

## ABSTRAK

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### **ANALISIS SENTIMEN TERHADAP *PAYLATER* MENGGUNAKAN METODE *K-NEAREST NEIGHBOR* (KNN) PADA MEDIA SOSIAL X**

(xv + 66 halaman: 36 gambar, 5 tabel; 12 lampiran)

Layanan *paylater* dengan gagasan “beli sekarang bayar nanti”, semakin populer di Indonesia karena kepraktisannya dalam melakukan transaksi. Namun, peningkatan penggunaannya menimbulkan kekhawatiran terkait perilaku impulsif dalam berbelanja. Untuk memberikan gambaran lebih lanjut, penelitian ini mengklasifikasikan sentimen masyarakat terhadap *paylater* menggunakan algoritma *K-Nearest Neighbor* (KNN) pada media sosial X. Data dikumpulkan dari media sosial X melalui *data crawling* dengan kata kunci “*paylater*” dari 1 Januari 2024 hingga 31 Agustus 2024, menghasilkan 17.366 data. Setelah data melalui tahapan *pre-processing* yang meliputi *case folding*, *normalization*, *tokenizing*, *stop-word removal*, dan *stemming*, data diolah menggunakan metode TF-IDF dan data dibagi menjadi 80% *data training* dan 20% *data testing*. Untuk menangani ketidakseimbangan kelas, digunakan juga metode SMOTE. Hasil penelitian menunjukkan bahwa model KNN dengan nilai  $k = 2$  memberikan akurasi tertinggi sebesar 91,28%, dengan *precision* sebesar 95%, *recall* sebesar 94%, dan *f1-score* sebesar 95% pada kelas negatif. Sementara pada kelas positif, diperoleh *precision* sebesar 76%, *recall* sebesar 79%, dan *f1-score* sebesar 77%. Penelitian ini juga menunjukkan kecenderungan sentimen masyarakat yang negatif terhadap layanan *paylater*, dengan persentase sentimen negatif mencapai 84,5% dan positif sebesar 15,5%.

Referensi: 74 (1959-2024)

Kata Kunci: *Paylater*, Analisis Sentimen, *K-Nearest Neighbor*, KNN, Media Sosial X, TF-IDF, SMOTE

## **ABSTRACT**

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### ***SENTIMENT ANALYSIS OF PAYLATER USING THE K-NEAREST NEIGHBOR (KNN) METHOD ON SOCIAL MEDIA X***

*(xv + 66 pages: 36 pictures, 5 tables; 12 attachments)*

*The paylater service, with the concept of “buy now, pay later”, has become increasingly popular in Indonesia due to its convenience in facilitating transactions. However, the rise in its usage raises concerns regarding impulsive shopping behavior. Based on this issue, this study aims to classify public sentiment toward paylater using the K-Nearest Neighbor (KNN) algorithm on social media X. Data was collected from social media X through data crawling with the keyword “paylater” from January 1 2024 to August 31 2024, resulting in 17,366 data. After pre-processing steps, including case folding, normalization, tokenizing, stop-word removal, and stemming, the data was processed using the TF-IDF method and split into 80% training data and 20% testing data. To address class imbalance, the SMOTE method was also applied. The study results show that the KNN model with  $k = 2$  achieved the highest accuracy of 91,28%, with a precision of 95%, recall of 94%, and an f1-score of 95% for the negative class. For the positive class, precision was 76%, recall was 79%, and the f1-score was 77%. This study also shows a tendency for negative public sentiment towards paylater, with 84,5% negative and 15,5% positive sentiment.*

*References: 74 (1959-2024)*

*Keywords: Paylater, Sentiment Analysis, K-Nearest Neighbor, KNN, Social Media X, TF-IDF, SMOTE*