# 在线情感分析的实时股价预测算法

# 摘要

作为资本市场的重要组成部分，股价市场的变化规律一直被金融从业者期待掌握。行为经济学认为个人的交易决策会显著地受到情感或者情绪的影响，股票交易并非完全理性。诸多情感因素中，来自社交网络中对上市公司舆论情感评价的因素对股价影响最为突出。针对实时情感二分类问题，基于在线SVM算法提出了一种更新淘汰策略，并且提出了一种在线被动攻击的SVM算法进行情感分析，以适应于实时产生的社交网络情感数据进行股价预测。应用多家航空公司的情绪与股价数据进行模型训练。经实验评估，对于实时社交网络文本数据，更新淘汰策略的在线SVM股价预测算法对股价预测的XXX比使用XXX提高了XXX，在线被动攻击的SVM算法比使用XXX提高了XXX。

# 关键词

情感分析 在线学习 股价预测

# Real-time Stock Price Prediction Algorithm Based on Online Sentiments Analysis

# Abstract

The variation of stock market, which is one of the most important part of capital market, is always expected to be controlled by financial practitioners. Behavioral economics believes that trade decisions of individuals could be significantly affected by emotions or sentiments, which makes stock trading is not completely rational. Among various emotional factors, the sentiments within social network platform towards specific listed companies have dominating influence on their stock prices. To address emotional binary classification problems, this thesis proposes an update-elimination strategy based on online SVM algorithm and an online passive aggressive SVM algorithm, both of which fit real-time social network sentiment data in stock price prediction. This thesis used multiple airline companies’ sentiments and stock prices data in model training. Experiment evaluations show that the online SVM algorithm with update-elimination strategy … , and the online passive aggressive algorithm …