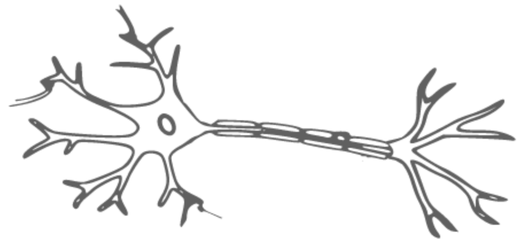
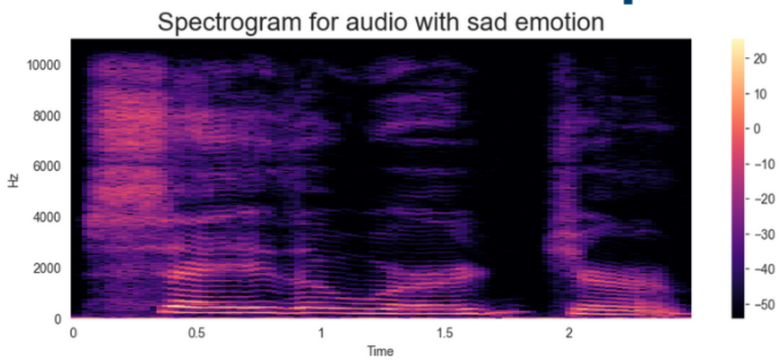
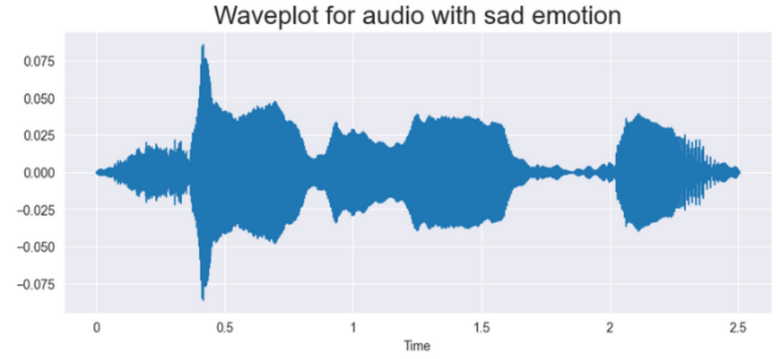
Speech Emotion Recognition using Recurrent Neural Networks

Bledea Mihaela Alexandra

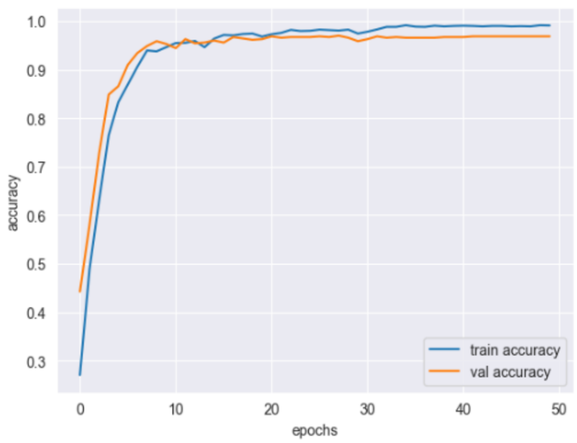


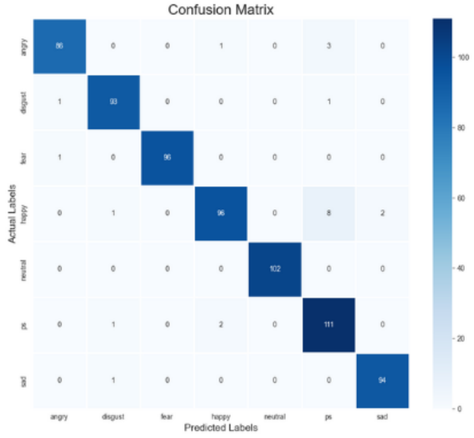
Representation

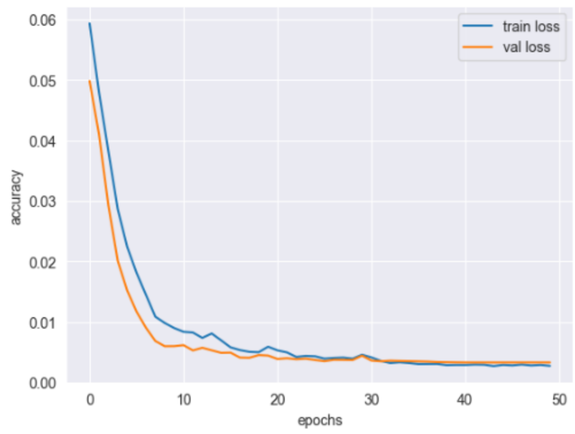




Evaluation







Code availability

A TensorFlow and Keras Implementation for Speech Emotion Recognition available on github: https://github.com/AlexandraBledea/Sem5-Computer-Vision-And-Deep-Learning

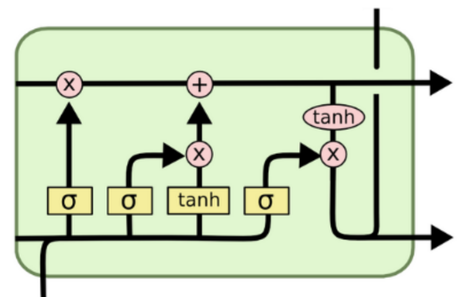
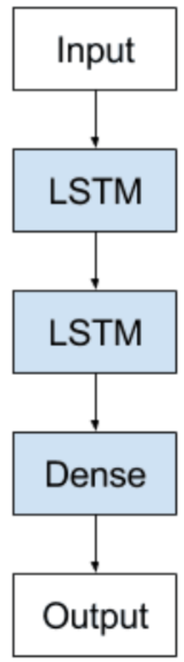
Motivation

Speech Emotion Recognition can be found in applications for:

- Healthcare
- Gaming Experience Improvement
- Stress monitoring
- Marketing

In the future, it may provide a device with a personal assistant which is not only able to understand the emotions of its owner, but to respond to them with the same empathy and compassion

Proposed model

The proposed model is a stacked Long Short Term Memory Network and has the following layout:

- Long Short Term Memory layer of 128 units that outputs an array of hidden states for the subsequent layer
- Long Short Term Memory layer of 128 units
- Fully Connected layer of 32 units and Rectified Linear Unit (ReLU) as activation function
- Dropout layer of 0.2 chance
- Fully Connected Final layer of output size 7 and Soft-Max as activation function