

## **ABSTRACT**

The tourism sector in Bandung Regency serves as a primary economic pillar, featuring diverse natural, cultural, and culinary attractions appealing to domestic and international tourists. Department of Culture and Tourism data shows tourist visits reached 7,044,300 in 2023. In the mid of tourist high dependence on Google Maps reviews as the main reference, the available information is often poorly organized with varying quality, creating difficulties for tourism managers in decision-making.

This research develops a machine learning-based sentiment analysis system that automatically collects and analyzes Google Maps reviews. The system implements three classification algorithms (Naive Bayes, SVM, and K-NN) with comprehensive preprocessing and TF-IDF method for feature extraction. The system features a Flask and Next.js web interface presenting sentiment distribution visualization and negative comment analysis.

Evaluation results show SVM model achieves best performance with 88% accuracy, followed by Naive Bayes (85%) and K-NN (67%). System testing on one example of review data at the Tangkuban Perahu tourist attraction resulted in a sentiment distribution of 74.3% positive, 17.1% negative, and 8.6% neutral from 474 reviews. This research proves sentiment analysis provides objective insights for tourism destination managers in understanding visitor perceptions and supporting decision-making to enhance tourism service quality in Bandung Regency.

**Keywords:** Analysis Sentiment, Google Maps, Machine Learning, Text Classification, Tourism