Rajeev Gandhi Memorial College of Engineering & Technology
(Autonomous)
Nandyal-518501, Andhra Pradesh. India
Department of Computer Science & Engineering (DATA SCIENCE)

ABSTRACT

Title of the Project: Real-Time Feedback for Teachers using Speech Emotion

Detection in Classroom Teaching

Domain: Deep Learning

Abstract:

Traditional classroom teaching methods, where real-time understanding of students emotional states is often missing. Teachers struggle to gauge student engagement based on limited visual cues, hindering effective interaction. The project leverages Speech Emotion Detection (SED) to provide immediate emotional feedback during lectures. Using advanced audio processing and machine learning, emotional insights are extracted from speech features like MFCCs, chroma features, and spectral contrast. A real-time feedback system is developed that captures students' audio responses and classifies emotions such as happiness, boredom, and confusion. A dynamic dashboard visualizes aggregated emotional data, helping teachers adjust teaching strategies. The project tackles challenges such as noise, data privacy, and linguistic diversity. It aims to create a more engaging, inclusive, and responsive learning environment. By integrating SED, it empowers educators to make data-driven decisions and improve learning outcomes. The system ultimately enhances the teaching-learning experience for both students and teachers.

Supervisor:

Dr. P. KIRAN RAO, M. Tech., Ph.D.

Assistant Professor

Department of CSE(DS)

Co-Supervisor

Ms. A. ANNAPURNA M. Tech, (Ph.D.)

Assistant Professor

Department of CSE(DS)

Project Team:

JAKKA BHAVYA SREE (21091A3210)

DASARI SREEVANI (21091A3250)

OWK SIVABHAVANI (21091A3247)

Signature of Co-Supervisor   **Signature of Supervisor**   **Signature of HOD**