Document of Standard Agent

Team name

U-Mart Project

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Agent

Name

RandomStrategy

Summary

The agent buys or sells randomly. The limited price on order is set randomly around the latest futures price, and quantity of the order is set randomly within a prescribed range. Position of the agent is also considered in decision making.

Execution and arguments

according as TestStrategy.java

Summary of arguments

according as TestStrategy.java

Type

Tool	Number of orders	Market of Limit	Asset management	Reference data	Long or short term	Against or follow trend	Learning	Online learning
Strategy.java	1	Limit Price	Yes	futures price, spot price, position, cash, remaining session	Both	Neither	No	No

Outline of algorithm

Getting the latest futures price (U-Mart price). If it cannot obtain new price, it try to obtain latest spot price. When neither can be obtained, a constant (nominalPrice) is used for " the latest price". Price on order is decided as Gaussian distribution whose mean is latest price (latest futures price in a lot of cases) and standard deviation is widthOfPrice. Order volume is obtained as an uniform random numbers between minQuote and maxQuote.

Class

Class Name

RandomStrategy

Super class

Strategy

Summary of class

Same as Summary of Agent

Fields

Name	Type	Role	Range	Value	Reason of Value
widthOfPrice	int	Variance of limit price decided	1 ... 1000	20	
maxQuant	int	Maximam volume of one order	(minQuant+1) ... (initial cash/300,000)	50	
minQuant	int	Minimum volume of one order	1 ... (maxQuant-1)	10	
maxPosition	int	Upper bound of net position. For asset management.	1 ... (initial cash/300,000)	300	

Methods

Name	Summary	Returned type	Arguments			
			Name	Type	Role	Range
getOrder	to dicide order	Order	spotPrice	int[]	Time Series of spot price	1 ...
			futurePrice	int[]	Time Series of futures price	-1 : When trade is failure, positive value : contracted futures price
			pos	int	current position	Positive is buying position. Nagative is selling position.
			money	long	amount of cash	0 ...
			restDay	int	Number of to the closing of market	0 ... 240

Attachment

RandomStrategy.doc, RandomStrategy.java

Comments