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Comparison of different convolution neural network architectures for the solution of the problem of emotion recognition by facial expression

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In this paper the usage of convolution neural networks considers for solving the problem of emotion recognition by face expression images. Emotion recognition is a complex task and the result of recognition is highly dependent on the choice of the neural network architecture. In this paper various architectures of convolutional neural networks were reviewed and there were selected the most prospective architectures. The training experiments were conducted on selected neural networks. The proposed neural network architectures were trained on the AffectNet dataset, widely used for emotion recognition experiments. A comparison of the proposed neural network architectures was made using the following metrics: accuracy, precision, recall and training speed. At the end of this paper the comparative analysis was made and obtained results were overviewed.

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