In [1]:
```python
import numpy as np
from imageio import imread
import pickle
import math
import cv2
import imutils
```

In [2]:
```python
import numpy as np
import os
import pickle
import matplotlib.pyplot as plt
import math
from sklearn.utils import shuffle
from keras.layers import Input, Conv2D ,Lambda, merge, Dense, Flatten,MaxPooling2D,BatchNormalization,Activation,Concatenate
from keras.models import Model, Sequential
from keras.regularizers import l2
from keras import backend as K
from keras.optimizers import SGD,Adam
from keras.losses import binary_crossentropy
from keras.losses import mean_squared_error
```

Using TensorFlow backend.

In [3]:
```python
from keras import backend as K
K.tensorflow_backend._get_available_gpus()
```

WARNING: Logging before flag parsing goes to stderr.
W0906 17:46:25.375844 140259859052352 deprecation_wrapper.py:119] From /home/kv
irupak/.conda/envs/IUS2019/lib/python3.6/site-packages/keras/backend/tensorflow
_backend.py:190: The name tf.get_default_session is deprecated. Please use tf.c
ompat.v1.get_default_session instead.

W0906 17:46:25.377086 140259859052352 deprecation_wrapper.py:119] From /home/kv
irupak/.conda/envs/IUS2019/lib/python3.6/site-packages/keras/backend/tensorflow
_backend.py:197: The name tf.ConfigProto is deprecated. Please use tf.compat.v1
.ConfigProto instead.

W0906 17:46:25.377648 140259859052352 deprecation_wrapper.py:119] From /home/kv
irupak/.conda/envs/IUS2019/lib/python3.6/site-packages/keras/backend/tensorflow
_backend.py:203: The name tf.Session is deprecated. Please use tf.compat.v1.Ses
sion instead.

W0906 17:46:25.620291 140259859052352 deprecation_wrapper.py:119] From /home/kv
irupak/.conda/envs/IUS2019/lib/python3.6/site-packages/keras/backend/tensorflow
_backend.py:207: The name tf.global_variables is deprecated. Please use tf.comp
at.v1.global_variables instead.

Out[3]: ['/job:localhost/replica:0/task:0/device:GPU:0']

```
In [4]: from tensorflow.python.client import device_lib
        print(device_lib.list_local_devices())
```

```
[name: "/device:CPU:0"
device_type: "CPU"
memory_limit: 268435456
locality {
}
incarnation: 4652454105130391735
, name: "/device:XLA_CPU:0"
device_type: "XLA_CPU"
memory_limit: 17179869184
locality {
}
incarnation: 8290849710033540552
physical_device_desc: "device: XLA_CPU device"
, name: "/device:GPU:0"
device_type: "GPU"
memory_limit: 32069527143
locality {
  bus_id: 1
  links {
  }
}
incarnation: 12198976693625790859
physical_device_desc: "device: 0, name: Tesla V100-PCIE-32GB, pci bus id: 0000:
3b:00.0, compute capability: 7.0"
, name: "/device:XLA_GPU:0"
device_type: "XLA_GPU"
memory_limit: 17179869184
locality {
}
incarnation: 16254603406711773411
physical_device_desc: "device: XLA_GPU device"
]
```

```
In [ ]:
```