NARASARAOPETA ENGINEERING COLLEGE (AUTONOMOUS)

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

2024-2025

Batch Number	BG1
Team Members	K.Jahnavi Sai Priya (21471A0591) V.Bala Harshitha (21471A05D6) B.Lakshmi Varsha (21471A0577) S.Kavya (21471A05C9)
Guide	Shaik Rafi M.Tech
Title	Multimodal Cyber Bullying Detection Using Deep Learning Techniques
Domain/Technology	DEEP LEARNING
Base Paper Link	https://doi.org/10.1145/3477495.3531925
Dataset Link	https://github.com/Jhaprince/MultiBully?tab=readme-ov-file#dataset
Software Requirements	Browser: Any latest browser like Chrome Operating System: Windows 11 Python (COLAB) Flask(Spyder)
Hardware Requirements	System Type: Intel Core i5 or above RAM: 8 GB Number of cores:5 Number of Threads: 4
Abstract	Cyberbullying detection is the process of classifying and recognizing cyberbullying activity, which includes using technology to harass or threaten people usually via online platforms. In order to address this, we examined a publicly available dataset that was classified as bully or non-bully according to text, image and image-text. We next proposed applying a deep learning model to recognize cyberbullying based on multimodal data. The VGG16 pre-trained model detects bullying in photos, while the XLM-RoBERTa with BiGRU model detects bullying in text. By combining these models (VGG16 + XLM-RoBERTa and BiGRU) with attention processes, CLIP, feedback mechanisms, CentralNet and other tools, we created a model for detecting cyberbullying in imagetext based memes. Our final model showed that the algorithm is able to identify most cyberbullying occurrences with a decent accuracy of 74%.

Signature of the student(s) **Signature of the Guide** **Signature of the project coordinator**