Quantitative Trading (I)

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Abstract

The technological advancements in financial exchanges replace not only most of the trading pits by electronic matching systems but more importantly, produce voluminous, high quality and high resolution market data that accelerates many exciting developments in quantitative trading. As an introduction of this series of 2 presentations, we will first offer an overview of the discipline of quantitative trading. Then, we will illustrate a specific investment strategy that leveraged on a statistical model that built upon various stylized features of the market data. By applying a new approach of stochastic optimization technique that incorporates Empirical Bayes methodology, the proposed strategy achieves decent long-term performance. We will conclude the first session by highlighting several directions such as implementing optimal multi-period portfolio optimization with transaction costs via reinforcement learning, Monte Carlo tree search and deep learning.