

Programski paket

A framework of Multimodal Risk Assessment And Symptom Tracking: MRAST Framework

Key software components:

- Language Feature Extractors (integrating STANZA, NLTK)
- Audio Feature Extractors (integrating OpenSmile, COVAREP)
- Facial Feature Extraction (integrating OpenFace, Deep Face)
- DepressionAI framework (SVM, RF and LSTM based pre-trained models)

Verzija:

1.0

Leto zasnove:

Feb 2022

Avtorji

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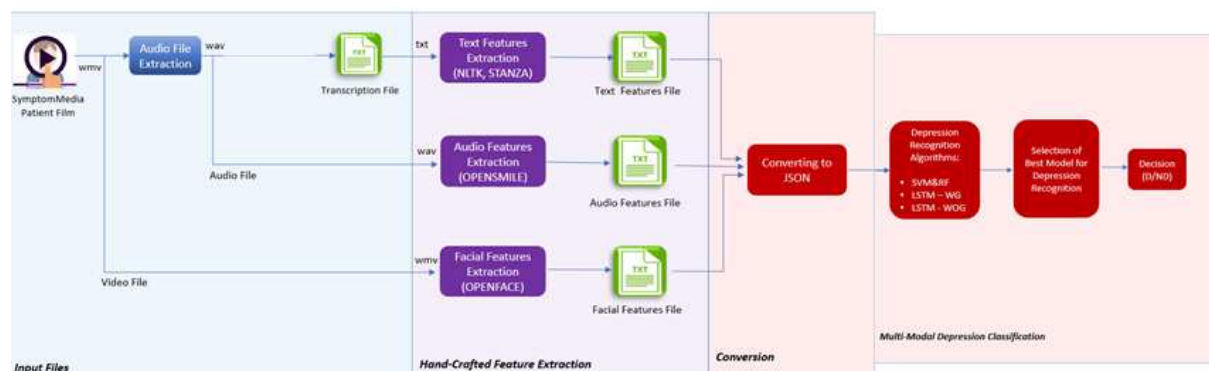
Raziskovalni projekt

H2020 PERSIST

Raziskovalna skupina

Inštitut za elektroniko in telekomunikacije

Short description:



Design and Architecture of the MRAST Framework

The MRAST framework is built on top of the cutting edge AI algorithms and machine learning models for feature extraction. The final structure of the MRAST framework is given in the figure above. The goal of the framework is to extract observable biomarkers of depression from patient diaries and risk asses individuals against depression. It is build on top of PERSIST Sensing network. The process is starting after inserting a video as an input. A transcription file is attached. The extracted

audio file is used for audio feature extraction. The process ends with a COVAREP file that includes all audio features. OpenFace library is used for facial features extraction directly from the patient video file. And, library gives 5 files for different features (action units on face, facial landmarks in 2D and 3D, head pose and eye gaze). An the NLTK and Stanza libraries are used for text feature extraction. All feature files are fed into state of the art machine learning algorithms (SVM, RF, LSTM with Gating and LSTM without Gating) for depression classification.