

# 实作-1

## Lab 1

明玉瑞 Yurui Ming  
yrming@gmail.com

# 声明

## Disclaimer

- ▶ 本讲义在准备过程中由于时间所限，所用材料来源并未规范标示引用来源。所引材料仅用于教学所用，作者无意侵犯原著者之知识产权，所引材料之知识产权均归原著者所有；若原著者介意之，请联系作者更正及删除。

The time limit during the preparation of these slides incurs the situation that not all the sources of the used materials (texts or images) are properly referenced or clearly manifested. However, all materials in these slides are solely for teaching and the author is with no intention to infringe the copyright bestowed on the original authors or manufacturers. All credits go to corresponding IP holders. Please address the author for any concern for remedy including deletion.

# 环境准备

## Environment Preparation

- ▶ 下载并安装Python开发环境（Download and install the Python environment）：
  - ▶ <https://www.python.org/downloads/>
  - ▶ 请安装3.7版本（please install version 3.7）
- ▶ 安装TensorFlow 1.x库（Download and install the tensorflow library）
  - ▶ 打开命令行窗口（cmd.exe），键入如右命令：`pip install tensorflow==1.15`
  - ▶ 关于pip的使用技巧（Tips about pip）
    - ▶ 安装模块（install modules）：`pip install module_name`
    - ▶ 安装特定版本模块（install modules of specific version）：`pip install module_name==version`
    - ▶ 查看已安装模块（inspect already installed modules）：`pip list`
    - ▶ 卸载模块（uninstall modules）：`pip uninstall module_name`

# 环境准备

## Environment Preparation

- ▶ 安装sonnet库 (Download and install the sonnet library)

- ▶ `pip install dm-sonnet`

- ▶ 验证TensorFlow是否安装成功

打开命令行窗口 (cmd.exe)，以交互方式执行python程序 (键入python后按回车键)

```
>>> import tensorflow as tf
>>> hello = tf.constant("Hello TensorFlow!")
>>> sess = tf.Session()
>>> print(sess.run(hello))
```

如果安装成功，则会成功打印: `b'Hello TensorFlow!'`

# 环境准备

## Environment Preparation

► 验证TensorBoard及Sonnet是否安装成功

1. 在C盘或D盘根目录下新建文件夹，重命名为tensorboard
2. 桌面或任意目录新建txt文件，重命名为tb-test.py
3. 键入以下内容：

```
import tensorflow as tf
import sonnet as snt

x = tf.random.normal((32, 10))
net = snt.Linear(1)
y = net(x)

writer = tf.summary.FileWriter("D:/tensorboard",
                                tf.get_default_graph())
with tf.Session() as sess:
    sess.run(tf.global_variables_initializer())
    print(sess.run(y))
writer.close()
```

# 环境准备

## Environment Preparation

► 验证TensorBoard及Sonnet是否安装成功

4. 执行tb-test.py, `C:\Users\MSUser>python C:\Users\MSUser\Desktop\tb-test.py`

5. 验证TensorBoard是否有输出:

a. 执行命令, 如 `C:\Users\MSUser>tensorboard --logdir=D:\\tensorboard --port=8008`

b. 打开浏览器, 如chrome, 键入网址: <http://localhost:8008/>

c. 如果安装成功, 可以看到如下图所示: 

