Project Proposal

Fuzzy Rule-based Contrast Enhancement in CUDA

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Abstract

Image enhancements are very essential in giving clarity to the imagery data and thereby setting up an environment in which extraction of relevant and required information out of the image becomes reasonably sound and sophisticated. The way in which digital data is captured, stored, handled and retrieved may lead to loss of information. Such type of losses can be recovered by performing some image enhancements that allows to bring out details that were hidden in an image. There are many techniques such as the classical histogram equalization; but fuzzy rule-based contrast enhancement is breaking more grounds in simplicity in both understanding and representing knowledge out of the image data.

The objective of this project is to implement a Fuzzy Rule-based Contrast Enhancement (FRCE) in CUDA to take advantage of the HPC due to parallel computing as Image enhancement is applied in wide range of everyday field with real time data acquisition and where images data are needed to be understood and analyzed. For example, medical imaging, satellites imaging etc.

Target Conference

- **IEEE Conference on Computer Vision and Pattern Recognition, CVPR 2019**

Submission Deadline	Friday 16 Nov 2018
Conference & Submission Link	http://cvpr2019.thecvf.com/
Conference Dates	Jun 15, 2019 - Jun 21, 2019
Conference Address	Long Beach, United States

List of References

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