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MLII
Final Project Proposal
Topic: Stock Prediction using RNN

During the pandemic, stock trading has increased in Korea, and the KOSPI index has exceeded over 3,000. Likewise, I became interested in stock trading as well and invested in some stocks. I wanted to seek ways to invest stocks effectively and found out that deep learning can be used to predict stocks as well while searching the topic. I used Tesla stock data, which I invested in a few months ago, and imported 10 years of stock price data from the Yahoo Finance library. Since the stock data is a sequence of points that are indexed in time order, recurrent neural network models were appropriate. I will use all RNN GANs, LSTM (Long Short Time Memory), and GRU models and find the best model. In google scholar, there are several deep learning model articles for deep learning models. In March, I will focus on the midterm and study research about RNN. I will finish coding by April 15th and start writing the final report and finish it by April 25th. The project slides will be prepared, and the presentation will be recorded in the last week of April. The final presentation deadline is May 2nd.

Reference:

O. Mogren, C-RNN-GAN: Continuous Recurrent Neural Networks with Adversarial Training (2016), Constructive Machine Learning Workshop

A. Shewalkar, Performance evaluation of Deep Neural Networks Applied To Speech Recognition RNN, LSTM, and GRU (2019), Journal of Artiifcial Intelligence and Soft Computing Research, Vol.9, No.4 pp235-245, doi.10.2478

J. Zhao, D. Zeng, S. Liang, Prediction Model for Stock Price Trend Based on Recurrent Neural Network (2021). J Ambien Human Comput 12, pp. 745 – 753, doi.10.1007