VCU College of Engineering

Mult 25-607

Machine Learning for RF Spectrum Sensing

Team Contract

Prepared for

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Vectrus

By

Team Members

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Step 1: Get to Know One Another. Gather Basic Information.

Task: This initial time together is important to form a strong team dynamic and get to know each other more as people outside of class time. Consider ways to develop positive working relationships with others, while remaining open and personal. Learn each other's strengths and discuss good/bad team experiences. This is also a good opportunity to start to better understand each other's communication and working styles.

Team Member Name	***Strengths each member bring to the group***	***Other Info***	***Contact Info***
Shane Simes	Adaptability, Strong organization skills	Strong skills in many different coding languages, good at document/report drafting	simess@vcu.edu
Daniel Hartman	Flexibility, communication skills	Knowledgeable in HFFS, proficient at soldering, knowledgeable in multiple programming languages	hartmand2@vcu.edu
Kush Patel	Adaptable, quick to learn.	Technical knowledge in embedded systems, strong skills in various languages and tools.	Patelku2@vcu.edu
Baaba Jeffrey	Organization, adaptability, collaborative skills	Skillful in multiple programming languages	Jeffreybt@vcu.edu

Other Stakeholders	***Notes***	***Contact Info***
Yanxiao Zhao Tamer Nadeem	Was on similar project last year	yzhao7@vcu.edu tnadeem@vcu.edu
Riley Stuart John Robie		Riley.Stuart@gov2x.com John.Robie@gov2x.com

Step 2: Team Culture. Clarify the Group's Purpose and Culture Goals.

Task: Discuss how each team member wants to be treated to encourage them to make valuable contributions to the group and how each team member would like to feel recognized for their efforts. Discuss how the team will foster an environment where each team member feels they are accountable for their actions and the way they contribute to the project. These are your Culture Goals (left column). How do the students demonstrate these culture goals? These are your Actions (middle column). Finally, how do students deviate from the team's culture goals? What are ways that other team members can notice when that culture goal is no longer being honored in team dynamics? These are your Warning Signs (right column).

Resources: More information and an example Team Culture can be found in the Biodesign Student Guide "Intentional Teamwork" page (webpage | PDF)

Culture Goals	***Actions***	***Warning Signs***
Respect and Support	- Encourage open communication and active listening during meetings. - Provide constructive feedback and recognize each other's strengths.	- Team members interrupt each other frequently. - Criticism is not constructive or lacks respect.
Accountability	- Clearly define each member's responsibilities and deadlines. - Regularly review progress and address any issues promptly.	- Missed deadlines are frequent without explanation. - Lack of follow-through on assigned tasks.
Acknowledging Contributions	- Recognize and praise individual achievements during team meetings. - Provide positive feedback and encourage peers.	- Team member's efforts are consistently overlooked. - No acknowledgment of significant contributions during team discussions.

Constructive Feedback	- Offer feedback that is specific, actionable, and supportive. - Encourage a culture where feedback is welcomed and acted upon.	- Feedback is vague, overly critical, or not delivered in a constructive manner. - Team members become defensive or disengaged during feedback sessions.
Collaborative Problem-Solving	- Engage in open discussions to address issues collaboratively. - Foster an environment where all opinions are considered and valued.	- Problems are ignored or handled in isolation. - Team members shut down or dismiss others' suggestions without discussion.

Step 3: Time Commitments, Meeting Structure, and Communication

Task: Discuss the anticipated time commitments for the group project. Consider the following questions (don't answer these questions in the box below):

- What are reasonable time commitments for everyone to invest in this project?
- What other activities and commitments do group members have in their lives?
- How will we communicate with each other?
- When will we meet as a team? Where will we meet? How Often?
- Who will run the meetings? Will there be an assigned team leader or scribe? Does that position rotate or will the same person take on that role for the duration of the project?

Required: How often you will meet with your faculty advisor advisor, where you will meet, and how the meetings will be conducted. Who arranges these meetings?
See examples below.

Meeting Participants	***Frequency*** ***Dates and Times / Locations***	***Meeting Goals*** ***Responsible Party***
Students Only	Every Tuesday at 7 pm at the library in person	Actively work on projects. Bring up questions about the project.

Students + Faculty advisor	May join weekly 7 pm meetings through Zoom	Update faculty advisor and get answers to our questions (Any of the team members will scribe; Baaba will create meeting agenda and lead meeting)
Project Sponsor	Meeting Monday 9/9 in person then meeting online after that through zoom	Update project sponsor and make sure we are on the right track (Shane will create meeting agenda and lead meeting; Kush/Daniel will present prototype so far)

Step 4: Determine Individual Roles and Responsibilities

Task: As part of the Capstone Team experience, each member will take on a leadership role, ***in addition to*** contributing to the overall weekly action items for the project. Some common leadership roles for Capstone projects are listed below. Other roles may be assigned with approval of your faculty advisor as deemed fit for the project. For the entirety of the project, you should communicate progress to your advisor specifically with regard to your role.

- **Before meeting with your team**, take some time to ask yourself: what is my "natural" role in this group (strengths)? How can I use this experience to help me grow and develop more?
- **As a group,** discuss the various tasks needed for the project and role preferences. Then assign roles in the table on the next page. Try to create a team dynamic that is fair and equitable, while promoting the strengths of each member.

Communication Leaders

Suggested: Assign a team member to be the primary contact for the client/sponsor. This person will schedule meetings, send updates, and ensure deliverables are met.

Suggested: Assign a team member to be the primary contact for faculty advisor. This person will schedule meetings, send updates, and ensure deliverables are met.

Common Leadership Roles for Capstone

1. **Project Manager:** Manages all tasks; develops overall schedule for project; writes agendas and runs meetings; reviews and monitors individual action items; creates an environment where team members are respected, take risks and feel safe expressing their ideas.

Required: On Edusourced, under the Team tab, make sure that this student is assigned the Project Manager role. This is required so that Capstone program staff can easily identify a single contact person, especially for items like Purchasing and Receiving project supplies.

2. **Logistics Manager:** coordinates all internal and external interactions; leads in establishing contact within and outside of organization, following up on communication of commitments, obtaining information for the team; documents meeting minutes; manages facility and resource usage.
3. **Financial Manager:** researches/benchmarks technical purchases and acquisitions; conducts pricing analysis and budget justifications on proposed purchases; carries out team purchase requests; monitors team budget.
4. **Systems Engineer:** analyzes Client initial design specification and leads establishment of product specifications; monitors, coordinates and manages integration of subsystems in the prototype; develops and recommends system architecture and manages product interfaces.
5. **Test Engineer:** oversees experimental design, test plan, procedures and data analysis; acquires data acquisition equipment and any necessary software; establishes test protocols and schedules; oversees statistical analysis of results; leads presentation of experimental finding and resulting recommendations.
6. **Manufacturing Engineer:** coordinates all fabrication required to meet final prototype requirements; oversees that all engineering drawings meet the requirements of machine shop or vendor; reviews designs to ensure design for manufacturing; determines realistic timing for fabrication and quality; develops schedule for all manufacturing.

Team Member	***Role(s)***	***Responsibilities***
Shane Simes	Project Manager	- Primary contact for sponsor - Manage scheduling - Schedule monthly meeting with sponsor - Help with any task that's needed -
Kush Patel	Systems Engineering	- Overview of product design
Daniel Hartman	Test Engineering Finances	- Data acquisition - Design testing plan - Research for purchasing decisions - Track budget
Baaba Jeffrey	Logistics Manager	- Primary contact for advisor - Ensure all deadlines are met - Ensure everyone is on the same page and up to date with the project

Step 5: Agree to the above team contract

Team Member: Shane Simes	*Signature: Shane Simes*
Team Member: Kush Patel	*Signature: Kush Patel*
Team Member: Baaba Jeffrey	*Signature: Baaba Jeffrey*
Team Member: Daniel Hartman	*Signature: Daniel Hartman*