CAP 6619 Deep Learning Homework 1

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1 Introduction

This document contains our answers to the questions in the first homework assignment of CAP 6619: Deep Learning, taught by Dr. Xingquan Zhu at Florida Atlantic University in the Fall of 2018.

Dr. Zhu is the author of the questions and tasks we answer and do in this document. We find the original document specifying this first homework assignment in [4].

2 Question 1

Homework one begins with a task and two questions

> Please show the perceptron structure and explain the function of each component [0.5 pt]. What is the purpose of using training examples in a neural network? Given property weight values, what is expected output vs. actual output of an example? [0.5 pt] [4]

2.1 Perceptron Structure

Dr. Zhu gives the perceptron structure in G

References

[1] Michel Goossens, Frank Mittelbach, and Alexander Samarin. *The LaTeX Companion*. Addison-Wesley, Reading, Massachusetts, 1993.

[2] Albert Einstein. *Zur Elektrodynamik bewegter Körper*. (German) [*On the electrodynamics of moving bodies*]. Annalen der Physik, 322(10):891–921, 1905.

[3] Knuth: Computers and Typesetting, http://www-cs-faculty.stanford.edu/~uno/abcde.html

[4] Zhu: Homework 1 https://canvas.fau.edu/files/14059715/download?download_frd

[5] Xingquan Zhu. 2018. Perceptron Architecture and Learning. (August 2018). Retrieved September 8, 2018 from https://canvas.fau.edu/courses/50073/files/folder/Lectures?preview=14020569