ABSTRACT

APPLICATION OF CONVOLUTIONAL NEURAL NETWORK ALGORITHM IN SENTIMENT ANALYSIS OF THE EFFECT OF BRAND IMAGE AND PRICE LABELS (ANALYSIS STUDY: SKINTIFIC SKINCARE PRODUCTS)

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There are various kinds of products included in cosmetic products, namely personal care, make up, fragrances including perfume, hair care and skincare. Skincare has become one of the primary needs for women in Indonesia today, because skincare can maintain healthy skin. Skincare is a beauty product used by users to clean dirt on the face. In deciding to choose a skincare product, of course consumers are influenced by various factors such as skincare quality, brand image and price. Apart from that, reviews of skincare products are also important as cosmetic companies' efforts to attract consumer buying interest. One method in deep learning for analysis is Convolutional Neural Network (CNN). Sentiment analysis is carried out as an effort to evaluate and determine consumer satisfaction with skincare products and as a means of improving service. This research uses the CNN-LSTM method where this model has several stages such as data scraping, data preprocessing which consists of data cleansing & case folding, stemming, tokenizing, filtering (stopword removal), labeling process, modeling, and model evaluation. In this study, 2 models were used with different losses. Model 1 uses binary crossentropy while model 2 uses categorical crossentropy. The highest accuracy results were in model 1 with the resulting accuracy value being 97%.

Keywords: Analysis, Algorithm, Brand Image, CNN, Sentiment, Skincare.