## Team Project Status Update Form

Complete as a team and designate a team lead to submit to the group assignment link in Module 4.

### Team Information

Team Number: 2

Team Members [Full Names]:

* Keller Flint-Blanchard
* Manikanta Katuri
* Troy Crawford

Team Leader/Representative: Manikanta Katuri

Team GitHub Link: https://github.com/FutureScopeAI/AAI-521

If you are using any cloud services in addition to GitHub to host and transfer data, provide the link.

### Project Description

* Project Title: Car object detection
* Short Description/Project Objectives:

### Project Dataset

* Selected Dataset: [Name/Link]: https://www.kaggle.com/datasets/sshikamaru/car-object-detection
* Description of Your Selected Dataset (data source, number of images, dimension of images, size of dataset, etc.):

**Short Description/Project Objectives:** YOLO (You Only Look Once) algorithm is used for real-time car object detection. Fast YOLO processes 155 frames per second, achieving higher mean Average Precision (mAP) compared to other real-time detectors.

### Description and Requirements

* What is the task, and why does it matter?
* 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?
* Has this dataset been used a lot in the past for computer vision, either papers, applications, competitions and similar uses?
* What is the feature extraction plan?
* Is there any bad data, cropped image…? (This is not a hard stop, there are several ways we can handle this problem)
* **Selected Dataset:** [Car Object Detection Dataset](https://www.kaggle.com/datasets/sshikamaru/car-object-detection)
* **Description:**
  + Contains car object detection images.
  + Uses YOLO algorithm, which predicts objects and bounding boxes in a single forward pass through the network.
  + Fast YOLO achieves 155 FPS and provides higher accuracy.

**Description and Requirements:**

* **Task Importance:** To achieve real-time car detection for applications like traffic monitoring, autonomous vehicles, etc.
* **Data Characteristics:**
  + Not specified: type of camera, cropping, or editing status of photos.
  + No detailed information provided about raw or pre-processed state.
* **Usage History:** Likely used for papers, competitions, and applications but needs further research for specifics.
* **Feature Extraction Plan:** Leverages YOLO to identify cars and bounding boxes in images.
* **Data Quality Issues:** Possible presence of bad or cropped images. Solutions may involve augmentation or filtering.

### Team Responsibilities

What are the contributions and areas of responsibility of each team member for the project?

|  |  |  |
| --- | --- | --- |
| Member 1 (Troy Crawford) | Member 2 (Name) | Member 3 (if applicable) |
| Data processing and cleaning.  Conclusion  Technical paper and coding |  |  |

**Comments/ Roadblocks:**