

BAB V

SIMPULAN DAN SARAN

5.1 Simpulan

Berdasarkan hasil yang telah dipaparkan dapat disimpulkan beberapa poin simpulan, yaitu:

- a. Penelitian ini menggunakan dua jenis model kombinasi *Recurrent Neural Network* yaitu *CNN-BiLSTM* dan *LSTM-2BiGRU* serta menerapkan *Attention mechanism* pada kedua model sebagai perbandingan. Hasil eksperimen menunjukkan bahwa model *LSTM-2BiGRU* dengan *Attention mechanism* memiliki kinerja yang lebih baik dibandingkan dengan model lainnya. Penerapan *attention mechanism* terbukti dapat meningkatkan akurasi model dengan mengambil informasi penting selama pelatihan untuk digunakan dalam membuat prediksi emosi. Secara keseluruhan, akurasi model *LSTM-2BiGRU* meningkat sebesar 4% dari 79% menjadi 83%.
- b. Model *LSTM-2BiGRU Attention* mencapai akurasi terbaik pada *fold* kelima menggunakan metode *5-fold Cross Validation* dengan akurasi model mencapai 83%. Hasil evaluasi *f-1 score* untuk masing-masing kelas *anger*, *happy*, dan *sadness* sebesar 83%, 84%, dan 81%. Hal ini mengindikasikan model memiliki kemampuan yang seimbang dalam memprediksi kelas emosi secara akurat. Selain itu, nilai *AUC* untuk masing-masing kelas *anger*, *happy*, dan *sadness* sebesar 0.95, 0.95 dan 0.94 mengindikasikan model dapat membedakan antara kelas positif dan negatif sangat baik dalam klasifikasi emosi.
- c. Hasil *blackbox testing* menunjukkan bahwa website berfungsi dengan baik dapat memprediksi emosi yang terkandung dalam lagu secara tepat dan *real-time* berdasarkan *input* berupa judul lagu dan nama *artist*.

5.2 Saran

Berdasarkan pembahasan yang telah dipaparkan terdapat beberapa saran yang dapat diterapkan untuk penelitian selanjutnya, yaitu:

- a. Penggunaan fitur audio atau multimodal fusion untuk meningkatkan performa akurasi model
- b. Pelatihan data dengan menggunakan jumlah data yang lebih besar akan membuat model mempelajari lebih banyak informasi sehingga performa model dapat meningkat
- c. Penggunaan pre-trained word embeddings lainnya atau pre-trained model yang dikombinasikan dengan model *deep learning* lainnya
- d. Pengembangan model klasifikasi dengan menggunakan multilabel kelas emosi yang lebih banyak sehingga penelitian pengambilan informasi musik dapat mengeksplorasi jenis-jenis emosi lainnya.

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Judul Skripsi : PENINGKATAN KLASIFIKASI EMOSI LIRIK BERDASARKAN
KOMBINASI RECURRENT NEURAL NETWORK DENGAN
ATTENTION MECHANISM

Tanggal	Catatan	Paraf
2024-03-29	Konsultasi judul dan latar belakang	
2024-04-05	Revisi bab 1 latar belakang	
2024-04-12	Acc bab 1 dan pengajuan bab 2	
2024-04-19	Revisi bab 2 tambahkan teori dan literature review	
2024-04-26	Acc bab 2 dan pengajuan bab 3	
2024-05-03	Revisi bab 3 perbaiki dan tambahkan flowchart	
2024-05-10	Acc bab 3 dan pengajuan bab 4	
2024-05-17	Revisi bab 4 lengkapi hasil dan pembahasan lebih detail	
2024-05-31	Acc bab 4 dan pengajuan bab 5	
2024-06-07	Revisi bab 5 lengkapi saran dan simpulan	
2024-06-14	Acc bab 5 dan perbaiki referensi citasi	
2024-06-21	Acc sidang	

Mengetahui
Ketua Program Studi



Hartana Wijaya, M.Kom

Tangerang, 21 June 2024

Pembimbing



Aditiya Hermawan, S.Kom., M.Kom

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Tangerang, 30 Juli 2024

Stanley Ananda