

**Implementasi Data Mining untuk Prediksi Penjualan Produk Kerajinan
Prasegi Art dengan Algoritma C4.5** (*Implementation of Data Mining for
Predicting Sales of Prasegi Art Craft Products Using the C4.5 Algorithm*)

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ABSTRACT

Micro, Small, and Medium Enterprises (MSMEs) like Prasegi Art require data-driven strategies to identify best-selling products in order to improve sales effectiveness on e-commerce platforms. This study aims to design and implement a product popularity classification system for Prasegi Art's handicraft products using the C4.5 algorithm. The system development method used is the Waterfall model, which includes the stages of requirements analysis, design, implementation, and testing. This study utilizes historical transaction data aggregated to obtain the total sales of each product. The C4.5 model was built using three categorized input attributes: product category name, product type ('Standard' or 'Custom'), and price range ('Low', 'Medium', 'High'). The goal of this model is to classify products into one of three popularity classes: 'Not Popular' (total sales < 5 units), 'Moderately Popular' (total sales 5–20 units), or 'Highly Popular' (total sales > 20 units). The result of this study is a functional system built with Laravel that can automatically classify products, with the C4.5 model achieving an accuracy of 36.36% on test data. Although the model's performance is relatively low, the system provides a foundational step toward data-driven decision-making for production and marketing strategies based on historical sales data.

Keywords: *data mining, C4.5 algorithm, product classification, e-commerce, MSMEs, Prasegi Art, product popularity*