ABSTRACT

CLASSIFICATION OF CAT SOUNDS USING CONVOLUTIONAL NEURAL NETWORK (CNN) AND LONG SHORT-TERM MEMORY (LSTM) METHODS

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Cats become pets who are very close to humans, and they convey messages by producing identical sounds. Therefore, analysis of pet voices is important for a better relationship between cats. Animal communication through sound, especially in cats, depends on the situation or context in which the sound is made such as in a state of danger. Based on these problems, a classification method is needed to classify the similarity of characteristics in the resulting sound pattern. The classification methods used are Convolutional Neural Network (CNN) and Long Short-Term Memory (LSTM) which can remember information for a long time and are used for a long time period. This study aimed to determine feelings or moods based on the sound produced into 4 categories: The Purr, The Meow, The Mating Call, and The Growl. The result of this study is that the best architectural model is to use 4 CNN convolution layers measuring 8-8-8-8 and 2 LSTM layers measuring 8-8 with an accuracy of 56.25%.

***Keywords** : CNN, Cat, LSTM, Voice*