Using Machine Learning in Trading and Finance
New York Institute of Finance, Google Cloud

Overview

Week 1

Week 2

Week 3

Week 4

Grades

Notes

Discussion Forums

Week 3

Using Machine Learning in Trading and Finance

Week 3
Discuss the topic here.
135 threads · Last post 2 days ago

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Build a Momentum-based Trading System

Momentum trading is a strategy in which traders buy or sell assets according to the strength of recent price trends. Price momentum is similar to momentum in physics, where mass multiplied by velocity determines the persistence with which an object will follow its current path (like a heavy train on a track). In financial markets, however, momentum is determined by other factors like trading volume and rate of price changes. Momentum traders bet that an asset price that is moving strongly in a given direction will continue to move in that direction until the trend loses strength or reverses. This module teaches you all about momentum trading.

∧ **Less**

Learning Objectives

- Build a momentum-based trading model and back test it
- Identify the factors that contribute to the momentum feature

∧ **Less**

Identify momentum-based factors

▶ **Video:** Introduction to Momentum Trading 9 min   **Resume**

▶ **Video:** Introduction to Hurst 8 min

▣ **Reading:** Hurst Exponent and Trading Signals Derived from Market Time Series 10 min

Build a trading model that uses momentum factors

▶ **Video:** Building a Momentum Trading Model 7 min

▶ **Video:** Define the Problem 9 min

▶ **Video:** Collect the Data 2 min

▶ **Video:** Creating Features 3 min

▶ **Video:** Split the Data 3 min

▶ **Video:** Selecting a Machine Learning Algorithm 3 min

Video: Backtest on Unseen Data 1 min

Video: Understanding the Code: Simple ML Strategies to Generate Trading Signal 9 min

Discussion Prompt: Compare interpretability versus explanatory power of the momentum factor 10 min

Video: Lab Intro: Momentum Trading 43 sec

Graded External Tool: Lab: Momentum Strategies 2h 30m Due Mar 1, 1:59 AM CST

Video: Momentum Trading Lab Solution 7 min

Ungraded External Tool: Optional Lab: Improve Momentum Trading strategies using Hurst 2h 30m