Stock Trends for Boosting Trading Bots Decisions

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Description

Stock market forecasting is one task of central importance that automatic trading bots need to reliably accomplish in order to be useful. Stock market forecasting is concerned with accurate prediction of either/both the trend or/and the price of a stock so as to gain a higher profit through trading. However, obtaining an accurate prediction of the stock trend and/or price has been a challenging and difficult task due to the nonlinear and volatile nature of stock market exchanges. Moreover, predicting stock trends is a complex task as there are millions of events and pre-conditions for a particular stock to move in a particular direction. So, we need to be able to capture as many of these events as possible. Unfortunately, the aggregation of useful pre-conditions for such a diverse set of information in a way that an automatic trading bot can use has proven to be difficult. However, deep learning provides promising horizons and this has become a very active area of research.

The goal of this research project is to use the latest advancements in deep learning techniques in order to generate accurate predictions on an hour by hour basis (day by day at minimum). Specifically, the focus we'll be on researching an "ensemble" of adversarial, attention and sentiment analysis deep learning techniques in order to provide informative stock price movement predictions that can be used to inform a trading bot decision making process.

References

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