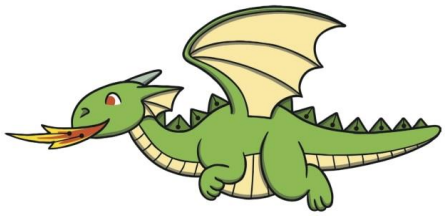
This lab is worth 5% of your final AI4G grade.
Due End of Day Tuesday February 5th

How to Train your Artificially Intelligent Dragon via Backpropagation



Lab 7

Follow the instructions in "Back Propagation Solution Walk Through.docx".

Type your name here → Haotai Xiong C00265675

Copy in screen shots here to demonstrate completion of the following (something in the image should identify your own machine):

1. The TensorFlow training showing the 15 predictions it makes at the end of the training process.

```
[507.0, 172.0, 374.0, 200.0, 473.0] => 0 (expected 0)
[504.0, 172.0, 374.0, 200.0, 476.0] => 0 (expected 0)
[501.0, 172.0, 374.0, 200.0, 479.0] => 0 (expected 0)
[498.0, 172.0, 374.0, 200.0, 482.0] => 0 (expected 0)
[495.0, 172.0, 374.0, 200.0, 485.0] => 0 (expected 0)
[492.0, 172.0, 374.0, 200.0, 488.0] => 0 (expected 0)
[489.0, 172.0, 374.0, 200.0, 491.0] => 0 (expected 0)
[486.0, 172.0, 374.0, 200.0, 494.0] => 0 (expected 0)
[483.0, 172.0, 374.0, 200.0, 497.0] => 0 (expected 0)
[480.0, 172.0, 374.0, 200.0, 500.0] => 0 (expected 0)
[477.0, 172.0, 374.0, 200.0, 503.0] => 0 (expected 0)
[474.0, 172.0, 374.0, 200.0, 506.0] => 0 (expected 0)
[471.0, 172.0, 374.0, 200.0, 509.0] => 0 (expected 1)
[468.0, 172.0, 374.0, 200.0, 506.0] => 0 (expected 1)
[465.0, 172.0, 374.0, 200.0, 503.0] => 0 (expected 1)
```

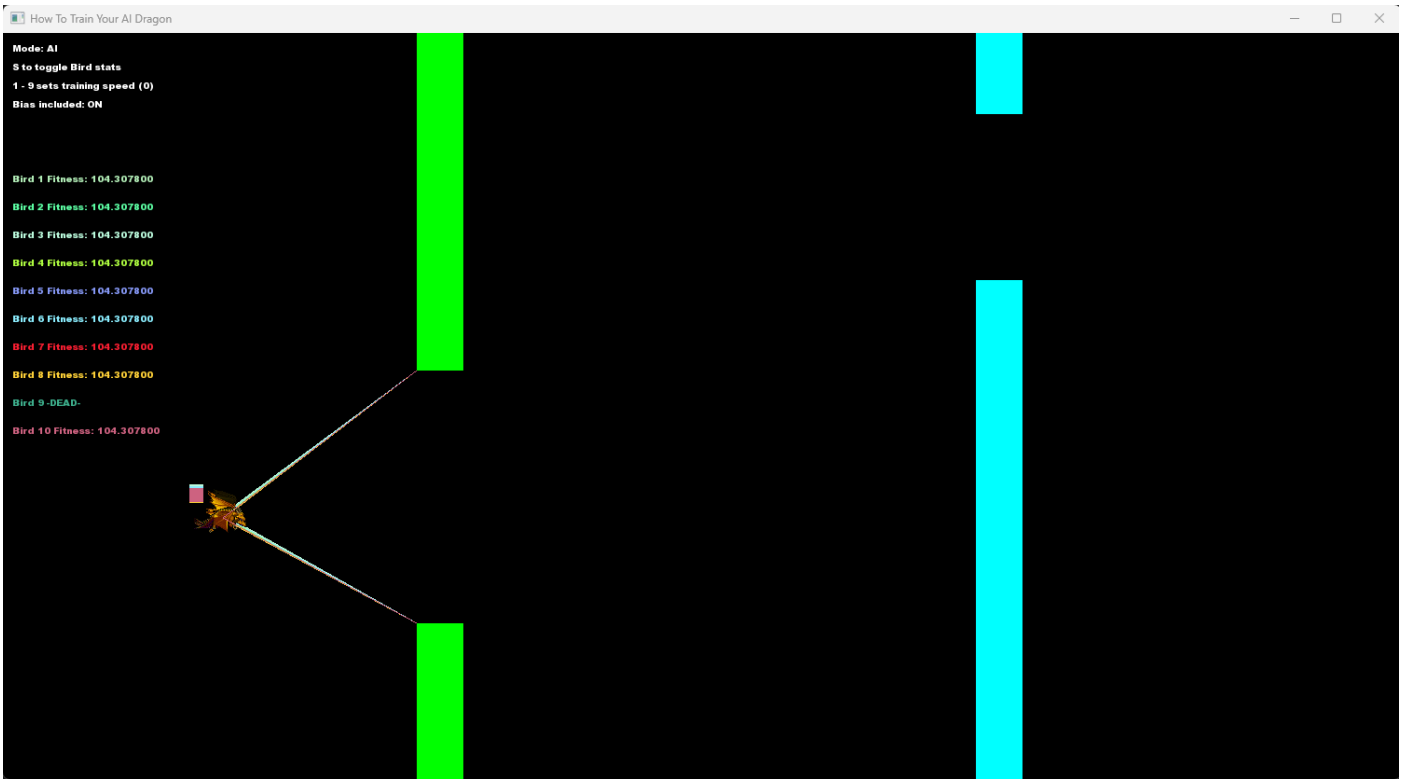
2. Successful execution of the “convert_flappy_model_weights_to_csv.py” script.

```
Model: "sequential"
_________________________________________________________________
 Layer (type)                Output Shape              Param #
=================================================================
 dense (Dense)               (None, 4)                 24

 dense_1 (Dense)             (None, 1)                 5

=================================================================
Total params: 29 (116.00 Byte)
Trainable params: 29 (116.00 Byte)
Non-trainable params: 0 (0.00 Byte)
_________________________________________________________________
Loaded model from disk
Layer 0
Layer name dense
[array([[-0.5509448 , -0.02059394, -0.00870643, -0.14905143],
       [-0.15036738,  0.19262087, -0.14009105, -0.30913723],
       [ 0.21251488, -0.41189677, -0.2290696 , -0.2646075 ],
       [-0.28110927, -0.73021936,  0.6214614 , -0.06655097],
       [-0.4030427 , -0.16088974,  0.32316363, -0.40135434]],
      dtype=float32), array([0.       , 0.       , 1.1185024, 0.       ], dtype=float32)]
Layer 1
Layer name dense_1
[array([[-0.50649774],
       [ 0.463318  ],
       [ 0.0233754 ],
       [ 0.37295556]], dtype=float32), array([-1.9660252], dtype=float32)]
```

3. The AI playing the game with the trained weights showing at least one bird with a fitness > 100



My Model is UNBEATABLE