

**PEMANFAATAN *INDOBERT INTERMEDIATE LAYERS* UNTUK
ANALISIS SENTIMEN BERBASIS ASPEK TERHADAP ULASAN
WISATA CANDI BOROBUDUR DAN PRAMBANAN**

SKRIPSI



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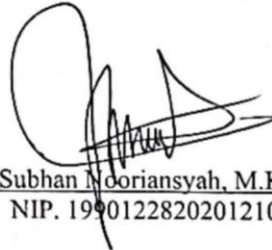
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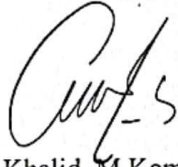
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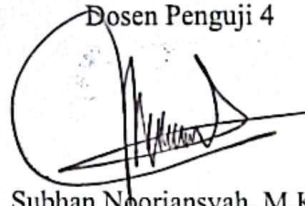
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ABSTRAK

PEMANFAATAN *INDOBERT INTERMEDIATE LAYERS* UNTUK ANALISIS SENTIMEN BERBASIS ASPEK TERHADAP ULASAN WISATA CANDI BOROBUDUR DAN PRAMBANAN

Oleh :

Yulia Eka Ananta

Candi Borobudur dan Prambanan merupakan destinasi strategis dalam pengembangan pariwisata Indonesia. Untuk memahami sentimen wisatawan terhadap aspek spesifik destinasi, penelitian ini menerapkan *Aspect-Based Sentiment Analysis* (ABSA) menggunakan IndoBERT-base dengan pemanfaatan *intermediate layers*. Fokus analisis meliputi enam aspek utama: aksesibilitas, amenitas, citra, daya tarik, harga, dan sumber daya manusia (SDM). Ekstraksi fitur dilakukan menggunakan teknik LSTM-Pooling dan Attention-Pooling, kemudian dievaluasi melalui *10-fold cross-validation*. Data ulasan berbahasa Indonesia diperoleh dari GitHub yang telah dianotasi melalui *crowdsourcing*. Hasil untuk analisis sentimen menunjukkan model IndoBERT-Attention unggul dengan akurasi rata-rata 0.9859, sedangkan IndoBERT-LSTM sebesar 0.9854 dan IndoBERT-Base sebesar 0.984. Sementara hasil untuk analisis klasifikasi aspek dalam F1-Score (%) sebagai pembandingan penelitian sebelumnya menunjukkan bahwa model IndoBERT-LSTM dapat memprediksi dengan baik, skor tertinggi pada aspek aksesibilitas sebesar 95.82%, harga sebesar 94.86 %, amenitas sebesar 94.01%, sdm sebesar 91.70%, daya tarik sebesar 85.26% dan Citra 84.14%. Temuan ini memberikan wawasan bagi pengelola wisata di Candi Borobudur dan Candi Prambanan serta memperkuat efektivitas IndoBERT dalam analisis sentimen berbahasa Indonesia.

Kata Kunci: *Aspect-Based Sentiment Analysis*, Candi Borobudur, Candi Prambanan, IndoBERT, pariwisata

ABSTRACT

UTILIZATION OF INDOBERT INTERMEDIATE LAYERS FOR ASPECT-BASED SENTIMENT ANALYSIS OF BOROBUDUR AND PRAMBANAN TEMPLE TOURISM REVIEWS

By:

Yulia Eka Ananta

Borobudur and Prambanan Temples are strategic destinations in the development of Indonesia's tourism sector. To understand tourists' sentiments toward specific aspects of these destinations, this study applies Aspect-Based Sentiment Analysis (ABSA) using IndoBERT-base with the utilization of intermediate layers. The analysis focuses on six main aspects: accessibility, amenities, image, attraction, price, and human resources. Feature extraction is performed using LSTM-Pooling and Attention-Pooling techniques and evaluated through 10-fold cross-validation. Indonesian-language review data were obtained from GitHub and annotated via crowdsourcing. The sentiment analysis results show that the IndoBERT-Attention model performs best with an average accuracy of 0.9859, followed by IndoBERT-LSTM at 0.9854 and IndoBERT-Base at 0.984. For aspect classification, based on F1-Score (%) and compared with previous studies, the IndoBERT-LSTM model demonstrates strong predictive capabilities, achieving the highest scores in accessibility (95.82%), price (94.86%), amenities (94.01%), human resources (91.70%), attraction (85.26%), and image (84.14%). These findings provide valuable insights for tourism managers at Borobudur and Prambanan Temples and further reinforce the effectiveness of IndoBERT for sentiment analysis in the Indonesian language.

Keywords: Aspect-Based Sentiment Analysis, Candi Borobudur, Candi Prambanan, IndoBERT, tourism

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