Monthly Stock Return Prediction via Neural Network

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Contents

Preliminary Analysis

Choice of Prediction Model

Feature Engineering

Neural Network Implementation (benchmark: no features, data only)

Validation and Result

Preliminary Analysis

Data Pre-processing

To analyze the data for trends, first we had to shift data that arrives concurrently with stock returns. Information that arrives at the same time as returns cannot be used to predict returns in that period, only the next period.

Basic Analyses

Initial analysis consisted of simple plots and regressions of input data against monthly stock returns (include various plots of data vs returns).

Our investigation showed no clear linear relationships between data values and returns.

Choice of Prediction Model

Neural Networks

We chose the neural network as the model to investigate for our project.

-in-class discussion

-lack of clearly predictive variables