

## **A DESIGN OF A SOUND BASED CHICKEN TYPE CLASSIFICATION SYSTEM USING COVOLUTIONAL NEURAL NETWORK METHOD**

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### **ABSTRACT**

This study aims to design and develop a chicken sound classification system using the Convolutional Neural Network (CNN) method. Chickens are essential animals in agriculture and conservation, and sound recognition of chickens can aid in monitoring chicken populations and efficiently identifying different chicken species.

In the initial stage of the research, chicken sound data were collected by recording three types of chicken sounds from various species, namely Bangkok chicken, Pelung chicken, and Laughter chicken. The chicken sound data were then processed and organized into a dataset representing the characteristic variations in sound for each chicken type. Data preprocessing was also conducted to eliminate noise and optimize data quality.

The Convolutional Neural Network (CNN) method was chosen due to its ability to process spatially structured data like images or sounds. The CNN model was implemented and trained using the training data to learn distinct sound patterns from each chicken type.

The evaluation results demonstrated that the chicken sound classification system using the CNN method achieved satisfactory accuracy in identifying different chicken species. This highlights the potential application of sound recognition technology for monitoring chicken populations, detecting behavioral changes, and conserving chicken species.

**Keywords:** Chicken Sound Classification, Convolutional Neural Network, Sound Preprocessing.

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