IMPLEMENTING THE NAÏVE BAYES METHOD IN A CHICKEN FEED DEMAND PREDICTION SYSTEM BASED ON HISTORICAL SALES DATA (Case Study: CV. Felicia Yukent Pratama)

ANGGI MALINDA
Program Studi Informatika, Fakultas Sains & Teknologi
Universitas Teknologi Yogyakarta
Jl. Ringroad Utara Jombor Sleman Yogyakarta
E-mail : anggimalinda1811 @gmail.com

ABSTRACT

CV Felicia Yukent Pratama faces challenges managing chicken feed inventory because stock levels are currently determined subjectively, relying heavily on the owner's and employees' intuition. This approach poses operational risks such as overstocking, which increases storage costs, and stockouts, which can reduce customer satisfaction and sales opportunities. This study aims to implement the Naïve Bayes method within a web-based Decision Support System (DSS) to predict categories of chicken feed demand based on historical sales data. The system was developed using the Python programming language and the Flask framework, following a Waterfall model. The dataset comprised 42,896 sales transactions collected over one year. Test results demonstrate that the Naïve Bayes algorithm can classify demand with 99% accuracy and precision, recall, and F1-score values exceeding 97%. In addition to generating demand category predictions, the system provides measurable and actionable stock adjustment recommendations. Consequently, this system enables more accurate, structured data-driven decision-making in chicken feed inventory management.

Keywords: Decision Support System, Naïve Bayes, Demand Prediction, Historical Data, Stock Management.