

ABSTRACT

Diploma work: 78 p., 31 fig., 6 tabl., 2 appendixes, 13 references.

ALGORITHMIC TRADING , TIME SERIES ANALYSIS,
COINTEGRATION, ADAPTIVE DECISION SUPPORT SYSTEM, STOCKS
MARKETS, EFFECTUATION THEORY

Object of research - Financial time series of securities, history of trading operations.

Subject of study - Classification methods based on machine learning.

The purpose of the work - To analyze the subject of research, to implement continuous access to trading data, to test the built model on historical data and in real time.

Methods of research - methods of machine learning: decision tree, random forest, neural network, gradient boosting.

Actuality - the task of making decisions on the securities markets is leading for the modern world. Building low risk strategies is the best choice for keeping any company's liabilities. The constructed model can easily be transferred to any market, which is based on the time series and counterparts of the series are equal users without significant advantage.

The results of the work indicate the achievement of the profitability of the use of assets in applying the model at the level of the average bank rate of 8% per month. Ways of further development of the subject of research - to increase the number of attracted asset parameters in the model; use strategies for trading other financial instruments and adapt the model for multi-pair transactions.