

**California State University San Bernardino
School of Computer Science and Engineering**

Thesis Proposal Presentation

Date

March 12, 2020 (Thursday)

Time

10:30am– 11:00am

Location

-JB 359

Title

**News Sentiment Analysis for Stock Market Index Prediction with
Skimming Mechanism and Multi-task Learning**

Student

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Advisor

Prof. Dr. Kerstin Voigt

Abstract

Over the years, investors and researchers have been engaged in developing models for stock market prediction. However, predicting stock prices is extremely challenging. Many time series based and machine learning based prediction systems have been proposed. Unfortunately, these models are limited because they only consider the numerical data of the market. To address this issue, sentiment analysis has been lately used to predict the market trend by exploring the sentiment signals from the text corpus. However, many existing sentiment analysis approaches ignored the heterogeneity of news articles as well as how investors or audience read and response to the news articles. To address these issues, we attempt to propose a deep learning architecture for stock market index prediction given financial news. We will include a skimming mechanism to intimate how audience read and process the articles, and use multi-task learning to learn the quality of news articles besides price signal.