



Large-Scale, Real-Time 3D Image Reconstruction Using Multi-View Stereo Algorithms

National Center for High-performance Computing, Taiwan

Ashley He

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Progress and Challenges

- Attempted to replace ANN library used by KeyMatchFull to match keypoints with KNN on GPU library.
 - ◆ KNN on GPU is implemented for CUDA and CUBLAS, which requires an NVIDIA graphics card, so decided to try to get code running on a computer that meets those specifications.
- Tried to get current program running remotely on the computer with a CUDA-compatible NVIDIA graphics card.
 - ◆ Had some issues accessing the server, but were resolved after communicating them with the person who provided access to the server.

Progress and Challenges

- ◆ Very challenging without being able to run commands as root.
 - Significantly decreased efficiency due to needing to either a) compile libraries from source, which proved to be very time-consuming, or b) emailing the person who provided access to the server, who then emails the system administrator in order to install necessary libraries.
- To address the issue above, requested a way to test my code with more administrative privileges.
- ◆ Had the graphics card from last week reinstalled in my work computer.
 - ➔ Card seems to be working despite issues last week.
 - ➔ Spent significant amount of time trying to install and enable CUDA library and determining why my code does not detect the libraries.

Upcoming Goals

- Continue trying to get my code running on CUDA with current work computer set-up.
- After getting CUDA working as expected, replace ANN library with KNN CUDA or CUBLAS.

Culture

City God Temple Night Market, Hsinchu



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