Progress Report #5

04/21/2023

PAST

ZED SVO Image Processing

* Attempting different methods of transferring the data over to the remote machine. Downloading from Box onto my local computer and transferring through SFTP was waaaay too slow. Need permissions to download directly from box onto ubuntu machine.

Mask R-CNN Setup

* Finished setting it up
* Trying to run through some basic examples to verify proper functioning -> having trouble with CUDA
* Training was running very slow so I spoke to Xiaodan about what I’d need to do to run it faster
* Learned a bit about running Mask R-CNN with TensorFlow and Keras
* Found dataset of clearer sorghum images that might be useful for training/validation.testing

Point Cloud Flattening

* Spoke with my friend familiar with point clouds
* Started research on best way to ‘uncurl’ the pointcloud of the (segmented) leaves, reading papers

Thesis Writing

* Organizing relevant papers for my literature review portion
* Writing literature review portion of thesis
* Writing introduction portion of thesis

ONGOING

Point Cloud Flattening

* Ongoing research on best way to ‘uncurl’ the pointcloud of the (segmented) leaves

ZED SDK Installation through Docker

* Setting up a container image to be used to process ZED .svo files
* Considering doing on this on my local machine instead of the remote machine but not sure if the processing is gonna be very slow (I might try it anyways, to free up load on the remote machine)

ZED SVO Image Processing

* Email john about permissions I need to download directly from box onto remote machine
* Determining the best way forward with the point cloud work and the mask rcnn training work, and processing the images accordingly

Mask R-CNN Setup

* Will start training on ZED images after processing .svo files and determining the best strategy
* Working on CUDA integration to train quicker (plus potentially some other tricks)

Thesis Writing

* Working on introduction & literature review