

**April 23 Milestone:**

1. Get OpenCV + CUDA working on Euler.
2. Understanding and executing the native algorithm.
3. Implementing the parallel OpenMP version along with basic analysis.
4. If time permits start working on the parallel CUDA implementation.

**Accomplished so far:**

The initial plan was to work with the OpenCV implementation of the Stitcher Class as the baseline. We tried to get OpenCV to work along with CUDA on Euler but faced infrastructural issues while building OpenCV. A different baseline was thus needed and we decided to go ahead with OpenPano (OpenPano is a panorama stitching program written in C++).

We have set up the infrastructure of running OpenPano on Euler. The OpenPano implementation also has several optimizations incorporated, making it a faster algorithm than what was expected. This has made the problem of reducing execution time more challenging for us, requiring us to come up with more innovative ways of parallelizing the code. We have implemented a parallel OpenMP version of OpenPano and conducted basic analysis of the performance gain. We have seen encouraging results so far and hope to fine tune and extract more performance from the OpenMP version of the code.