BAB VI

KESIMPULAN DAN SARAN

A. Kesimpulan

Dari penelitian ini, dapat diperoleh beberapa kesimpulan, yaitu:

1. Pengenalan wajah menggunakan MobileNet, MobileNetV2, dan VGG-16 yang telah dilakukan menunjukkan hasil yang baik. Pada Georgia Tech Face Database, AT&T Face Database, dan FEI Face Database, MobileNet masing-masing mencapai tingkat akurasi sebesar 100%, MobileNetV2 masing-masing mencapai tingkat akurasi sebesar 100%, 100%, dan 99,52%, dan VGG-16 masing-masing mencapai tingkat akurasi sebesar 100%, 100%, dan 96,19%.
2. Pengenalan ekspresi wajah menggunakan MobileNet, MobileNetV2, dan VGG-16 yang telah dilakukan juga menunjukkan hasil yang cukup memuaskan. Pada RAF-DB, tingkat akurasi MobileNet mencapai 84,52%, MobileNetV2 mencapai 83,83%, dan VGG-16 mencapai 83,74%.
3. Tingkat performa tertinggi untuk pengenalan ekspresi wajah diperoleh dengan menggunakan MobileNet dengan raihan akurasi sebesar 84,52%.
4. Tingkat performa tertinggi pengenalan wajah pada Georgia Tech Face dan AT&T Face Database diperoleh dengan menggunakan MobileNet masing-masing yakni 100% dan 100%, MobileNetV2 masing-masing yakni 100% dan 100%, dan VGG-16 masing-masing yakni 100% dan 100%, sedangkan pada FEI Face Database, tingkat performa tertinggi diperoleh dengan MobileNet yakni 100%.

B. Saran

Adapun saran untuk penelitian berikutnya adalah:

1. Perlunya penelitian yang menggunakan *pre-trained* model CNN lainnya untuk dilakukan pembandingan.
2. Disarankan melatih model dengan menggunakan jumlah dataset yang lebih banyak. Khusus untuk pengenalan ekspresi wajah, dapat dicoba untuk mengenali ekspresi wajah gabungan (*compound face expression*).
3. Perlunya penelitian lanjutan tentang implementasi pengenalan wajah dan ekspresi wajah untuk kasus yang lebih spesifik, misalnya untuk di sekolah, dan sebagainya.
4. Perlunya penelitian lanjutan untuk pengenalan wajah atau pengenalan ekspresi wajah yang bergerak dinamis, seperti masukan berupa video, yang memiliki subjek bergerak, seperti ketika berlari, menggelengkan kepala, dan lain sebagainya.

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