|  |  |
| --- | --- |
| Name: | Edward Eisenberger |
| ID#: | 1066164 |
| Assignment 3 | |
| Due Date: | March 1, 2019 |
| Date of Submission: | February 24, 2019 |

Table of Contents

[Part A 3](#_Toc1815663)

[Part B 3](#_Toc1815664)

[Part C 3](#_Toc1815665)

[Part D 3](#_Toc1815666)

[Part E 3](#_Toc1815667)

[Output 3](#_Toc1815668)

# Part A

Show the matrix equations for the forward pass:

# Part B

Show the matrix equations (partial derivatives) for the backpropagation algorithm:

# Part C

The Neural Network (NeuralNetwork.py), Hidden Layer (NeuronLayer.py), and Backpropagation algorithm have been implemented in the NeuralNetworkExample project located in the Assignment03 directory.

# Part D

The Neural Network Example project implemented both the Stochastic Gradient Descent (SGD) algorithm and the Mini Batch Gradient Descent algorithms.

# Part E

The Neural Network Example project implemented the tanh and RELU activation function.

# Output

