ASPECT BASED SENTIMENT ANALYSIS TERHADAP ULASAN *GAME* BUATAN *DEVELOPER* INDONESIA DI STEAM MENGGUNAKAN ALGORITMA *LOGISTIC REGRESSION*

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ABSTRAK

Industri *game* Indonesia berkembang pesat di *platform* Steam, namun *volume* ulasan yang besar menyulitkan pengembang untuk mengidentifikasi kekuatan dan kelemahan produk secara manual. Penelitian ini menerapkan *Aspect Based Sentiment Analysis* (ABSA) menggunakan algoritma *Logistic Regression* untuk menganalisis lima aspek utama: *Story, Gameplay, Graphics, Music,* dan *Performance*. Penelitian ini mengumpulkan 3.046 ulasan mentah dari lima *game* lokal populer yang kemudian diekstraksi menjadi 7.175 pasangan aspek-opini melalui proses ABSA. Setelah melalui tahap pelabelan, diperoleh 5.770 data *valid* yang terdiri dari 3.671 sentimen positif dan 2.099 sentimen negatif. sementara 1.405 data lainnya dikategorikan sebagai *non-labeled* (NaN) karena tidak memenuhi kriteria sentimen yang jelas. Hasil pengujian terhadap 1.731 data uji menunjukkan bahwa model *Logistic Regression* tanpa penyeimbangan kelas menghasilkan performa yang solid dengan tingkat akurasi sebesar 84,17%. Model ini sangat efektif dalam mengenali sentimen positif dengan nilai *Recall* Positif mencapai 92,73%, namun menghadapi tantangan pada kelas minoritas dengan *Recall* Negatif sebesar 69,21%. Analisis sentimen per aspek mengungkapkan kekuatan utama *game* lokal pada aspek *Graphics* (77,4% positif), *Music* (74,7% positif), dan *Story* (71,7% positif). Sebaliknya, aspek *Performance* menjadi titik lemah utama dengan dominasi sentimen negatif sebesar 63,4% terkait kendala teknis seperti *bug* dan optimasi. Temuan ini memberikan wawasan strategis bagi pengembang untuk memprioritaskan perbaikan kinerja teknis guna meningkatkan daya saing produk di pasar global.

Kata Kunci: Analisis Sentimen*, Aspect Based Sentiment Analysis (ABSA), Game Indonesia, Logistic Regression,* Steam.

ASPECT BASED SENTIMENT ANALYSIS OF REVIEWS OF GAMES MADE BY INDONESIAN DEVELOPERS ON STEAM USING LOGISTIC REGRESSION ALGORITHM

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ABSTRACT

The Indonesian gaming industry is thriving on the Steam platform, but the large volume of reviews makes it difficult for developers to manually identify the product's strengths and weaknesses. This study applied Aspect Based Sentiment Analysis (ABSA) using the Logistic Regression algorithm to analyze five main aspects: Story, Gameplay, Graphics, Music, and Performance. The study collected 3,046 raw reviews from five popular local games which were then extracted into 7,175 opinion-aspect pairs through the ABSA process. After going through the labeling stage, 5,770 valid data were obtained consisting of 3,671 positive sentiments and 2,099 negative sentiments, while the other 1,405 data were categorized as non-labeled (NaN) because they did not meet clear sentiment criteria. The test results of 1,731 test data showed that the Logistic Regression model without class balancing produced solid performance with an accuracy rate of 84.17%. This model is very effective in recognizing positive sentiment with a Positive Recall value of 92.73%, but faces challenges in the minority class with a Negative Recall of 69.21%. Sentiment analysis per aspect revealed the main strengths of local games in the aspects of Graphics (77.4% positive), Music (74.7% positive), and Story (71.7% positive). On the other hand, the Performance aspect was the main weak point with the dominance of negative sentiment at 63.4% due to technical obstacles such as bugs and optimization. These findings provide strategic insights for developers to prioritize improvements in technical performance to improve product competitiveness in the global market.

Keywords: *Aspect Based Sentiment Analysis (ABSA), Indonesian Games, Logistic Regression, Sentiment Analysis, Steam*