

## **ABSTRACT**

*Emotional expression is an effort made by someone to communicate the status of feelings or emotions in response to certain situations both internal and external as seen from biological changes, physiological and a series of actions like attitudes and behaviors oriented toward goal-oriented. Although humans can recognize expressions very well, facial recognition research is continuing to improve the quality of expression recognition in human and computer interactions.*

*In this study discusses the detection of human facial expressions using the Convolution Neural Network (CNN) method with the Indonesian Mixed Emotion Dataset (IMED), in this algorithm there are two methods in a series namely convolution as feature extraction and neural network as classification. To facilitate the extraction of features, the researcher does preprocessing. The preprocessing stage is face detection, cropping, resizing and grayscaling.*

*To overcome overfitting, in this study, data augmentation was performed on training data and also test data. The results of experiments in this study that the Convolution Neural Network (CNN) algorithm can recognize human facial expressions with an accuracy rate of 93.63% of the 110 expressions tested.*

**Keywords:** *human face expression, CNN, IMED*