**Team Charter**

Advisor: Vuk Marojevic, Ph.D, vuk.marojevic@msstate.edu

External adviser: Neal Wise, neal@atwoodfence.net

Team membership:

| Role | Name | NetID | Major (EE or CpE) |
| --- | --- | --- | --- |
| Leader | Ajaya Dahal | ad2323 | CpE |
| Member | William Clark | wsc147 | EE |
| Member | Walker Thames | wjt96 | EE |
| Member | Zachary Sahnger | zjs79 | CpE |
| Member | Joseph Westerfield | jaw1278 | EE |

**Team Name:** Collide-O-Scope

**Mode & Frequency of Communication:**

Our team currently has a group MMS thread as a primary means of communication. We also have a team in Microsoft Teams that can be used for both group messaging and video conferencing with screen sharing. All messages whether via MMS or Teams are expected to be responded to within a 6-8 hour window. In the event of a scheduling conflict, the member with said conflict should notify the team no later than 24 hours of the event with which he has a conflict. Most advisor meetings will be conducted via Teams as our external advisor works too far away to attend in person. Meetings consisting of only team members will be in-person whenever possible and can also be live-streamed in the event of a team member being unable to attend in person.

**Submission Schedule:**

All materials to be submitted as class assignments are to be completed within 3 business days from the external deadline set by the professors. The team will then meet for an internal review of all these assignments between one and two business days prior to the external deadline. Submissions shall be completed following team review meetings no later than twenty-four hours following the conclusion of the internal review meeting.

**Team Roles:**

| Team lead | Ajaya Dahal |
| --- | --- |
| Hardware subsystem lead | Walker Thames  Support: Joseph Westerfield |
| Connectivity and integration lead | Ajaya Dahal  Support: Zachary Sahnger |
| Materials and Structure lead | William Clark  Support: Walker Thames |
| Software lead | Zachary Sahnger  Support: Ajaya Dahal |
| Power supply subsystem lead | Joseph Westerfield  Support: William Clark |

In the event that a team member is unable to work in-person, he is expected to work remotely on his subsystem and videoconference into any meeting. We plan to have a surplus of parts to accommodate a teammate under quarantine.

Communication between subsystem leads will be maintained to ensure compatibility. For example, the material and structures lead will work with the hardware lead to ensure the enclosure can hold the PCB. Similarly, the software lead will work with the communications lead to make sure the application can connect to the device.

**Potential Obstacles:**

Due to the nature of the project, these devices are exposed to harsh weather conditions such as rain and very high temperatures in the summer. This could cause some of these components to behave differently. This could be avoided by reading the datasheet and doing research while finding the right parts.

Testing the device could be troublesome, as our project requires access to guardrails to collect sufficient data for successful operation. We plan to visit our client to gain access to these guardrails, to accurately simulate the conditions of a crash.

There is also a possibility that our order could be delayed. In order to reduce the risk of this occurring, parts should be ordered early enough that if there is a delay, they will still arrive on time to build a prototype.

**Conflict Resolution:**

In the event of a disagreement between team members, the team will meet to discuss and debate both sides of the dispute, deciding which approach to take. If there is no unanimous agreement, then the team will hold a vote with three-fifths votes required to determine the solution. In the unlikely event of a tie, the team lead breaks the tie with his vote.

If the quality of work or participation of any team member is found to be unsatisfactory by other members, that team member will be provided constructive criticism. Each team member is expected to handle such criticism positively.

**Additional Comments or Concerns to Discuss with Dr. Dabbiru & Ms. Nordin:**

N/A

**Signatures**

William Clark, wsc147

Ajaya Dahal, ad2323

Zachary Sahnger, zjs79

Walker Thames, wjt96

Joseph Westerfield, jaw1278