02132 Assignment 1 report

Software implementation of a cell detection and counting algorithm in C

Group: 22

Mikkel Arn Andersen **s224187**
Niclas Juul Schæffer **s224744**
Rasmus Kronborg Finnemann Wiuff **s163977**
github.com/rwiuff/02132Assignment1

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1 Work distribution

Explain here who has done what, for both implementation and report.

2 Design

Explain here what the design process was. Explain how you structured your code (e.g., divide functionality into functions, decide the functions prototypes, etc.). Explain how you decide to represent and store data (e.g., what representation, what buffers to use, etc.). Motivate the design decision you made.

3 Implementation

Briefly discuss the implementation in C of your design. Explain how you have exploited the C language in the context of embedded system to implement the algorithm. You can include some code snippets if these are relevant to explain certain aspects of the implementation.

4 Optimizations and enhancements

Explain here the optimizations and enhancements you have implemented in order to improve cell detection rate, execution time, memory use, and/or other algorithm characteristics you considered relevant. Explain what was the motivation (thinking-process) behind the optimizations and enhancements you implemented.

5 Test and analysis

Report here the results from the test and analysis you have carried out according to the assignment instructions. You need to at least address the following: functionality tests, execution time analysis, memory use analysis. For each optimization/enhancements you implement, you need to perform tests to prove its validity. If you have implemented optimization/enhancements which do not give the expected benefits, describe why it does not work. Remember to discuss the results from the test and analysis you have carried out, do not just present them, but explain and argue their meaning.

6 References

List here the references that you have used (if any) It can be articles or websites where you have found inspiration and understanding.