University of Messina, Italy
Department of Mathematical and Computer Sciences,
Physical Sciences and Earth Sciences

Subject: Internship Proposal

ID	PTI_EN_Amadeo Marica_05/03/2026 19.26.48
Data	05/03/2026 19.26.48

Project Supervisor

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Project details

Title	Affective Computing: Speech and Facial Emotion Recognition Systems

Detailed description: The aim of this internship is to study centralized distributed machine learning techniques for emotion recognition within the framework of Affective Computing. The internship will consider two main research directions:

1. Speech Emotion Recognition (SER)

Students will implement and test baseline machine learning models for emotion classification from speech signals. The work will include feature extraction, dataset preprocessing, model training, and performance evaluation.

2. Facial Emotion Recognition (FER)

Students will conduct a feasibility analysis of facial emotion recognition systems. The activity will include literature review, analysis of publicly available datasets, study of convolutional neural network architectures, and evaluation of computational requirements. Pre-trained models could be tested without full training from scratch.

The internship activities will therefore include:

- Literature review on Affective Computing
- Dataset analysis for SER and FER
- Implementation and testing of baseline ML models (primarily for speech emotion recognition)
- Feasibility study and comparative analysis of facial emotion recognition approaches
- Performance evaluation and final report

Duration (month – max 12)	6

Duration (hours)	150
Open positions	2

Internship Skills

Technical requirements: • Basic knowledge of Python programming • Basic knowledge of Machine Learning	
Other skills	• Interest in Artificial Intelligence and Human-Computer Interaction • Ability to work autonomously • Teamwork skills