

## Status Report #1: Karthik Natarajan (Team A5)

I have started looking into the software that will allow us to interface with a point & shoot camera for our alternate video capturing strategy. To do this, I first worked on installing and setting up a system to run linux commands that can be replicated on the board. I initially tried to use the Unix subsystem provided by windows and interface with the camera but there was a problem with connecting to the USB devices so I switched to a virtual machine.

Then, I looked into software that can be used to interface with our camera the most common of which was gphoto2 (now renamed libgphoto2). Using this I was able to run a simple test to see if my VM can interface with the camera by using the command `gphoto --abilities` (Result of command is shown below).

```
ece349@ece349-vm:~$ gphoto2 --abilities
Abilities for camera      : Canon PowerShot A3100 IS
Serial port support      : no
USB support               : yes
Capture choices          :
                          : Capture not supported by the driver
Configuration support    : no
Delete selected files on camera : yes
Delete all files on camera : no
File preview (thumbnail) support : yes
File upload support      : yes
ece349@ece349-vm:~$
```

This task relates more to component testing/ checking to just make sure that we can actually talk to the camera using the FPGA. So, based on our Gantt Chart this task is on schedule. During the next week, I hope to do more with gphoto2 and start to capture and save images to the VM so it can be sent to the YOLO-v3 network for processing. And, if we do decide to work with two or more cameras, like mentioned in the team status report, I will probably end up working on the software that decides both how to zoom in the individual cameras while also picking which camera feed to display to get the best view of the perpetrator.