National Institute of Technology Rourkela

Defence Seminar

Seminar Title	: Diagnosis of Major Depressive Disorder from Text
Speaker	: Vankayala Tejaswini (Rollno : 520cs6005)
Supervisor	: Bibhudatta Sahoo
Venue	: Convention Hall (CS-208), CSE Department,
Date and Time	: 28 Jul 2025 (11.30AM)
Abstract	: Major Depressive Disorder (MDD) is a critical mental health condition affecting millions worldwide, often going undiagnosed due to stigma, cost, and delayed intervention. This research proposes innovative computational methods to detect and analyse depression through textual data from digital platforms. Leveraging Natural Language Processing (NLP) and Deep Learning, the thesis introduces four major contributions: (i) a FastText-CNN-LSTM (FCL) model to classify depression from social media text, (ii) a BERT with Modified CNN (BMC) framework for chatbot-based depression level detection using PHQ-9, (iii) a Speech Enhancement-based Conversational Agent (SECAD) to address verbal expression limitations in speech-to-text depression analysis, and (iv) a Hybrid DistilBERT-CNN (HDC) model for classifying MDD symptoms based on DSM-5 criteria. The work demonstrates significant improvements over existing techniques and provides a cost-effective, accessible solution for early MDD diagnosis.