ABSTRACT

Bachelor thesis, volume 1: 93 p., 3 tabl., 15 fig., 1 append., 35 sources.

NEURAL NETWORKS, CONVOLUTIONAL NEURAL NETWORKS, VIDEO EMOTION CLASSIFICATION, AUDIO EMOTION CLASSIFICATION, VIDEO PROCESSING, AUDIO PROCESSING, MULTICLASSIFICATION

This work consists from 3 volumes: volume 1 - topicality of the work, overview of neural networks and ensembling methods basics, volume 2 - overview of methods for working with video and model creation for emotion classification, volume 3 - overview of methods for working with audio and model creation for emotion classification.

In this work methods for working with video and audio were overviewed, deep learning models for human emotion classification were studied and implemented, their accuracy was validated on publicly available dataset, also demo version of the program was created which provides ability to test models on real-world data.

Built models could be used for getting additional information for market research and for recommender systems, for continuous psychological diagnostic, wich would help prevent mental illnesses, or for voice interfaces improvement.