

Development Plan

ProgName

Team #, Team Name
Student 1 name
Student 2 name
Student 3 name
Student 4 name

Table 1: Revision History

Date	Developer(s)	Change
Date1	Name(s)	Description of changes
Date2	Name(s)	Description of changes
...

[Put your introductory blurb here. Often the blurb is a brief roadmap of what is contained in the report. —SS]

[Additional information on the development plan can be found in the [lecture slides](#). —SS]

1 Confidential Information?

[State whether your project has confidential information from industry, or not. If there is confidential information, point to the agreement you have in place. —SS]

[For most teams this section will just state that there is no confidential information to protect. —SS]

2 IP to Protect

[State whether there is IP to protect. If there is, point to the agreement. All students who are working on a project that requires an IP agreement are also required to sign the “Intellectual Property Guide Acknowledgement.” —SS]

3 Copyright License

[What copyright license is your team adopting. Point to the license in your repo. —SS]

4 Team Meeting Plan

The team will meet weekly on Tuesdays from 3:00pm to 4:00pm virtually on Discord or in person on campus if needed. The team will meet with the industry advisor biweekly on Thursdays from 2:30pm to 3:30pm. These meetings with the industry advisor will be conducted either online on Microsoft Teams or in person on campus.

The meetings will be structured as follows:

1. An agenda prepared by the meeting chair (who rotates among team members each week) will be made to use as a guide for the meeting.
2. The team will go over any announcements or completed To-Dos from the previous week’s meeting if needed.
3. Each member will present what they have worked on so far and ask the remaining group members for feedback or any questions if needed.
4. The team will discuss and document any decisions needed about the deliverables or the project.

5. Any concerns/questions will be documented for the next team meeting or for the next industry advisor meeting.

5 Team Communication Plan

[Issues on GitHub should be part of your communication plan. —SS]

6 Team Member Roles

The team will work collaboratively to develop and refine this project. To ensure a clear division of tasks, each team member have been assigned roles that align with their areas of expertise and contribute to achieving the goals of this project. These roles will rotate throughout the year to prevent overspecialization and to ensure that all members can gain experience and knowledge in every aspect of the project.

The defined roles and responsibilities per team member is as follows:

- **Fiza Sehar:** *Developer, Documentation, Model Training Specialist*
Fiza will be responsible for developing features and maintaining documentation for the project. She will also be leading the model training for the project to ensure efficient and accurate performance.
- **Dhruv Sardana:** *Developer, Documentation, Full-Stack Specialist*
Dhruv will work across both frontend and backend development, and in ensuring a seamless integration and functionality. He will also support in writing documentation for this project.
- **Nawaal Fatima:** *Developer, Documentation, Data Specialist*
Nawaal will also work on developing features with a focus on data management, pre-processing, and analysis in this project. She will also contribute in the documentation of the project.
- **Moly Mikhail:** *Developer, Documentation, Backend Specialist*
Moly will be handling the APIs, database management, and system logic focusing on the backend of the project. She will also support in the documentation of the project.
- **Casey Francine Bulaclac:** *Developer, Documentation, Frontend Specialist*
Francine will be responsible for the design and implementation of the user interface, ensuring correct usability and accessibility while assisting in the project documentation.

7 Workflow Plan

- How will you be using git, including branches, pull request, etc.?

- How will you be managing issues, including template issues, issue classification, etc.?
- Use of CI/CD

8 Project Decomposition and Scheduling

Project Schedule:

Deliverables	Due Date
Problem Statement, Proof of Concept, and Development Plan	Week 04
Software Requirements Specification and Hazards Analysis (Revision 0)	Week 06
Verification & Validation Plan (Revision 0)	Week 08
Design Document (Rev-1)	Week 10
Proof of Concept Demonstration	Week 11 + 12
Design Document (Revision 0)	Week 16
Project Demonstration (Revision 0)	Week 18 + 19
Verification & Validation Report (Revision 0)	Week 22
Final Demonstration (Revision 1)	Week 24
Final Documentation	Week 26
Capstone EXPO	Week 26

- How will you be using GitHub projects?
- Include a link to your GitHub project

[How will the project be scheduled? This is the big picture schedule, not details. You will need to reproduce information that is in the course outline for deadlines. —SS]

9 Proof of Concept Demonstration Plan

What is the main risk, or risks, for the success of your project? What will you demonstrate during your proof of concept demonstration to convince yourself that you will be able to overcome this risk?

10 Expected Technology

[What programming language or languages do you expect to use? What external libraries? What frameworks? What technologies. Are there major components of the implementation that you expect you will implement, despite the existence of libraries that provide the required functionality. For projects with machine learning, will you use pre-trained models, or be training your own model? —SS]

[The implementation decisions can, and likely will, change over the course of the project. The initial documentation should be written in an abstract way; it should be agnostic of the implementation choices, unless the implementation choices are project constraints. However, recording our initial thoughts on implementation helps understand the challenge level and feasibility of a project. It may also help with early identification of areas where project members will need to augment their training. —SS]

Topics to discuss include the following:

- Specific programming language
- Specific libraries
- Pre-trained models
- Specific linter tool (if appropriate)
- Specific unit testing framework
- Investigation of code coverage measuring tools
- Specific plans for Continuous Integration (CI), or an explanation that CI is not being done
- Specific performance measuring tools (like Valgrind), if appropriate
- Tools you will likely be using?

[git, GitHub and GitHub projects should be part of your technology. —SS]

11 Coding Standard

[What coding standard will you adopt? —SS]

Appendix — Reflection

[Not required for CAS 741 —SS]

The purpose of reflection questions is to give you a chance to assess your own learning and that of your group as a whole, and to find ways to improve in the future. Reflection is an important part of the learning process. Reflection is also an essential component of a successful software development process.

Reflections are most interesting and useful when they're honest, even if the stories they tell are imperfect. You will be marked based on your depth of thought and analysis, and not based on the content of the reflections themselves. Thus, for full marks we encourage you to answer openly and honestly and to avoid simply writing "what you think the evaluator wants to hear."

Please answer the following questions. Some questions can be answered on the team level, but where appropriate, each team member should write their own response:

1. Why is it important to create a development plan prior to starting the project?
2. In your opinion, what are the advantages and disadvantages of using CI/CD?
3. What disagreements did your group have in this deliverable, if any, and how did you resolve them?

Appendix — Team Charter

[borrows from [University of Portland Team Charter](#) —SS]

External Goals

[What are your team’s external goals for this project? These are not the goals related to the functionality or quality of the project. These are the goals on what the team wishes to achieve with the project. Potential goals are to win a prize at the Capstone EXPO, or to have something to talk about in interviews, or to get an A+, etc. —SS]

Attendance

Expectations

[What are your team’s expectations regarding meeting attendance (being on time, leaving early, missing meetings, etc.)? —SS]

Acceptable Excuse

[What constitutes an acceptable excuse for missing a meeting or a deadline? What types of excuses will not be considered acceptable? —SS]

In Case of Emergency

[What process will team members follow if they have an emergency and cannot attend a team meeting or complete their individual work promised for a team deliverable? —SS]

Accountability and Teamwork

Quality

[What are your team’s expectations regarding the quality of team members’ preparation for team meetings and the quality of the deliverables that members bring to the team? —SS]

Attitude

[What are your team’s expectations regarding team members’ ideas, interactions with the team, cooperation, attitudes, and anything else regarding team member contributions? Do you want to introduce a code of conduct? Do you want a conflict resolution plan? Can adopt existing codes of conduct. —SS]

Stay on Track

[What methods will be used to keep the team on track? How will your team ensure that members contribute as expected to the team and that the team performs as expected? How will your team reward members who do well and manage members whose performance is below expectations? What are the consequences for someone not contributing their fair share? —SS]

[You may wish to use the project management metrics collected for the TA and instructor for this. —SS]

[You can set target metrics for attendance, commits, etc. What are the consequences if someone doesn't hit their targets? Do they need to bring the coffee to the next team meeting? Does the team need to make an appointment with their TA, or the instructor? Are there incentives for reaching targets early? —SS]

Team Building

[How will you build team cohesion (fun time, group rituals, etc.)? —SS]

Decision Making

[How will you make decisions in your group? Consensus? Vote? How will you handle disagreements? —SS]