VCU College of Engineering

25-344 Sensor Data Fusion and Algorithm Development

Team Contract

Prepared for

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DoD Aspire

By

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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***
David Anthony	C, C++,C# , Java, LUA	Worked in tech support for 7 years.	anthonyde@vcu.edu
Paul Reid	ReactJS, NodeJS, Tensorflow, Kali Linux, Python, C#	GAN AI image modeling, ReactJS website	reidp@vcu.edu
Grace Gillam	React, Angular, Matlab maybe…., Node, SpringBoot, Java, JS, HTML, Python maybe….	Full-stack development	gillamga@vcu.edu
Jeffrey Weaver	Java, C/C++, Python,	Swift IOS dev Computer Science TA	weaverjs@vcu.edu

Other Stakeholders	***Notes***	***Contact Info***
Luo Changqing	useless, might as well send an email every week *sensor data fusion guy*	cluo@vcu.edu
Nibir Dhar	N/A	dharnk@vcu.edu

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***
Have a consistent weekly meeting time.	- Meeting at 2:00 every Friday	- Student misses first meeting - Student misses meetings afterwards
Adhering to sprint timelines	- Holding each other accountable for work at deadlines - Checking trello every thursday Trello	- Student shows up for weekly meeting with no considerable work done - Student does not talk with members of group and does not meet deadlines
Have a highly efficient code runtime and comments	- Code review weekly and everyone will assess what has been pushed - Read Algorithms textbook	- Multiple poor reviews - Is not writing a lot of code that is getting committed
Push to the GitHub on your own branch when you do something and then merge carefully	- Don't resolve merge conflicts in VSCode - just use GitHub desktop or actual GitHub	-Breaking main and not saying anything about it -Student pushes without confirming integrity

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 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	When questions arise, On Discord Voice Channel/ put question on trello board	Update trello as needed and maybe a discord message if something big happened! Actively monitor discord *(*Jefferson will record these for the weekly progress reports and meetings with advisor*)*
Students Only	Every Friday at 2:30	Review commits and pushes to github and go over any questions. Prototyping pngs will go in github Trello tasks can be added by everyone - push status reports into GitHub
Students + Faculty advisor	Every Friday at 2:00	Update faculty advisor and get answers to our questions (Jeff will scribe; Grace will create meeting agenda and lead meeting)
Project Sponsor	*N/A*	Update project sponsor and make sure we are on the right track (Responsibilities can be rotated)

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; lead 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 sub-systems 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***
David Anthony	Systems Engineer	Creating high-level design and architecture that define the system's components, their relationships, and how they interact.
Jeffrey Weaver	Logistics	following up on communication of commitments, obtaining information for the team; and documenting meeting minutes;
Paul Reid	Test Engineering	Review github commits weekly, verify that all of the code works in sync with each other.
Grace Gillam	Project Manager	Make sure everyone has tasks and also manage the project. Manage GitHub and make sure no one breaks main, also code a lot, book library rooms weekly for meetings.

Step 5: Agree to the above team contract

Team Member: *Signature: **Paul Reid***

Team Member: Grace Gillam *Signature:* Grace Gillam

Team Member: *Signature:* Jeffrey Weaver !!

Team Member:David Anthony *Signature:* David Anthony