Spring 2023 ECE 445 Team Contract

Instructions: The content of this document should be specific to your goals and needs. Ideas for the content of each section are provided as suggestions.

Project No. and Name	Project 2, Ground-Breaking Next-Gen Smart Pet Door
Member Name, netID	Jeffrey Deng, jdeng13
Member Name, netID	Norbert Szczotka, nszczo2
Member Name, netID	Matthew Wei, mswei2

ECE 445 is a project-based course. The course includes both team and individual grades. Project teammates generally all get the same grade for team assignments based on the expectation that all team members do their fair share of the work involved. The purpose of this contract is to lay out the tasks needed for the successful completion of the project and distribute them in a fair and efficient way to the team members. It will also discuss how the teammates will work together during the project and address any issues that come up. A contract that promotes good teamwork that leads to a successful project should:

- Acknowledge that each team member has commitments and responsibilities outside of ECE 445
- Encourage open communication about challenges that team members are facing, both in and out of ECE 445
- Give team members the benefit of the doubt and the opportunity to explain themselves when something goes wrong and resist jumping to judgement

Project Description:

At a high level, our design will revolve around modifying an existing door to fit our dog door. This dog door is controlled by the user through a phone app. Subsystems of this design include the app, the door, the sensors, mechanical, the power system, and the camera. Motion detectors will be used to alert the customer when the pet is near the door and needs to enter. A camera will also be used to prevent unwanted visitors or other animals from entering. In addition, the app can also be used to manually open the door and close it immediately. This system will be on both sides of the door, so the pet can get in and out and not be trapped outside.

Project Goals

For the end of our project, we expect the project to be fully functional. We need to make sure the sensor can accurately detect motion and alert the camera to turn it on. This alert must also be able to send a signal to our app and feed the camera footage to the app. The app from here must be able to work properly (buttons and camera). The button when pressed should be able to successfully send a signal to the door and cause it to open. This same criteria should be applied to the other side of the door as well. Once all these functions are working properly, then we can determine the project is effective.

Expectations (ground rules) for each member: *Try to list six or more minimum expectations. Consider aspects such as preparation, participation, feedback, responsiveness, etc. Try to explicitly list anything that could potentially turn into a problem. Find ways to encourage everyone to communicate (this may also fall under "tasks").*

1. Show up to meetings on time.
2. Expect team members to offer feedback on each other's work to improve overall quality.
3. Set expectations for regular updates, progress reports, and the sharing of important information.
4. Expect team members to come prepared for meetings, discussions, or tasks with relevant materials, information, and research.
5. Hold them accountable for completing their responsibilities on time and with quality.
6. Encourage a proactive approach to identifying and addressing potential issues or obstacles.
7. Promote empathy and support for team members, recognizing that personal challenges or stress can impact performance.

Roles: *Do you see this team performing well because everyone works together and contributes equally? Are there certain aspects of the project that some teammates excel at? Can tasks be spread among individuals to optimize progress toward the final product?*

Yes, this team is performing well because everyone works together and contributes equally. We will delegate tasks based on individual strengths and weaknesses. This ensures each team member will stay motivated and engaged on the project. Some team members are better at working with software, while others have a good idea of mechanical related design, while some are best with PCBs and electronics. Team performance will be enhanced when regular communication and adaptability are established.

Project Meeting Time(s): *The team will meet at the scheduled team meeting with TA each week. Can you also preset an ideal time for team meetings in the lab (your team may need to sign up for lab bench access)? Is your team interested in meeting to work on other aspects of the course together such as project research?*

Our designated meeting times will be on the weekends, where none of us have classes or other obligations, so we are entirely focused on working on this project. We will also meet during the weekdays, however these days will vary depending on when all the members are available at the same time.

Agenda: *Who will set the agenda? Beyond the weekly meetings with the TA, what will the team do to ensure that it stays on track during the semester? When a decision needs to be made, will it be approved by consensus or majority vote? Will a team member be appointed to keep records?*

At the beginning of each week, we together will determine the agenda and for what needs to be accomplished in order to stay on track. In order to stick to our schedule, we will use discord as well as a git repository to track tasks, deadlines, and progress. Decisions will be made by majority. A teammate will be appointed to push all our progress and text updates to the git in order to keep records.

Process and penalties for dealing with team issues: *What happens when ground rules are broken? Who intervenes? What happens if the situation escalates? Always remember not to jump to judgement. Give group members the benefit of the doubt and the opportunity to explain themselves when something first goes wrong.   TAs and instructors are available to help resolve issues.*

When ground rules are broken, we will have a civil conversation including all team members to discuss what went wrong and how to ensure it will not happen again in the future. All three of us are familiar and comfortable with each other so we will not have any problems initiating these conversations. We will maintain a positive and productive team dynamic.

End-of-term agreement on using final peer assessment for grade adjustment: Do you believe that this contract should hold your team accountable to its contents or that it may hold little value? There will be two formal peer assessments this semester. The first is used only to provide honest, constructive feedback to each team member. The second peer assessment affects a teammate's grade.   Without accountability, many promises go by the wayside.

Yes we believe that this contract will hold all of us accountable to its contents and we will keep this in mind when we provide honest, constructive feedback to each team member during the first and second peer assessments.

Signatures: Iterate on this document until everyone is comfortable with its contents and signs (it is okay to type your printed name as your digital signature).

I affirm that I participated in generating this team charter and that I will abide by its contents to the best of my ability. Furthermore, I understand that failure to meet the expectations expressed here can lead to the stated consequences.

netID: jdeng13   (digital) Signature: Jeffrey Deng   Date: 9/13/2023

netID: nszczo2   (digital) Signature: Norbert Szczotka Date: 9/13/2023

netID: mswei2   (digital) Signature: Matthew Wei   Date: 9/13/2023