

ABSTRAK

Fluktuasi harga beras di pasar tradisional Sumedang berdampak signifikan terhadap konsumen, pedagang, dan pemerintah daerah, sehingga penelitian ini bertujuan untuk menganalisis dan memprediksi harga beras premium dan medium menggunakan metode regresi linear sederhana di empat pasar, yaitu Tanjungsari, Conggeang, Parakanmuncang, dan Darmaraja, dengan data harian periode 2022–2024 (159 sampel per pasar) dari Dinas Koperasi, Usaha Kecil Menengah, Perdagangan, dan Perindustrian Kabupaten Sumedang, yang diolah menjadi data mingguan, bulanan, dan tahunan melalui sistem berbasis web dengan pendekatan Web Engineering; hasilnya menunjukkan model regresi linear efektif dengan koefisien korelasi (R) rata-rata 0.725, koefisien determinasi (R^2) pada skenario training/testing 90/10 sebesar 54.22%–72.07%/65.23%–76.24%, 80/20 sebesar 53.80%–70.89%/58.75%–80.27%, dan 70/30 sebesar 52.51%–70.52%/59.68%–77.67%, serta MAPE training 4.03%–4.95% dan testing 2.87%–4.28% (akurasi rata-rata 95.81%–97.13%), didukung tingkat kepuasan pengguna 80.6% dari 36 responden, membuktikan bahwa metode ini menjadi solusi akurat untuk prediksi harga beras guna mendukung stabilitas harga di pasar tradisional Sumedang.

Kata kunci: Prediksi Harga, Beras, Pasar Tradisional, Regresi Linear, Web Engineering, MAPE, R^2

ABSTRACT

The fluctuation of rice prices in Sumedang's traditional markets significantly impacts consumers, traders, and local government, necessitating accurate price prediction systems. This study aims to analyze and predict premium and medium rice prices using simple linear regression in four markets—Tanjungsari, Conggeang, Parakanmuncang, and Darmaraja—utilizing daily price data from 2022–2024 (159 samples per market) sourced from the Sumedang Regency Department of Cooperatives, Small and Medium Enterprises, Trade, and Industry, processed into weekly, monthly, and yearly datasets through a web-based system developed using the Web Engineering approach. Results demonstrate the effectiveness of the linear regression model with an average correlation coefficient (R) of 0.725, coefficient of determination (R^2) for training/testing scenarios of 90/10 at 54.22%–72.07%/65.23%–76.24%, 80/20 at 53.80%–70.89%/58.75%–80.27%, and 70/30 at 52.51%–70.52%/59.68%–77.67%, with MAPE for training at 4.03%–4.95% and testing at 2.87%–4.28% (average accuracy of 95.81%–97.13%), supported by an 80.6% user satisfaction rate from 36 respondents, confirming that this method provides a reliable solution for rice price prediction to support price stability in Sumedang's traditional markets.

Keywords: Price Prediction, Rice, Traditional Market, Linear Regression, Web Engineering, MAPE, R^2