_feed.py --mkl=0
```

Result



CNN

Run in different tf enverionment. Please refer to ###Steps###

```
python lenet5.py
```

Following is the optimized record (it's only used for internal training, not use it for customer demo/training)

240	510	default	8	1
210	510	1	4	1
210	220	1	default	default
220	210	2	default	default
240	210	4	default	default
260	240	8	default	default
240	200	8	4	2

Intel(R) Xeon(R) Platinum 8180M CPU @ 2.50GHz

tf-mkl	**tf-legacy**	**MKL_NUM_THREADS**	**inter_op_parallelism_threads**	**intra_op_parallelism_threads**
75	67	default	default	default