

Team 3 Bi-weekly Report : 07

April 7th - April 20th

Summary:

Object Detection:

Integrated distance measurement code. Carried out field testing.

Distance Measurement:

Changed disparity in the distance calculation to be based off of matching features rather than simply the bounding box coordinates. Gathered data from field tests.

Pending Issues

- Sometimes there seems to be overfitting in the trained model and the images detected seem to be misclassified.

Plans for the Upcoming Work Period

- Test the distance measurement at longer range and with a larger separation between the cameras
- Obtain test metrics using video recorded with SmartAg

Individual Contributions

John:

- Team Role: Communications Lead
- Contribution:
 - Extracted fieldsafe video data
 - Unfortunately most of the video was just an empty field so it was not as useful as we had hoped
 - Reworked distance measurement to be calculated off of matching features rather than bounding boxes to improve accuracy.
 - Helped acquire video from a field session with SmartAg to use for testing later
- Hours Worked: 10
- Total Hours: 60.5

Souparni:

- Team Role: Meeting Facilitator

- Contribution:
 - Worked with Bowen to make changes to object detection code. Integrated the new distance measurement code with object detection.
 - Worked with team to design poster
 - Helped with gathering data from field for further testing.
- Hours Worked: 9
- Total Hours: 57

Fahmida:

- Team Role: Tester
- Contribution:
 - Worked with team to design poster
 - Assisted the team to collect video on the testing fields
 - Unsuccessfully attempted to figure out the cause of error when both cameras do not see the same object
- Hours worked : 7.5
- Total Hours: 46.5

Ashley:

- Team Role: Document Manager
- Contribution:
 - Collaborated with Eric on the final poster
 - Created final presentation and added content
 - Set up final paper
 - Met with the whole team to collect video on the testing fields
- Hours: 10
- Total Hours: 56

Eric:

- Team Role: Webmaster
- Contribution:
 - Collaborated on final poster and final paper
 - Drew Final functional diagram
 - Met with team to do field testing
 - Helped Bowen a little to find the config for the hyper-parameters Quincy suggested to tweak (mainly dropout) to avoid overfitting.
- Hours: 10
- Total Hours worked: 56

Bowen:

- Team Role: Hardware Maintainer

- Contribution:
 - Combine object detection and distance measuring code
 - Worked on training for 5 objects and debug.
 - Hours worked: 8
- Total Hours: 56