



**Activity:**

Instructions to execute AxoloTec Challenge

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The following document shows how to execute the whole project of AxoloTec Challenge, with the purpose that everyone that is allowed to access the files, is able to execute the following instructions to run the code, this instructions assume that the neural network code and model are loaded in a laptop or computer and the remaining codes are on the Jeson Nano device:

1. First we need to open three terminals in order to run all the codes to make the robot move.
2. Two of the terminals need to be a SSH connection and the remaining one must be connected by the “export ROS\_MASTER\_URI” and “export ROS\_IP” methods.
3. It is important that the terminal that does not run SSH connections is the one that runs the neural network since, as it is too heavy it needs a more powerful device to run smoothly.
4. In one of the terminals with the SSH protocol you need to run the “roslaunch ros\_deep\_learning video\_source\_ros1.launch” with a resize on the image to 320x320.
5. Now we need to move to the terminal that does not have SSH to run the neural network, for the following commands we assume that you named the ROS packages the same as us. Run “roslaunch beginner\_tutorials Yolo\_v5.py” as this will run the neural network.
6. And for the final SSH terminal you need to run “roslaunch axolobot Line\_Follower.py” to make all the codes connect between them and make the logic controller at the same time.

With all these instructions you should be able to run the Axolotec final project with no problem.