AI502: Deep Learning (Spring 2023)

Programming Assignment 2

Due: May 28 (Sun), 11:59 pm

1 Overview

In this programming assignment, you will implement a recurrent neural network (RNN) for time-series forecasting. The purpose of this assignment is to give you hands-on experience with building and training RNN on sequential data. We assume a simple regression problem on a sinusoid function with white noise. The goal is to predict the future based on the past and current information.

2 Guideline

Refer to the skeleton code in a colab link for the guideline. Basically, you will modify the code to improve the forecasting performance. You may try anything on your own, modify any part except for the evaluation code.

3 Report

The report (**up to 2 pages in a pdf format**) should contain (1) what you tried, (2) the outcome and (3) your analytic thoughts on the results.

4 How to submit

1. Download and fill in the skeleton codes. Build your own RNN and try to improve the algorithm. You can find the skeleton code on a colab link. If you have any issues, ask TAs for help.

2. Modify the name of files and compress them into a zip file.

   - code: **PA1_{student_ID}_{name}.ipynb**
   - report: **a PDF format**, with a filename as **PA1_{student_ID}_{name}.pdf**
   - zip: **{student_ID}_{name}.zip**