**Minutes of General AutoDrive Meeting for 10/04/2024 - Fall 24 Week 5**

1. **Background**

North Carolina A&T State University (NCAT) participates in SAE International’s student project to develop solutions for tomorrow’s self-driving cars. The NCAT team, Aggies Autonomous Auto(A3) meet on a weekly schedule. The meetings are held to coordinate team efforts towards the successful execution of yearly deliverables. This particular meeting was held both **in-person/virtually** on **October 04, 2024** via the Zoom platform for a one (1) hour duration; specifically, from **10:00am -11:00am**. The Agenda of the meeting was set by the team captain.

1. **Attendees**

In attendance for the **October 04, 2024** meeting were the following people:

* Dr. Younho Seong (Faculty)
* Dr. Sun Yi (Faculty)
* Dr Daniel Acree (Faculty)
* Kelvin Kwakye (Team Captain)
* Clement Alabi (Project manager)
* Chandra (Technical Lead)
* Hossam (Technical Lead)
* Abiodun (Technical Lead)
* Azeez (Technical Lead)
* Yoo Sang Chang (Team Member)
* Francis Logarh (Team Member)
* Tunji Ademola (Team Member)
* Chase Jackson (Team Member)
* Jayleen (Team Member)
* Nooruldeen Al Azawi (Team Member)
* Muktadir (Team Member)
* Christopher Tetteh Nenebi
* Sally Acquaah
* Ahmed

1. **Agenda**

* Updates from Team Leads
* Open Forum
* Closing Remarks

1. **Main Points of Discussion**

* **Meeting Began** (**10:02am**)**:** Kelvin opened the meeting by asking Team Leads to gives on their submission of GANTT charts, stating that only static teams so far had submitted theirs.
* **Perception** (**10:02am**):Going through the perception team slides Hossam elaborated on the **Design-Your-Own-Challenge** task, stating that he was providing GPS points to enable Tunji having working resources to practice for V2X challenges. He also stated that there was a website that could help him generate an HD map form the GPS points for his use.
  + **Object Detection (10:15am**): Hossam, stated his plan to collect data for 9 classes out 10 for the object detection aspect of the perception teams’ milestones. In that vein, he also mentioned that
    - Therewere currently insufficient images to be used to train detection models for traffic signage.
    - There is a plan to take measurement for the calibration matrix (Camera/LIDAR calibration) adjusted from ROSbag
  + **Route Planning (10:18am**)**:** Byron stated, the team had had its introductory meeting and were brainstorming to meet deliverables and produce realizable timeline/GANTT charts.
  + **HD Map (10:21):** Richard mentioned that he had requested CTF doc files for Samantha to aid in the development of new maps. He added that Samantha was asking if we were using a new track for our challenges after she had communicated with Hossam. In response to that Dr. Sun Yi asked if we needed the HD map for testing purposes, emphasizing that we could us the roundabout and parking lot for planning and testing of solutions for the challenges. To which the perception team stated that it wasn’t needed.
* **Dynamic Team Update (10:30am**): Michael (Dynamic Team Lead), summarized the dynamic team updates by mentioning the Dynamic Team kicked off their Check-in meetings on a two-week cycle. He also stated that he was orienting Byron and Jalen to the new roles on the team., and that he was lo thinking of aligning the design your own challenge next in terms of preparing a GANTT chart to guide work on that aspect of the team.
* **Noor/HMI (10:35am):** Noor stated that he needed to get a display monitor screen that will connect to the server (form 2 vendors), to display a web-app to interface with ROSS. He world also package it with docker so it doesn’t break.
* **Electrical Power (10:42am):** Abiodun mentioned that he had two new members Oscar and Eli to help him effect plans for the new power restructuring of the vehicle.
* **Static Meeting Update (10:44):** Clement mentioned that the static teams had had an initial meeting with the next meeting scheduled for next Thursday. He invited the leads of the Static sub units to provide their updates.
* **Simulation (10:45):** Kris stated had began to develop and almost complete a general model for the vehicle and that planned to work with Michael and Hossam to understand control logic in order to build more specialized models as needed. He also plans to package these models in a Simulink package so we don’t have to remodel anytime testing/working on these is required.
* **Safety (10:47):** Francis stated that there are some, there were some lessons learnt from Michigan to be applied by his team, in like manner there are safety lessons to be learned internally. The Safety team is still waiting feedback from various teams here at home. He emphasized the ff:
  + Every pending task and every milestone for various teams need to be done with safety procedures/tests in mind which will be fed into safety reports.
  + For the SOTIF report, the Safety team is awaiting template from SAE this month for work to begin.
* **Mobility Innovation (10:50):** Sydney stated that her team is still brainstorming on the GANTT chart and timelines. She had also split her team into two to tackle the 2 challenges. The team was also researching about sensors and other resources required to identify the specific scenarios to condense solutions towards deadlines.
* **Open Forum (10:55):** Kelvin emphasized the importance of team leads updating the team leadership with timelines and GAANTT charts. Dr. Sun stated that team leads should inform of the new skillsets they needed to meet their deadlines so the team could hire more talent for the project.
* **Meeting Ended** (**10:59am**)**:** Kelvin moved the meeting to a close, stating that all teams should work on meeting all weekly deliverables from previous weeks before our next meeting.

1. **Conclusion**

* Static teams have submitted GANTT charts; dynamic teams are still preparing theirs.
* Perception team is making progress with GPS resources and object detection tasks, but lacks sufficient training data for traffic signs.
* Route Planning team is brainstorming for deliverables and timeline creation.
* HD map updates are in progress, but testing does not require a new map.
* Dynamic team kicked off bi-weekly meetings and is working on GANTT charts for their projects.
* HMI team is preparing a web-app interface to connect to ROS using a display monitor.
* Power restructuring of the vehicle is underway with the addition of new team members.
* Simulation team is developing vehicle models and plans to package them for future use.
* Safety team is integrating internal and external lessons into safety reports and awaiting SAE templates for SOTIF.
* Mobility Innovation team is brainstorming and splitting tasks to meet deadlines.
* Kelvin emphasized the need for timely submission of GANTT charts and deliverables, and Dr. Sun urged team leads to communicate required skillsets for potential hires.

1. **Takeaways/Deliverables**

* Team leads to submit their GANTT charts and timelines.
* Perception team to collect more traffic sign data for object detection.
* Route Planning and Mobility Innovation teams to finalize deliverables and GANTT charts.
* Dynamic team to align "Design-Your-Own-Challenge" tasks with GANTT chart preparation.
* HMI team to acquire a display monitor and package the web-app in Docker.
* Safety team to continue integrating safety considerations in all team milestones and await SOTIF report template.
* Simulation team to complete the vehicle model and collaborate on control logic integration.