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Title: Price Signals in High Frequency Trade Execution

Abstract: We describe a framework for processing market data to produce short-term price forecasts for optimizing trade execution in futures and interest rate markets. The framework first computes a substantial number of simple features based on order book data. It then determines a number of signals from the features, using a variety of techniques including machine learning. Finally, a consensus layer uses a new clustering algorithm to decide which combination of signals to believe in which market conditions. The framework is in production use and is delivering substantial value.