Graduate Seminar

Department of Economics and Finance

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MA Candidate

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A Stock Selection Framework Based on Deep Stacked Autoencoder

After comparing 15000 outputs extracted from more than 2.6 million total outputs from 30 Neural Network models combined with 6 different outputs mixing methods, we setup a framework to build stock portfolio which is based on Deep Stacked Autoencoder Neural Network and the category targets combination strategy. The experiments on the US market show that the portfolio based on this framework has quite good performance. Neural Network has been proved to be effective on forecasting stock returns. However, setup with deeper layers, the Neural Network is much easier to fall into partially small. To solve this problem, the Greedy Layer-Wise Pretraining algorithm with Autoencoders has been raised for many years and has shown its effectiveness. Although Neural Network models have strong abilities on fitting high dimensional problems, different inputs will result in quite different output results. Based on the former researches and experiments in this paper, category targets combination strategy is raised to improve the stability of Neural Network models when building stock portfolios.

Date: Friday August 17 2018
Time: 3:00 PM
Room: Mackinnon 720