



INFORMATICS  
INSTITUTE OF  
TECHNOLOGY

INFORMATICS INSTITUTE OF TECHNOLOGY

In Collaboration with

UNIVERSITY OF WESTMINSTER

**Depression Analysis Through  
Facial and Vocal Expressions**

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Submitted in partial fulfilment of the requirements for the BEng in Software  
Engineering degree at the University of Westminster.

**July 2022**

## **Abstract**

Major Depressive Disorder is a mood illness that affects how you behave, think and feel with the behavioural change of a person. In Sri Lanka, nearly 7% of adults are diagnosed with depression every year. A person can diagnose with depression at any time and it can lead to improper behaviour or performance in their life. Sometimes it might lead them to take their own life. Traditionally it is diagnosed by interviewing the person with Beck Depression Inventory, Beck Hopelessness Scale, Patient Health Questionnaire. These methods are difficult and time consuming. Also, it requires full support from the patient.

In this paper an automatic early depression identification using machine learning is proposed using facial and vocal expressions. This will increase the quality of treatment and reduce the impact on patients' real life.

**Keywords:** Depression, Major Depressive Disorder, Clinical Interview, Machine Learning, Audio Modal, Video Modal