BAB V

KESIMPULAN DAN SARAN

A. Kesimpulan

Berdasarkan hasil pengujian dapat disimpulkan:

1. Telah berhasil mengembangkan *code* program untuk segmentasi citra menggunakan metode *fuzzy level set* berbasis python dengan tingkat *error* 5,16%-6.72% pada GPU CUDA dan tingkat *error* 8.70%-9.21% pada CPU dibandingkan dengan matlab Li et al (2009).
2. Algoritma *fuzzy level set* mampu mensegmentasi citra yang memiliki *gaussian noise* yang memiliki kernel 5x5, 50x50 dan 100x100 dengan tingkat akurasi sebesar 69.75% - 81.82%.
3. Berdasarkan beberapa pengujian dari beberapa citra uji coba dan beberapa perangkat yang berbeda dapat disimpulkan bahwa *fuzzy level set* mampu mempercepat proses komputasi antara 7.95x hingga 836.43x dibandingkan dengan menggunakan CPU.

B. Saran

Aplikasi dapat dikembangkan lebih lanjut sebagai bahan penelitian lebih lanjut, seperti:

1. Pengembangan menggunakan memory CUDA yang lain seperti *sharedmemory*, *texture memory*, yang kinerja dapat lebih cepat dan lebih efisien.
2. Pengembangan menggunakan *multy device* CUDA untuk kinerja yang lebih cepat.
3. Pengembangan aplikasi juga dapat dikembangkan pada segmentasi citra dengan skema 3D.

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