

**Gebze Technical University**  
**Department of Computer Engineering**  
**CSE 654 / 484**  
**Fall 2021**

**Homework 04**  
**Due date: Jan 24<sup>th</sup> 2022**  
**No Late Submissions**

You are expected to use the Python language and the Keras library on Google Colabs unless otherwise noted. You will prepare a report including your code and results (in a Google ColabsJupyter Notebook). The report format is shown at the end of this document.

**Model a deep feed forward network for regression for a simple case**

Go to <https://colab.research.google.com/notebooks/welcome.ipynb> and familiarize yourself with the Google Colaboratory which is a free Jupyter notebook environment that requires no setup and runs entirely in the cloud. With Colaboratory you can write and execute code, save and share your analyses, and access powerful computing resources, all for free from your browser.

Then read and understand the deep learning example at <https://colab.research.google.com/github/lmoroney/mlday-tokyo/blob/master/Lab1-Hello-ML-World.ipynb>. We looked at this example in one of our lectures. Similar examples can be found at <https://colab.research.google.com/github/lmoroney/mlday-tokyo/blob/master>

Also, you may want to watch associated videos such as <https://youtu.be/KNAWp2S3w94>

You will solve exactly the same problem as in HW3 but this time you will use LSTM networks in Keras. There are many many-to-many LSTM network examples over the Internet, you may use one of them to modify.

What to submit to the Teams page

- Your source code
- Your report that includes your method details and your performance tables
- test run results for at least 20 sentences