

Assignment 4.2 AAI 521 – Team Project Status Update Form

Fill out this form and submit it by the end of Module 4 in Blackboard.

1. Team Number: 6
2. Team Leader/Representative: Adam Graves
3. Full Names of Team Members:
 1. Adam Graves
 2. Christi Moncrief
 3. Reed Oken
4. Title of Your Project:
 - Edge IoT Device for near Real Time People Counting in Region Of Interest (ROI)
5. Short Description of Your Project and Objectives:
 - An edge IoT device that has a few sensors for detecting and counting people in a room or space (ROI). This project will focus on the camera sensor section of the device and the counting of people in a region of interest. The device will have an algorithm that will count the number of people in an ROI and their estimated direction of movement, along with the confidence scores.
6. Name of Your Selected Dataset:
 - Mixed public MP4 of people moving in an area/room/space
7. Description of Your Selected Dataset (data source, number of images, dimension of images, size of dataset, etc.):
 - Data sourced from public MP4 on the web; people moving in public areas.
8. What is the task, and why does it matter?
 - The task is to have a device that can count the number of people and the estimated direction of movement in a region of interest which can be an open space, room, etc. This can be used in public or private spaces. It is useful when the need for occupancy limits are required, such as, entrance to a public gathering that is limited to the number of people allowed. Or understanding crowd numbers in public gatherings and places.

9. How were the data measures, how raw is this dataset? For example, what type of camera(s) were used, have the photos been cropped or edited before you started using them?
- The data is raw footage of public spaces with people. This is in the format of an MP4 (short) file.
 - The device is using a DFRobot camera, part: FIT070, used for RASPBERRY PI (most likely we will simulate with a webcam)
10. Has this dataset been used a lot in the past for computer vision, either papers, applications, competitions and similar uses?
- No known numbers, but these are public MP4 clips
11. What is the feature extraction plan?
- Using YOLOv8 which has automatic feature extractions. Output a set of bounding boxes, each with a class label (e.g., person) and a confidence score.
12. Is there any bad data, cropped image...? (This is not a hard stop, there are several ways we can handle this problem)
- Yes there are images that are cropped or difficult to identify, this is part of the challenge.
13. Are you using any cloud services to host and transfer data? If yes, provide the link here:
- GitHub: https://github.com/ChristiMoncrief/AAA-521_Group6_FinalProject
14. How many times have your members met in the last week?
- Twice
15. List the specific contributions that each team member is providing for the Final Team Project. **NOTE:** ALL students on the team should contribute equally to the Final Team Project.

Team Member 1 (Adam Graves)	Team Member 2 (Christi Moncrief)	Team Member 3 (Reed Oken)
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List of contributions Brainstorm ideas Documentation Team rep Coding	List of contributions Brainstorm ideas Documentation Setup the GitHub Code validation	List of contributions Brainstorm ideas Documentation Draft project proposal Code
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16. Comments/ Roadblocks: Challenging to deal with a moving set of data such as the MP4, and how we will emulate the camera capturing as though we are creating the MP4.