

Machine Learning Based Data Monitoring System for Chicken Poultry

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Abstract

Livestock is one of the production sectors that can produce many resources for human needs such as meat, egg, milk, leather, wool, and fur. Farmer must ensure that all farm animals are in good condition to achieve optimum level of production. The welfare of livestock can be determined by observing and analyzing the animal's health and behaviour. The livestock that has a symptom of being sick leads to a low level of production compared to good animal welfare. In the case of chicken poultry, a low nutrient diet and inconsistent daylight may lead to decreased of laid eggs. As a result, the poultry are unable to produce the desired amount of egg to end consumer which trigger an issue in food security. The objective of this study is to evaluate chicken production based on its effectiveness by implementing machine learning. The level of chicken production is determined by using fuzzy logic as the machine learning platform based on the collected data. After the data were evaluated by fuzzy logic, the result of the system will indicate whether the chicken will produce a low, normal, or high level of production. By using this system, farm owners are able to predict whether the chickens on their farms are able to produce the desired quantity of chicken.

Keywords: Food security; Livestock; Production; Fuzzy logic; Machine learning.