BAB V
KESIMPULAN DAN SARAN

Bab ini akan menyimpulkan hasil penelitian ini dengan menyajikan kesimpulan yang menjawab tujuan penelitian dan saran yang ditujukan pada iterasi selanjutnya dari penelitian serupa di masa yang akan datang.

V.1 Kesimpulan

Sebagai aplikasi yang memudahkan proses pembelajaran dan pemahaman *American Sign Language* (ASL), khususnya elemen *fingerspelling* dari ASL, penelitian ini mengintegrasi model *computer vision state of the art* dan *framework* TensorFlow Lite di platform Android untuk menyajikan pengalaman yang terbaik bagi pengguna. Kesimpulan dari penelitian ini adalah perancangan dari:

1. Rancangan model *computer vision* berbasis MobileNetV2 dengan *testing accuracy* 0.9689 dan EfficientNet-Lite 4 dengan *testing accuracy* 0.94182 untuk menginterpretasikan *fingerspelling American Sign Language* berbasis *dataset* Barczak et al. (2011).
2. Integrasi model dengan menggunakan TensorFlow Lite pada aplikasi Android untuk menampilkan hasil interpretasi *fingerspelling American Sign Language* ke pengguna dengan akurasi 0.8 dibandingkan dengan akurasi aplikasi pada penelitian sebelumnya pada program Bangkit yang memiliki akurasi 0.133.

V.2 Saran

Saran yang dapat diterapkan pada iterasi selanjutnya dari penelitian serupa di masa yang akan datang adalah:

1. Penelitian ini menghasilkan aplikasi Android untuk menginterpretasikan *fingerspelling American Sign Language.* Penelitian selanjutnya dapat mengembangkan aplikasi untuk perangkat iOS, yang merupakan *platform mobile* dominan lainnya di pasaran.

2. Penelitian ini berfokus pada aspek *fingerspelling* dari *American Sign Language.* Penelitian ini dapat memperluas cakupan deteksi aplikasi pada pergerakan *American Sign Language* yang meliputi elemen gerakan*,* bersamaan dengan dikembangkan *dataset* dan metode pengembangan model yang optimal.
3. Penelitian ini berfokus pada *American Sign Language* yang umumnya digunakan di Amerika Utara. Seiring adanya variasi pada bentuk tangan pada bahasa isyarat di wilayah lainnya, penelitian selanjutnya dapat mengembangkan model deteksi bahasa isyarat wilayah lain seiring adanya ketersediaan *dataset* yang sesuai.
4. Penelitian ini tidak berfokus pada aspek *user interface,* sehingga aplikasi Android yang digunakan pada penelitian ini memiliki *user interface* yang simpel. Penelitian selanjutnya dapat berfokus pada *user interface* dan *useful features* bagi pengguna.

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