

**Department of Electrical and Computer Engineering
North South University**



Senior Design Project

Stock Market Price Forecasting Service using LSTM

Md. Mahabubul Hasan ID# 1421274042

Pritom Roy ID# 1430378042

Sabbir Sarker ID# 1420134042

Faculty Advisor:

Dr. Mohammad Monirujjaman Khan
Assistant Professor
ECE Department

Spring, 2019

LETTER OF TRANSMITAL

02 April, 2019

To

Dr. K. M. A. Salam

Professor & Chairman,

Department of Electrical and Computer Engineering

North South University, Dhaka

Subject: **Submission of Capstone Project on “Stock Market Price Forecasting Service using LSTM”**

Dear Sir,

With due respect, we would like to submit our **Capstone Project Report** on **“Stock Market Price Forecasting Service using LSTM”** as a part of our BSC program. The report deals with prediction of stock market share prices. This project was very much valuable to us as it helped us gain experience from practical field and apply in real life. We tried to the maximum competence to meet all the dimensions required from this report.

We will be highly obliged if you kindly receive this report and provide your valuable judgment. It would be our immense pleasure if you find this report useful and informative to have an apparent perspective on the issue.

Sincerely Yours,

.....
Md. Mahabubul
Hasan
ECE Department
North South University, Bangladesh

.....
Pritom Roy
ECE Department
North South University, Bangladesh

.....
Sabbir Sarker
ECE Department
North South University, Bangladesh

APPROVAL

Md. Mahabubul Hasan (ID# 1421274042), Pritom Roy (ID# 1430378042) and Sabbir Sarkar (ID# 1420134042) from Electrical and Computer Engineering Department of North South University, have worked on the Senior Design Project titled “Stock Market Price Forecasting Service using LSTM” under the supervision of Dr. Mohammad Monirujjaman Khan partial fulfillment of the requirement for the degree of Bachelors of Science in Engineering and has been accepted as satisfactory.

Supervisor’s Signature

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Dr. Mohammad Monirujjaman Khan

Assistant Professor

Department of Electrical Engineering & Computer Science
North South University

Dhaka, Bangladesh.

Chairman’s Signature

.....

Dr. K. M. A. Salam

Professor & Chairman

Department of Electrical Engineering & Computer Science
North South University

Dhaka, Bangladesh.

DECLARATION

This is to certify that this Project is our original work. No part of this work has been submitted elsewhere partially or fully for the award of any other degree or diploma. Any material reproduced in this project has been properly acknowledged.

Student's Names & Signatures

1. Md. Mahabubul Hasan

2. Pritom Roy

3. Sabbir Sarker

ACKNOWLEDGEMENT

By kindness of the Almighty we have successfully completed our senior design project entitled **“Stock Market Price Forecasting Service using LSTM”**

Our deep gratitude goes first to my faculty advisor Dr. Mohammad Monirujjaman Khan, who expertly guided us in our senior design project throughout the whole CSE499A and CSE499B. His guidance helped us in all type of research, writings and completing the project.

Our sincere thanks go to North South University, Dhaka, Bangladesh for giving us such a platform where we can have an industrial level experience as a part of our academics.

Last but not the least, we would like to thank our family as their inspiration and guidance kept us focused and motivated.

Abstract

In recent years we've seen in Bangladesh that the Stock market is not stable at all. In 2011 Stocks continued to tumble amid jitters over banks' liquidity crisis. After starting the day at 5,710, DSEX, the benchmark index of the Dhaka Stock Exchange, plunged to below 5,700 points in less than half an hour. Eventually, it lost 81.92 points to close the day at 5,623.64. People invest a lot in stock market. Many people just lost their hard-earned money in a blink of an eye because of investing at the wrong place. But we've seen the vice versa situation from the stock market as well. Stockify comes in play here. Stockify is dedicated to show accurate predicated prices of market shares. 70% accuracy have been achieved via training the algorithm Using LSTM which is an artificial neural network. Deep learning algorithm library TensorFlow have been implemented to show us predicted price using the closing prices of a day. Currently we are providing free service via our website and application. It would be on subscription based when the site will be more enriched in a business level. Thus, we hope to help people to make a profit in stock market and upraise the stock market of Bangladesh.