CYBERBULLYING TEXT CLASSIFICATION USING DEEP LEARNING

Wathma Rathnayake Mudiyanselage

A dissertation submitted in partial fulfilment of the requirement for Master of Science degree in Big Data Analytics

> Department of Computing Informatics Institute of Technology, Sri Lanka in collaboration with Robert Gordon University, UK

> > 2022

Abstract

Contributing to make the world a better place has always been one of my goals in life. As a researcher I explored my ways into machine learning and tried to find how I can identify harmful text content prior before releasing it to the outer world.

In this research I performed text classification on tweets shared on twitter and performed machine learning algorithms like CNN and LSTM to classify them and introduced a third-party API to get the prediction that can be integrated into any system

Key words : Text Classification, LSTM, CNN , Deep learning, Twitter

Acknowledgements

Throughout the past year I have been working on this research continuously. I would like to take this moment to thank my supervisor Mr. Saman Hettiarachchi for guiding me throughout the research and pushing me to always do the best.

I would like to thank Mr. Cassim Farook, the course leader of my degree program for keeping the communication with us continuously and reaching as soon as possible when we needed anything to clarify.

I cannot thank enough the well-known authors who published their work and the readers who used that information. It helped me a lot to learn lot of things throughout the pass year.

The data set I used for my research was a prepared by (Wang, Fu and Lu, 2020). I would like to thank them for creating such a well-balanced dataset.

I would like to thank people who participated in my online survey. Their honest answers contributed significant amount to my research.

I would also like to thank the professionals who provided critical evaluations despite their busy schedules.

In the spirit of full disclosure, I would like to thank my colleagues and my partner and my family for helping me to complete the research successfully.