



INFORMATICS  
INSTITUTE OF  
TECHNOLOGY

INFORMATICS INSTITUTE OF TECHNOLOGY

In collaboration with

UNIVERSITY OF WESTMINSTER

## **EMOSUIDE**

### **Social Media Text-Based Emotion and Suicidal Prediction System**

A dissertation by

Mr. P.C. Rakitha Nonis

Supervised by

Mrs. Aloka Fernando

Submitted in partial fulfillment of the requirements for the BEng (Hons) in Software  
Engineering degree at the University of Westminster.

**July 11<sup>th</sup>, 2022**

## **Abstract**

People today are much busier as a result of financial and social pressures, career responsibilities, and personal situations such as relationship issues. As a result of the improvement of modern technologies, people are used to engaging with social media platforms such as Facebook, Twitter, Instagram, and WhatsApp. During the pandemic situation in the world, people were advised to limit their physical contact with people. So, as a result, the user behavior of social media platforms rapidly increased. Via social media platforms, people share their emotions by dropping a message to someone, adding a comment to a post, posting an article or post on their social media accounts, etc. as the good part of this. In addition to that, people tend to convey their feelings and emotions when they are not at a good mental level. Some people, especially those who are under uncontrollable pressure, decide to commit suicide. This can be seen especially in the younger generations nowadays. Therefore, the author decided to do research on this specific area and develop a system to predict the emotion category and the suicidal probability by using a given social media text by using NLP (Natural Language Processing). The values of each result will be displayed on the screen so the person who enters the inputs can see the result with justification.

The key information-gathering approach for the research requirements was a questionnaire. It was used to gather requirements from the targeted audience. Also, the literature review of past research as well as the self-evaluations were done with the respective experts to gather the information related to the research area.

The author concluded that various systems have been developed for emotion predictions in the past after studying the results of the literature review. By considering the online questionnaire results, the author got to know that most people use social media platforms nowadays and they often use them to convey their emotions and feelings.

**Subject Descriptors:** Natural Language Processing (NLP)

**Key Words:** Text Classification, Support Vector Machine (SVM), Emotion and suicide detection