

# CS Capstone Design

## Technical Demo Grading Sheet (100 pts)

### TEAM: F1/10 YellowTails

**Overview:** The main purpose of the “Technical Demos” is to very clearly communicate the extent to which the team has identified key challenges in the project, and has proven solutions to those challenges. Grading is based on how complete/accurate the list of challenges is and how convincingly and completely the given demos cover the given challenges.

This template is fleshed out by the team, approved by CS mentor, and brought to demo as a grading sheet.

### Risky technical challenges

Based on our requirements acquisition work and current understanding of the problem and envisioned solution, the following are the key technical challenges that we will need to overcome in implementing our solution:

#### **C1: Managing workspaces for different ROS projects and robots.**

We want our GUI to be scalable and work with multiple ROS projects in addition to our clients code base.

#### **C2: View currently set ROS workspace and it's files content.**

ROS requires that the workspace is sourced correctly and we want ROS's filesystems needs to be handled in the background.

#### **C3: Connect to car and run ROS from the GUI**

The current workflow runs ROS directly on the car but now we want our GUI to connect and start it automatically

In this section, we outline the demonstrations we have prepared, and exactly which of the challenge(s) each one of them proves a solution to.

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### **Demonstration 1: Creating a Project Profile**

Challenges addressed: C1, C2

Flight Plan: Step by step overview of demo

1. First we launch our GUI and get greeted with the profile picker
2. We set the IP address and workspace folder
3. The file tree window will populate
4. We will then select a file and its content will show up in the editor window
5. Finally we will click the Run Sim button to demonstrate we sourced the workspace

Evaluation:

- ✓ Convincingly demo'd each of listed challenges?
- ✓ Other evaluative comments:

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**Demonstration 2: Connecting to the car**

Challenges addressed: C1, C3

Flight Plan: Step by step overview of demo

1. We will click the start car button, this will start ROS on the car and spin the tires

Evaluation:

- ✓ Convincingly demo'd each of listed challenges?
- ✓ Other evaluative comments:

**Other challenges recognized by not addressed by demo:**

If there were challenges you listed earlier that were *not* covered by a demo, list here. This will hopefully be a short list...but better to be clear about where you are. If you have items here, you could list (if applicable) any pending plans to reduce these risks.