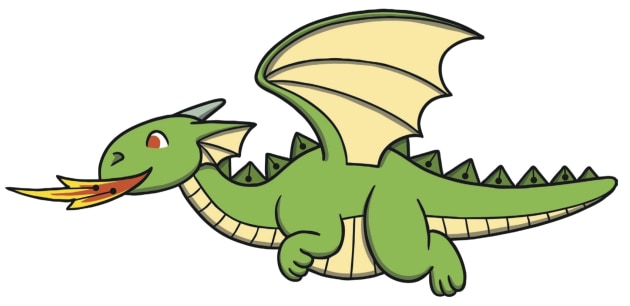
**This lab is worth 5% of your final AI4G grade.**

**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 🡪 Lukas Kmitas

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.

I am not entirely sure what this is telling me to do, does this mean the weights in flappy\_tf\_weights.csv ?

Here is some other stuff that I might be needed.

A screen shot of a computer code

Description automatically generated

You can also see my name in the path – “C:\Users\Lukas” to identify its me on my computer being used.

A screenshot of a computer

Description automatically generated

A screenshot of a computer

Description automatically generated

A screenshot of a spreadsheet

Description automatically generated

1. Successful execution of the “convert\_flappy\_model\_weights\_to\_csv.py” script.



Me running the command, I had my csv files outside of visual studio project, so I did need to make 1 small change in the script for keras\_flappy-bird\_network.py.

I did this -> dataset = loadtxt('FlappyBird\_ANN\_BP/FlappyBird\_ANN\_BP/training\_data.csv', delimiter=',')

Just calling the training\_data.csv, it won’t run if I had this inside the folder where the scripts reside for some reason.

A screenshot of a computer program

Description automatically generated

I added my name at the bottom as well the path saying my name to identify this is me doing it.

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

A screenshot of a computer

Description automatically generated

The maximum fitness I got was 39.7 it usually keeps dying around 10-40ish, I can’t get any more I keep training, running the 2 scripts in python and seeing how far it goes, sometimes it worse it only goes around 2-10 fitness.

A screenshot of a computer

Description automatically generated

**Video link on OneDrive**:

Just a little extra so you can see me playing the game and all the flappy dragons going.

<https://setuo365-my.sharepoint.com/:f:/g/personal/c00252129_setu_ie/EoIBoZ39a0hFlM_PUO0GPdQBGiRyNkR2v35TdTDSm3-wpQ?e=jRYEYf>