

Basic Knowledge and Environment of Tensorflow

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Introduction of tensorflow:

https://www.tensorflow.org/get_started/get_started

Why tensorboard:

<https://www.youtube.com/watch?v=eBbEDRsCmv4&t=227s>

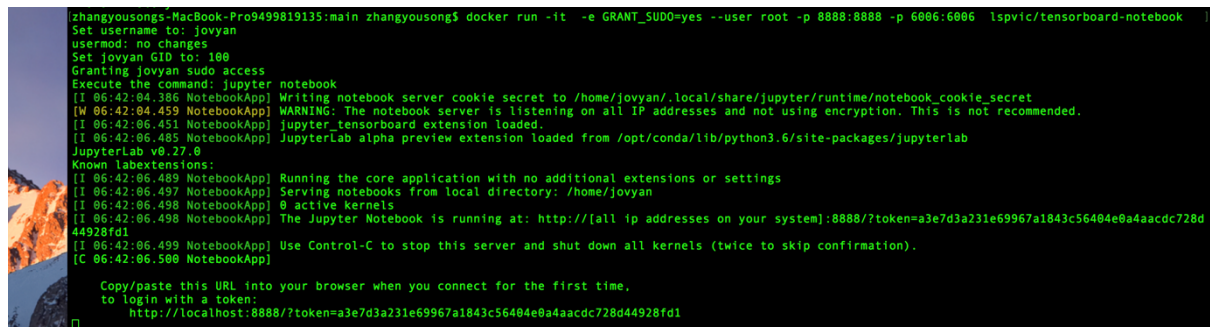
Docker install

`docker pull lspvic/tensorboard-notebook`

source: <https://hub.docker.com/r/lspvic/tensorboard-notebook/>

Run docker image of tensorflow

`docker run -it -e GRANT_SUDO=yes --user root -p 8888:8888 -p 6006:6006 lspvic/tensorboard-notebook` (6006 for tensorboard 8888 for Jupyter)

A terminal window showing the execution of the command `docker run -it -e GRANT_SUDO=yes --user root -p 8888:8888 -p 6006:6006 lspvic/tensorboard-notebook`. The output shows the JupyterLab environment starting up, including messages about writing the notebook server cookie secret, granting sudo access, and loading extensions. It also displays the URL `http://[all ip addresses on your system]:8888/?token=a3e7d3a231e69967a1843c56404e0a4aacdc728d44928fd1` and the token for access.

```
zhangyousong@MacBook-Pro9499819135:~$ docker run -it -e GRANT_SUDO=yes --user root -p 8888:8888 -p 6006:6006 lspvic/tensorboard-notebook
Set username to: jovyan
usermod: no changes
Set jovyan GID to: 100
Granting jovyan sudo access
Execute the command: jupyter notebook
[I 06:42:04.386 NotebookApp] Writing notebook server cookie secret to /home/jovyan/.local/share/jupyter/runtime/notebook_cookie_secret
[W 06:42:04.459 NotebookApp] WARNING: The notebook server is listening on all IP addresses and not using encryption. This is not recommended.
[I 06:42:06.451 NotebookApp] jupyter_tensorboard extension loaded.
[I 06:42:06.485 NotebookApp] JupyterLab alpha preview extension loaded from /opt/conda/lib/python3.6/site-packages/jupyterlab
JupyterLab v0.27.0
Known labextensions:
[I 06:42:06.489 NotebookApp] Running the core application with no additional extensions or settings
[I 06:42:06.497 NotebookApp] Serving notebooks from local directory: /home/jovyan
[I 06:42:06.498 NotebookApp] 0 active kernels
[I 06:42:06.498 NotebookApp] The Jupyter Notebook is running at: http://[all ip addresses on your system]:8888/?token=a3e7d3a231e69967a1843c56404e0a4aacdc728d44928fd1
44928fd1
[I 06:42:06.499 NotebookApp] Use Control-C to stop this server and shut down all kernels (twice to skip confirmation).
[C 06:42:06.500 NotebookApp]

Copy/paste this URL into your browser when you connect for the first time,
to login with a token:
http://localhost:8888/?token=a3e7d3a231e69967a1843c56404e0a4aacdc728d44928fd1
```

open jupyter by link:

<http://localhost:8888/?token=a3e7d3a231e69967a1843c56404e0a4aacdc728d44928fd1>

Other useful docker command

`docker ps` list current running images

`docker images` list docker images

`docker exec -it [NAMES] bash`

by `docker exec -it xxx bash` uer can terminal access tensorflow or tensorboard:

How to user sensorboard:

1. run tensorflow with `tf.summary` before
`summary_writer = tf.summary.FileWriter("/home/jovyan/tensorflow_logs/example/", graph=tf.get_default_graph())`
2. `docker exec -it [NAMES] bash`
`tensorboard --logdir /home/jovyan/tensorflow_logs`
3. <http://127.0.0.1:6006>

Source Code for

1. Tensorflow
<https://github.com/aymericdamien/TensorFlow-Examples>
2. tensorboard
<https://github.com/mamcgrath/TensorBoard-TF-Dev-Summit-Tutorial>

Funny video:

How RNN created codes (Lecture 10 | Recurrent Neural Networks from Stanford)

<https://www.youtube.com/watch?v=6niqTuYFZLQ&t=17s> begin at 35:00