

046211 - Deep Learning - Project Proposal Template

<u>Name</u>	<u>ID</u>	<u>Campus E-Mail</u>
Orel Tsioni	313350522	orel.ts@campus.technion.ac.il
Roe Ben Shlomo	313541559	roeeben@campus.technion.ac.il

Project Name: Stock Prediction Using LSTM & GRU

Short Description/Plan: In this project we'll be trying to predict the price of several stocks during periods as long as possible. We'll be working on data with daily information (open and close price, low and high of the day, and the volume) on the relevant stocks, and we'll be trying Deep Learning architectures such as LSTM & GRU.

We'll take the challenge of improving previous result of the LSTM predictions as done in previous projects and in the provided article (link down below).

Our goal is enlarging the periods of the well-fitted predictions by changing the LSTM architecture that appears on the article and by trying a new GRU architecture, and thus achieving a prediction of a couple of months at minimum.

We expect to face lots of challenges, as we're yet to study about LSTM and GRU, so the entire architectures will be completely new to us.

Available Resources:

Article: <https://www.analyticsvidhya.com/blog/2018/10/predicting-stock-price-machine-learningnd-deep-learning-techniques-python/>

Kaggle notebook: <https://www.kaggle.com/faressayah/stock-market-analysis-prediction-using-lstm>

Dataset: Panda's pandas_datareader .

Does your project build upon previous projects? Yes, we'll be comparing our results to the article and the Kaggle notebook that were provided in the previous section.