

# **SDMAY22-45**

## **Team Contract**

### **Team Members**

Amy Wieland

Nathan Bruck

Tyler Ingebrand

Sean McFadden

Nayra Lujano

Yi Ting Liew

Christopher Hazelton

## **Project Overview**

### **Required Skill Sets for Your Project: (if feasible – tie them to the requirements)**

- Machine learning background
- Arduino
- 3D Modeling
- Generic software development
- Hardware and peripherals
- Security Aspects

### **Skill Sets Covered by the Team: (for each skill, state which team member(s) cover it)**

- Machine learning background (Tyler and Sean both have prior experience with machine learning)
- Arduino (Nathan, Sean, Nayra)
- 3D Modeling (Nayra)
- Generic software development (everyone)
- Hardware and peripherals (Sean, Nayra, Nathan, Chris)
- Security Aspects (Chris)

### **Project Management Style Adopted by the Team:**

The team plans to adopt a Scrum project management style. Specific details relating to the execution of Scrum Software Development, such as sprint length, will be defined later in the semester when there is a clear picture of the product we are going to develop and the timeframe.

### **Initial Project Management Roles: (enumerate which team member plays what role)**

- Amy: Project Manager
- Tyler: Project Manager & Machine Learning Manager
- Nathan: External Hardware/Arduino Manager
- Yi Ting: Task Board Manager
- Sean: Machine Learning Manager
- Nayra: Research Manager
- Chris: Security Manager

## **Team Procedures**

### **Day, time, and location (face-to-face or virtual) for regular team meetings:**

The team plans to meet face-to-face or virtually depending on the content needing to be covered during the planned meeting. For meetings with lots of content to discuss or complex problems to solve, the team will meet in person. For meetings focused on progress updates, the team will meet virtually. Regular team meetings will take place on Thursday's at 3:00PM and Friday's at 10:30AM. In person meeting locations will be on campus and virtual meetings will take place through Discord.

### **Preferred method of communication updates, reminders, issues, and scheduling (e.g., e-mail, phone, app, face-to-face):**

The preferred method of communication will be through Discord. All updates, reminders, issues, and scheduling can take place through Discord. During in person meetings, updates, reminders, issues, and scheduling should be discussed face-to-face as well.

### **Decision-making policy (e.g., consensus, majority vote):**

The team will use a consensus decision making policy. If the team is struggling to reach a consensus, then a majority vote will be conducted.

### **Procedures for record keeping (i.e., who will keep meeting minutes, how will minutes be shared/archived):**

A running Google Doc shared with all team members will be utilized for meeting minutes. The scribe for meeting minutes will be rotated between team members. The meeting minutes will keep brief bullet points covering important topics discussed as well as summarize people's deliverables for the upcoming week.

## **Participation Expectations**

### **Expected individual attendance, punctuality, and participation at all team meetings:**

Team members are expected to be punctual. All team members are expected to be present at scheduled team events. If a team member expects to be late or miss a meeting, this should be communicated well in advance of the meeting. At team meetings, all team members are expected to be engaged and participate so that meetings can be conducted efficiently and effectively.

**Expected level of responsibility for fulfilling team assignments, timelines, and deadlines:**

Team members are expected to uphold their agreed upon responsibilities, assignments, and deadlines. Team members are expected to make continuous progress on assignments and seek feedback frequently. Procrastinating responsibilities until the last does not meet the expectations of the team. If a problem with a deadline or assignment arises, communicate with the team early. We will all work together to help each other out.

**Expected level of communication with other team members:**

Team members are expected to communicate often with each other. Over communication is preferred to under communication. As a team, everyone is here to help each other out, but we can only do so if we communicate with one another.

**Expected level of commitment to team decisions and tasks:**

Team members are expected to be 100% committed to the team decisions and tasks. If a member does not feel they are 100% committed to a team decision or task, they need to communicate this with the rest of the team. The team can then work together to derive a solution so that everyone can be onboard with the plan.

## **Leadership**

**Leadership roles for each team member (e.g., team organization, client interaction, individual component design, testing, etc.):**

- Amy: Project Manager
- Tyler: Project Manager & Machine Learning Manager
- Nathan: External Hardware/Arduino Manager
- Yi Ting: Task Board Manager
- Sean: Machine Learning Manager
- Nayra: Research Manager
- Chris: Security Manager

**Strategies for supporting and guiding the work of all team members:**

Team members should reach out to each other whenever they have questions. The team should work hard to fairly assign tasks and to not assign any single team member a large solo task. In weekly team meetings, the team should make sure each team member has a clear set of tasks to complete for the next week. A task management board will be created to keep track of what is done and what needs to be completed.

### **Strategies for recognizing the contributions of all team members:**

At each meeting, each team member should state what they have been working on, what they plan to do next, and any problems they have run into.

## **Collaboration and Inclusion**

### **Describe the skills, expertise, and unique perspectives each team member brings to the Team.**

#### Amy Wieland:

I am majoring in software engineering and have experience with Java, C#, C/C++, Git, as well as a little bit of experience with HTML, CSS, and JavaScript. This summer I worked at Parametric Studios, an ed tech company at the ISU Research Park, developing an AR application to help young students learn STEM concepts. At parametric, I gained experience utilizing the UnityGame Engine, rebuilding key parts of the UX and UI, and testing application features. Currently, I am in a database course at ISU acquiring experience with MySQL. I enjoy frontend development and gaining new skills, so I am excited to learn more about machine learning and embedded systems.

#### Tyler Ingebrand:

I am majoring in computer engineering with minors in general business and Spanish. My background is in C++ although I have some experience in Java, C#, Python, Julia, and VHDL. I have been doing research in the Virtual Reality Applications Center (VRAC) with projects on various topics from real time application development to supervised NN data collection and training (via Tensorflow). I am also currently working on NNs using Flux (a replacement for Tensorflow) in Julia.

#### Sean McFadden:

I am majoring in computer engineering and have experience with C/C++, Java, Python, and VHDL. I enjoy low-level programming and computer architecture. I am currently involved in research studying fault tolerance in deep learning, so I have recently been learning about CNNs and hardware accelerators. I am also familiar with the PyTorch machine learning framework.

#### Nayra T. Lujano

I am majoring in Computer Engineering with a minor in Cyber Security. I have experience with C/C++, Java, Python, VHDL, QuestaSim and Bash. I've worked on different security tasks such as networking through my minor. I've worked with 3D modeling, Arduinos and Raspberry Pis.

### Yi Ting Liew

I am majoring in Computer Engineering and have experience with C, Java, HTML, CSS, MySQL, Git, and VHDL. I am still actively searching for the field that interests me and besides, I am taking a user interface project class which makes me excited to learn more through Javascript and reactJS. I would like to learn about Machine Learning Applications throughout this class along with my teammates.

### Nathan Bruck

I am majoring in Electrical Engineering and have experience with C, Verilog, and VHDL. I also have experience in circuit design/simulation/construction and PCB design. During co-ops and internships, I have worked on building a flight simulator for aircraft flight management software and designed testing rigs for aircraft components.

### Chris Hazelton

I am majoring in Cyber Security Engineering and have experience with C, Java, some Verilog, some VHDL, Bash Scripting, Powershell Scripting, Computer Networking. I have worked an internship the last 2 years at Collins Aerospace with a network security team working on API Gateways and Web Application Firewalls.

### **Strategies for encouraging and support contributions and ideas from all team members:**

To encourage contribution, the team will ensure there is an inclusive culture present within the team. Team members should encourage others to share their ideas by asking what others think. When an individual shares an idea, team members should not shut it down immediately. Individuals should push themselves to not be afraid to share their ideas. When trying to solve a problem, having a brainstorming session may be useful in order to encourage ideas from everyone and prevent groupthink.

### **Procedures for identifying and resolving collaboration or inclusion issues (e.g., how will a team member inform the team that the team environment is obstructing their opportunity or ability to contribute?):**

If there is an issue, team members should be upfront and honest about it. Team members need to listen when someone communicates there is an issue, and everyone needs to work together to develop a solution. Open communication will allow everyone to be on the same page and allow team members to make changes to address an issue.

## **Goal-Setting, Planning, and Execution**

### **Team goals for this semester:**

- Have a complete design for the project ready by the end of the semester, so the next semester can be focused on implementation.
- Define project focus
- Identify tools needed for project
- Purchase necessary hardware

### **Strategies for planning and assigning individual and team work:**

A task management board will be created to keep track of what everyone is working on, what tasks need to be assigned, and what tasks have been completed.

### **Strategies for keeping on task:**

At weekly meetings, each team member should share what they have been working on, what they plan to do next, and any problems they have come across. A task management board will be created to help the team know what each other is working on and completing.

## **Consequences for Not Adhering to Team Contract**

### **How will you handle infractions of any of the obligations of this team contract?**

Communicate with the person that they are not meeting the expectations that have been set by the team. Then, as a team, develop a resolution plan to help resolve the issue and prevent any future occurrences of the infraction.

### **What will your team do if the infractions continue?**

If the person still fails to meet the expectations, the team will then discuss with the TA and/or advisor to figure out an action plan on how to resolve the situation.

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- a) I participated in formulating the standards, roles, and procedures as stated in this contract.
- b) I understand that I am obligated to abide by these terms and conditions.
- c) I understand that if I do not abide by these terms and conditions, I will suffer the consequences as stated in this contract.

1) \_\_\_\_\_ Tyler Ingebrand \_\_\_\_\_  
DATE \_\_\_\_\_ 9/17/2021 \_\_\_\_\_

2) \_\_\_\_\_ Nathan Bruck \_\_\_\_\_  
DATE \_\_\_\_\_ 9/17/2021 \_\_\_\_\_

3) \_\_\_\_\_ Yi Ting Liew \_\_\_\_\_  
DATE \_\_\_\_\_ 9/17/2021 \_\_\_\_\_

4) Amy Wieland \_\_\_\_\_  
DATE \_\_\_\_\_ 9/18/21 \_\_\_\_\_

5) \_\_\_\_\_ Sean McFadden \_\_\_\_\_  
DATE \_\_\_\_\_ 9/18/21 \_\_\_\_\_

6) \_\_\_\_\_ Nayra T. Lujano \_\_\_\_\_  
DATE \_\_\_\_\_ 9/18/2021 \_\_\_\_\_

7) \_\_\_\_\_ Christopher Hazelton \_\_\_\_\_  
DATE \_\_\_\_\_ 9/19/2021 \_\_\_\_\_