**CS 4740 Project 3 (Part 1) Write Up Document**

**Section 1 Questions**

**→ Q1: Error 1**

Please include a description of the error, a description of your fix, and a python comment in the code indicating where fix is for each of the 4 errors. The python comment will look something along the lines of "# Error 1 fix on line below".

**Your answer:**

The first error is in the initialization of the Neural Network where the dimensions of the second layer are defined as h x h where it should actually be h x output\_dim.

**→ Q2: Error 2**

Please include a description of the error, a description of your fix, and a python comment in the code indicating where fix is for each of the 4 errors. The python comment will look something along the lines of "# Error 1 fix on line below".

**Your answer:**

In the forward function, there wasn't any activation function used to get the output of the first layer and feed it to the second layer so we need to include that in our bug fix

**→ Q3: Error 3**

Please include a description of the error, a description of your fix, and a python comment in the code indicating where fix is for each of the 4 errors. The python comment will look something along the lines of "# Error 1 fix on line below".

**Your answer:**

We need to zero out the gradients using the optimizer.zero\_grad() function before we call our loss function so our gradients on EACH batch is accurate

**→ Q4: Error 4**

Please include a description of the error, a description of your fix, and a python comment in the code indicating where fix is for each of the 4 errors. The python comment will look something along the lines of "# Error 1 fix on line below".

**Your answer:**

Within the train\_and\_evaluate, we found the error of training on the validation set (val\_loader) where we should actually be training on the training set (train\_loader)

**Section 2 Questions**

**→ Q5: Miscellaneous**

List any additional libraries you used and sources you referenced and cited (labelled with the section in which you referred to them). Include a description of how your group split up the work. Include brief feedback on this assignment.

**Your answer:** We didn't use any additional libraries. We worked together for the entire assignment, using pair programming. The assignment was short and simple.