

MASTER'S THESIS:

## Multi-Modal Depression Detection Based on Visual, Physiological, and Psychological Cues

### Background:

This thesis explores the use of multiple visual, physiological, and psychological signals for detecting depression in individuals. In this study, we would like to investigate the feasibility and effectiveness of using a combination of facial action units, eye gaze, head pose, posture, electromyography (EMG), electrocardiography (ECG), electrodermal activity (EDA), respiration, and heart sound to detect depression.

The thesis presents a novel approach to depression detection, using multiple modalities to capture a more comprehensive and objective view of an individual's emotional state. The findings of the thesis contribute to the growing body of research on depression detection, providing insights into the potential of multi-modal approaches for improving the accuracy and reliability of depression diagnosis. It aims to represent a significant contribution to the field of mental health, with potential implications for improving the early detection and treatment of depression.

### Tasks:

- Performing literature research
- Helping in the Data collection (the study is already designed, and the data collection has been started)
- Evaluating recorded data and writing the thesis

### Requirements:

- Language skills: English
- Interest in mental health and detection of depression
- Familiarity with machine learning, computer vision, and data analysis techniques
- Proficiency in Python
- Good communication and writing skills
- Ability to work independently and as part of a team

In case you are interested, please send your CV, your transcript of records and 2-3 sentences about your motivation to:

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