

ABSTRACT

Nine Basic Needs are a mandatory requirement for Indonesian which are the main commodity and are sold freely in markets to fulfill their daily needs. However, the change of the price of primer commodities often go up and down which will confuse the public and affect the availability of goods. Therefore, to assist the public in planning their purchases and government agencies in monitoring the prices of primer commodities, a website-based prediction application was designed which provides information on the prices of 11 primer commoditied such as onion, garlic, rice, large red chilies, curly red chilies, chili peppers. red cayenne, chicken meat, beef, sugar, cooking oil, and chicken eggs for the future. This research uses predictions with the Naiveforecaster, Trendforecaster, Polynomial, STLforecaster, Exponential smoothing, AutoETS algorithms which have been previously tested with the accuracy parameters of MSE, MAE and MAPE. From the results of the tests that have been carried out, the smallest prediction error value was obtained using the Naiveforecaster algorithm for onion is 0.122089, garlic is 0.179896, rice is 0.028071, large red chilies is 0.255736, curly red chilies is 0.297125, red cayenne peppers is 0.396734, chicken is 0.066840, beef is 0.081499, 0.032785 granulated sugar, 0.168132 cooking oil, and 0.097315 chicken eggs. This website-based application is made using the Software Development Life Cycle (SDLC) method with a waterfall model, The Naiveforecaster forecasting method, building models with the Python programming language, and display processing with the PHP programming language.

Keywords: Nine basic needs, Naiveforecaster, prediction, MSE, SDLC.