

TAKE-HOME ASSIGNMENT – APL745

Ques: Derive systematically the steps involving the backpropagation of a neural network considered in the class with two hidden layers using the cross-entropy loss function. The activation function for each layer can be considered to be ReLU. Prepare a LaTeX report that briefly describes the derivation of each step along with the algorithmic framework.

PS: You can use <https://www.overleaf.com/> with IITD credentials for preparing the report. You can also [follow this thread](#) for drawing a neural network in LaTeX.

Submission deadline: 14 February 2023, EOD

Submission: Please upload the PDF using the same link that is provided for Assignment #4 on Gradescope.