

Hacking the Deep Learning Robot (to work)

Requirements Agreement Contract

this is a contract between the client (Prof. Giovanni De Gasperis), and the contractor (Deep Learning Robot Team), which asserts that the contractor is to provide proper software for this following robot under terms and requirements mentioned later in the contract.

the deep learning robot provided and properiated by the client according to the following technical specifications.

Technical Specifications:

the deep learning robot consists of the following hardware pieces:

1. Kobuki Mobile Base
2. Nvidia Tegra K1 Board
3. Speaker/Microphone/Bluetooth/Wifi modules
4. Asus Xtion Pro 3D Depth Camera

the Nvidia Tegra K1 Board comes preloaded with:

1. Google TensorFlow
2. Caffè
3. Torch
4. CUDA
5. cuDNN
6. Ubuntu 14.04.1
7. Robot Operating System (ROS) Indigo

Software Requirements:

the software development cycle is consistant of 3 stages, which are summarized roughly as the following:

Phase 1: testing the robot's basic functionality, in order to learn how to interface with all the components and make them work together.

Phase 2: achieving basic robot mobility, and achieving sensory input.

Phase 3: integration of sensory information and motor functions then design of the decision making process.