

## INTISARI

### **PERBANDINGAN MODEL TRANSFORMER (BERT DAN ROBERTA) PADA ANALISIS SENTIMEN**

(Studi Kasus : Ulasan Game Mobile Legends di Google Play Store)

Oleh

Saddam Ihsan Da'im  
20/462329/PA/20301

Di era yang berkembang pesat saat ini, internet telah menjadi bagian integral dari kehidupan manusia, secara signifikan mengubah aktivitas sehari-hari. Studi ini mengulas dampak teknologi, khususnya perkembangan internet, terhadap berbagai aspek kehidupan manusia, dengan fokus pada paradigma komunikasi dan hiburan. Secara khusus, penelitian ini mengeksplorasi analisis sentimen pengguna terkait game mobile populer "Mobile Legends" melalui ulasan di Google Play Store. Penelitian ini menggunakan dua model transformer, Bidirectional Encoder Representations from Transformers (BERT) dan A Robustly Optimized BERT Pretraining Approach (RoBERTa), untuk menilai kinerja klasifikasi sentimen. Hasil penelitian menunjukkan bahwa RoBERTa memiliki performa lebih baik dibandingkan BERT dalam tugas analisis sentimen. Didapat akurasi RoBERTa sebesar 83.7% sedangkan BERT sebesar 82.93%. Selain itu, proses pelatihan RoBERTa memerlukan waktu yang sedikit lebih lama dibandingkan dengan BERT.

**Kata kunci:** Mobile Legends, analisis sentimen, model transformer, BERT, RoBERTa

## ABSTRACT

### **COMPARISON OF TRANSFORMER MODELS (BERT AND ROBERTA) IN SENTIMENT ANALYSIS**

*(Case Study : Mobile Legends Game Review on Google Play Store)*

By

Saddam Ihsan Da'im  
20/462329/PA/20301

*In the rapidly evolving era, the internet has become an integral part of human life, significantly altering day-to-day activities. This study examines the impact of technology, particularly internet development, on various aspects of human life, focusing on the communication and entertainment paradigms. Specifically, this research explores user sentiment analysis related to the popular mobile game "Mobile Legends" through reviews on the Google Play Store. Two transformer models, Bidirectional Encoder Representations from Transformers (BERT) and A Robustly Optimized BERT Pretraining Approach (RoBERTa), are employed to assess sentiment classification performance. The research findings indicate that RoBERTa outperforms BERT in sentiment analysis tasks. RoBERTa achieved an accuracy of 83.7%, whereas BERT scored 82.93%. Additionally, the training process for RoBERTa requires slightly more time compared to BERT.*

**Keywords:** *Mobile Legends, sentiment analysis, transformer models, BERT, RoBERTa*