

BAB V

KESIMPULAN DAN SARAN

5.1 Kesimpulan

Berdasarkan hasil penerapan metode DCGAN dan CNN untuk klasifikasi tumor otak menggunakan citra MRI, diperoleh beberapa kesimpulan sebagai berikut:

1. Penggunaan metode DCGAN untuk menambahkan dataset untuk kelas *glioma*, *meningioma*, *notumor*, dan *pituitary* telah berhasil dilakukan dengan total keseluruhan untuk model DCGAN menghasilkan 6000 citra baru.
2. Klasifikasi tumor otak melalui citra MRI dengan menggunakan *convolutional neural network* (CNN) telah berhasil dilakukan dengan mendapatkan akurasi sebesar 90%.
3. Penggunaan metode DCGAN untuk menambah dataset saat pelatihan CNN memberikan hasil akurasi lebih tinggi dibandingkan tanpa DCGAN. Tetapi waktu yang dibutuhkan lebih banyak. Akurasi yang dihasilkan kurang signifikan dalam proses pelatihan CNN.

5.2 Saran

Adapun saran untuk penelitian berikutnya adalah:

1. Menggunakan metode GAN dengan arsitektur lain untuk menghasilkan citra sintesis dengan ukuran yang lebih besar dan lebih tampak realistik.
2. Memperbanyak pengujian dengan arsitektur CNN yang berbeda, seperti ResNet, Inception, EfficientNet atau yang lainnya.

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