**Department of Electrical and Computer Engineering**

Homework Assignment No. 13:

**HW No. 13: Transformers**

submitted to:

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ECE 8527: Introduction to Pattern Recognition and Machine Learning

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# Task 1

This homework is a bit different as we have not really spent time discussing transformer implementation, thus, I want to spend less of this time focusing on the code and instead explain the individual parts that make up this implementation for my own understanding. The code does work in its entirety, and I have attached it on the last few pages of this assignment. Since the code is explained within the tutorial itself, I will limit my own screenshots and include portions that I feel are imperative to my own understanding of a transformer implementation.

# Task 2