Homework 8

Instructions

This homework contains **1** concept and **4** programming questions. In MS word or a similar text editor, write down the problem number and your answer for each problem. Combine all answers for concept questions in a single PDF file. Export/print the Jupyter notebook as a PDF file including the code you implemented and the outputs of the program. Make sure all plots and outputs are visible in the PDF.

Combine all answers into a single PDF named andrewID_hw8.pdf and submit it to Gradescope before the due date. Refer to the syllabus for late homework policy. Please assign each question a page by using the "Assign Questions and Pages" feature in Gradescope.

Here is a breakdown of the points for programming questions:

Name	Points
M8-L1-P1	10
M8-L2-P1	10
M8-L2-P2	10
M8-HW1	60

Problem 1 (10 points)

Consider the following network, with $x_0 = 2$, $w_1 = -1$, $w_2 = 3$, $w_3 = 7$, and linear (identity) activation functions.
Compute $\partial L/\partial w_3$, $\partial L/\partial w_2$, $\partial L/\partial w_1$ provided that t = -40
$L=\frac{1}{2}e^T e$