

Abstract: Stock trading is a very complex topic that involves a lot of challenging problems. One of these problems is anomaly detection in trading flow. Real-time anomaly detection in time series is a very complicated task and thus this issue is still open.

The aim of this thesis is to research various models and algorithms that can be used for this task and try to find the most fitting ones. We develop models that detect anomalies based on the density properties of the data as well as statistical models and neural networks that detect anomalies based on the comparison of predicted data and actual data. As a result we propose models that can be further researched and used in real-time environment.