

Mit bitcoin trading simulation



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Bitcoin is evolving rapidly and is gaining deserved acceptance from major institutes too.

Bitcoin is a hot topic of discussion on Reddit and other forums every day. The platforms are flooded with discussions between Bitcoin holders and enthusiasts about bitcoin price movements. The suggested reasons range from unusual technical indicators to machinations of FUD peddlers.

A new paper claims a trading strategy have been devised to produce 89% return in a very short time.

The paper was written by Devavrat Shah, Massachusetts Institute of Technology associate professor, and Kang Zhang, computer science student. They used data of February to July collected from the world's largest exchange OKCoin.

They input the data into a predictive statistical model that they have developed. The results were then used to carry out a simulation of CNY/BTC trades.

The traders were only allowed to go short or long 1 BTC in each trade in this simulation.

The trading simulation, conducted using data of 50 consecutive days in the months May and June, gave very profitable results.

The unique trading strategy returned the highest profits in times of high volatility, starting from the end of May. At the end of the period, when the price declined, it was still profitable.

According to the authors, the trading strategy produced a Sharpe ratio of 4.

1. This reflects a portfolio's return after the risk-free rate of return is adjusted.

A high ratio suggests that an investor gained returns while taking less risk.

Any score above 3 is considered great.

The Sharpe ratio is compared to benchmark mutual funds such as the Vanguard Total Stock Market Index Fund. This \$355bn mutual fund is the largest such vehicle in the world which has 1-year Sharpe ratio of 1.79. The fund had 8.32% returns in 2013.

The results also support claims of technical traders in the bitcoin markets.

Their prediction data was analyzed in the paper.

The authors found evidence of 'head and shoulders' and 'triangle' patterns in the price charts. They wrote that this indicated the success of their trading strategy.

A previous version of the paper called "Bayesian Regression and Bitcoin," was published in the 2014 Allerton Conference.

The simulation has a restricted trade size of 1 BTC. It is a concern if more profit could be generated by increasing capital. The authors responded to the question by explaining that more research is needed even though they think that profit can be increased.

It was noted that more profit could be earned by crunching more data. This would require computation at a huge scale.

The authors used a 32-core computer with 128GB RAM for the study. They also used representative time-series data for the predictive modelling stage.

Zhang and Shah's predictive simulation is based mainly on a 'latent source model,' which was described in a paper published a year ago.

It was designed to forecast what would become Twitter's 'trending topics.'

The paper was co-authored by Shah along with 2 researchers at Twitter and MIT.