

Forecasting Cryptocurrency Value

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Programme: Information Technologies

Abstract:

This thesis will be focused on techniques for forecasting cryptocurrency value and potential, based on modern approaches from the field of computational intelligence, machine learning and other dedicated data science tools (e.g. Sentiment analysis from social networks and more). The aim of this work is to design an algorithm for automatic decision systems. Thesis should investigate and address current challenges in blockchain technology, related data collection and preprocessing techniques, analysis metrics and optionally utilization of high performance computing platforms. Thesis should also be focused on some of following research tasks: ranking Initial Coin Offering (ICO) values for incoming cryptocurrencies, trading strategies, optimization of multi-objective portfolio selection and many more.

Literature:

- [1] Peterson, Jack, and Joseph Krug. "Augur: a decentralized, open-source platform for prediction markets." arXiv preprint arXiv:1501.01042 (2015).
- [2] Darlington III, James K. "The future of Bitcoin: mapping the global adoption of world's largest cryptocurrency through benefit analysis." (2014).
- [3] Lamon, Connor, Eric Nielsen, and Eric Redondo. "Cryptocurrency Price Prediction Using News and Social Media Sentiment." Not Published (2016).
- [4] Atashian, Gasia, and Hrachya Khachatryan. "Sentiment Analysis To Predict Global Cryptocurrency Trends." (2018).
- [5] Zheng, Zibin, et al. "Blockchain challenges and opportunities: A survey." Work Pap.–2016 (2016).