

Client Expectations and Implementation Guidelines Document

Updated: 2021-08-07 10:00 PM

Your capstone project will be extremely demanding throughout this semester but for the teams that persist and go the extra mile, these next few weeks will be a strongly rewarding industry experience.

This document outlines the expectations for each team and individual students working on capstone projects for the client for this semester. Please ensure you read this document carefully and follow as outlined.

Contents

Client Expectations	1
General.....	1
Contribution.....	2
Meetings	2
Communication.....	2
Events.....	3
Usage Agreement.....	3
Hand-over Deliverables.....	4
Reference Material	4
Implementation Standards	5

Client Expectations

General

Each team has been provided with a scope for their project which is to be used as reference throughout the semester. Students are expected to do lots of research to ensure the best solutions are found, with research recorded in the appropriate repository and format. Documentation must be included with all work completed in a format that is legible and understandable.

The client reserves the right to amend the scope of the project throughout the semester based on team progress and unforeseen challenges that may arise. The client reserves the right to communicate problems with tutors to be raised with the course coordinator to take academic action if deemed essential for lack of progress or not meeting expectations.

Contribution

The client expects that students meet and exceed the scope and requirements outlined in the provided documents to achieve the best grade in the course. Each individual student in the team is expected to contribute to the project. Each student is expected to work on the project for approximately 10+ hours (6 cp) or 20+ hours (12 cp) per week, excluding meetings. That is a total contribution of 50 to 100+ hours per week for each team.

Contribution to the project will be tracked through Bitbucket and GitHub (there should be constant daily commits being made by all team members), communication (activity on Discord Server) and through all updates provided to the client. This information will be used at the end of the semester when it comes to evaluating everyone's contribution and final grade for the capstone unit.

Meetings

Each team is expected to attend two client meetings per week. **The meeting schedules will be given shortly.** All members of the team are expected to attend each meeting. These meetings will be held on Discord in the Voice Channels. Please wait in these respective Channels until the client arrives, or in the Waiting Room Voice Channel if the client is currently in another meeting. Should a problem arise, please message accordingly on Discord.

Each team is expected to submit and present a 1-minute video summary of their work-to-date for each meeting. These videos should be uploaded to YouTube as an [unlisted video](#), which will then be shared to the client and presented during the meeting. These videos must also follow the template outlined in these [Google Slides](#). For each meeting, simply copy the slides and insert the required information as detailed in the 'notes' section.

To submit your video, please fill out and submit the Google Form (link for semester sent via email) for each meeting. This form will require you to submit the link to both your team's video and Google Slides. Only one member per team is required to submit your video for each meeting. Multiple submissions for a single meeting is allowed, but only the last submission will be accepted.

Feedback will be given after each video during the meeting.

Any technical questions that arise should be asked during these meetings. Please ensure you prepare your questions before the meeting to save time.

Each team is to present and submit the plan for the next 'sprint' period at the end of each meeting. This should contain a list of tasks that each team member will work on for the next time period and outline what is expected to be delivered at the next meeting.

Please read the [Google Slides](#) template for more details about the structure of client meetings.

Communication

Email – the client prefers email communication for official documents, scope questions and communicating with tutors. The client will also respond to technical and scope questions via email, however, would prefer that the Discord Server (Sydney 2021) is used.

Discord – the client has selected Discord as the preferred tool to use throughout the semester for questions and notices. Teams will also be collaborating/discussing/sharing ideas with other teams

Expectations and Implementation Guidelines Document USYD Capstone 2021

through the platform. There is a total of 30 capstone teams taking part in this initiative. This kind of collaboration has been done before and it has been very positive for students and opens several different opportunities, such as meeting tech influencers, established developers and other technology specialists.

Join Discord – Sydney 2021: Change your name to your team name (assigned by the client, not the University) and your real name. For Example: *CS32.2 John*

Events

Students are expected to participate in the following activities throughout the semester as part of the core component of this project and to ensure understanding of the project.

Fortnightly Presentations – Throughout the semester, teams will be presenting their progress to other teams. This is a good way to practice your presentation skills while also showing off any progress you have made. It is an expectation that all teams take part when these presentations are held.

Venture Café - Students will be required to participate and present at Venture Café sessions when they arise throughout the semester. It is an online meeting community where different creators, start-up owners meet and discuss what they are doing with their own projects. It works like a 'drop-in session' where people may only join for a short amount of time or could stay for longer. Teams will be sharing your progress and discoveries through this platform. Teams are welcome to attend Venture Cafe on any Thursday to get a feel for the platform and chat with other technology people.

<https://venturecafesydney.org/>

Usage Agreement

You will be able to use the IP in this project for your academic purposes and further research. By engaging in this project HGV and it's partners will retain exclusive commercial use of the IP generated through this project.

Hand-over Deliverables

These are the expected document(s) and other items that are expected to be delivered to the client at the conclusion of the project.

- **Written Report** detailing how your solution solves the problem using your selected technology. This should be included with your University Report, please submit your University report too in PDF format.
- Clean **Video Demonstration** showing your working solution both in a simulated environment and real-world scenario.
- All **documentation** is to be created and written in Markdown, then build with a formatted document library such as Readthedocs for portability and usability. Documentation for:
 - Environment set up.
 - Installation
 - Usage
 - Code
 - **Jupyter Notebooks** – All final code that involves testing a system (e.g. detecting a turning sign, building an AI in TensorFlow) should be published and submitted as a Jupyter notebook.
- Fully documented and working code on Client's GitHub.

Reference Material

All reference materials will be provided by the client to teams via Discord or email.

Implementation Standards

Your team must use the below frameworks, environments, and packages for the duration of your project. This is to maintain consistency across the company. This list is for all teams, you may not be using all of the below for your particular project.

Description/Task	Frameworks/Language	Tutorials/Resources
Artificial Intelligence and Neural Networks	Programming Language: Python 3.9.x Frameworks: TensorFlow 2.5.x Keras Drivers/API: NVIDIA 471.XX CUDA 11.2 cuDNN 8.1 Recommended OS: Ubuntu 16.04 LTS Ubuntu 20.04 LTS	Udacity: Intro to TensorFlow for Deep Learning Docs: TensorFlow v2.5 Installing CUDA Download Ubuntu
Code Editing	Recommended Code Editor: Microsoft Code Jupyter Notebook (Conda) Notepad++	Installing Microsoft VS Code Installing Jupyter Notebook
Web Development	Front-End: ReactJS + NodeJS Bootstrap 5 jQuery Mobx Back-End: ExpressJS + NodeJS Databases: PostgreSQL	Tutorial: React Tutorial: React Bootstrap Tutorial: React with JQuery Tutorial: React with Express Tutorial: Express with PostGres Tutorial: React with MobX

Simulation	Simulation Environments: Unity 2021 Drone Tools: Gazebo 11+ (Drones Only) ArduPilot	Download Unity Tutorials: Unity Installing Gazebo Tutorials: Gazebo Tutorial: ArduPilot with Gazebo
Virtualisation	Environments: Docker	Tutorial: Docker Porting to Docker
Documentation	Read The Docs with Sphinx (Offline)	Documentation: Readthedocs
Testing	GitHub Continuous Integration	GitHub: CI Docs

End of Document