

ABSTRAK

Firdaussani, Ahmad. 2025. Analisis Sentimen Ulasan Pengguna Aplikasi Gojek Menggunakan Algoritma *Long Short – Term Memory* (LSTM). Tugas Akhir. Program Sarjana. Program Studi Teknik Informatika. Universitas Muhammadiyah Jember.

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Perkembangan era digital membawa dampak besar pada berbagai aspek kehidupan, termasuk transportasi berbasis aplikasi. Salah satu layanan populer di Indonesia adalah Gojek yang menawarkan fitur ojek online, pengiriman makanan, dan jasa kurir. Peningkatan pengguna smartphone mendorong semakin banyak masyarakat menggunakan Gojek, sehingga ulasan pelanggan perlu dianalisis untuk menjaga kualitas layanan dan daya saing. Analisis sentimen menjadi penting guna memahami opini pengguna agar perusahaan dapat merespons kebutuhan dengan tepat. Penelitian ini menerapkan algoritma *Long Short-Term Memory* (LSTM), varian *Recurrent Neural Network* (RNN) dengan *cell state* dan mekanisme *gate* (input, forget, output) yang mengatur aliran informasi. Struktur ini memungkinkan LSTM menyimpan informasi relevan serta membuang yang tidak penting, sehingga mampu menangkap pola jangka pendek maupun panjang pada teks ulasan. Dataset berupa ulasan Gojek periode 2021–2024 dianalisis dengan skenario split 70:30. Hasil pengujian menunjukkan LSTM mencapai akurasi 78%. Penerapan *Synthetic Minority Oversampling Technique* (SMOTE) efektif mengatasi ketidakseimbangan kelas dan meningkatkan f1-score tiap kelas (0: 0,73; 1: 0,75; 2: 0,85), khususnya pada kelas netral yang sebelumnya tidak terdeteksi. Dengan demikian, kombinasi LSTM dan SMOTE menghasilkan analisis sentimen yang lebih seimbang.

Kata Kunci : Transportasi Online, *Long Short-Term Memory*, Analisis Sentimen

ABSTRACT

Firdaussani, Ahmad. 2025. *Sentiment Analisis of User Reviews of the Gojek Application Using Algorithms Long Short – Term Memory*. Undergraduate Thesis. Undergraduate Program. Informatics Engineering Study Program. University of Muhammadiyah Jember.

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The development of the digital era has had a significant impact on various aspects of life, including app-based transportation. One popular service in Indonesia is Gojek, which offers online motorcycle taxis, food delivery, and courier services. The increase in smartphone users has driven more people to use Gojek, necessitating the analysis of customer reviews to maintain service quality and competitiveness. Sentiment analysis is crucial for understanding user opinions so that companies can respond appropriately to their needs. This study applies the Long Short-Term Memory (LSTM) algorithm, a variant of the Recurrent Neural Network (RNN) with cell states and a gate mechanism (input, forget, output) that regulates the flow of information. This structure allows the LSTM to retain relevant information and discard unimportant information, thus capturing both short-term and long-term patterns in review text. The dataset of Gojek reviews from 2021–2024 was analyzed using a 70:30 split scenario. Test results showed the LSTM achieved 78% accuracy. The application of the Synthetic Minority Oversampling Technique (SMOTE) effectively addresses class imbalance and improves the f1-score of each class (0: 0.73; 1: 0.75; 2: 0.85), especially for the previously undetected neutral class. Thus, the combination of LSTM and SMOTE produces a more balanced sentiment analysis.

Keywords: Online Transportation, Long Short Term – Memory, Sentiment Analysis