note

Autonomous Car Info

Updated 3/7/2018

Driver Requirements for undergrads:
The autonomous car must be driven by a person holding a Northeastern University Driver Certificate.
Eligibility requirements:

1. You need to be 21 or older.
2. Must possess a driver's license valid in the Commonwealth of MA.
3. Must have a clean driving record for the past 3 years (no moving violations and/or at fault accidents).
4. Must provide a copy of driving record from the Registry of Motor Vehicles
5. Must not have any prior record of motor vehicle homicide
6. Pass the online test
7. Pass the road test

To begin your exam, follow the directions below. Plan to put aside 75-minutes for the exam. Attached are two helpful documents for the exam.

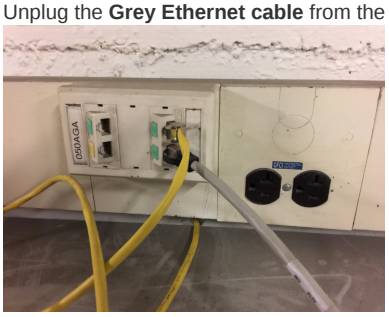
1. Read these documents (located under resources):
   - Rules_of_the_Road
   - The_Positive_Approach_to_Safe_Driving
2. Go to https://learn.ue.org/S62XU789661/NEUDriverSafety
3. First-time users should select the option to Register Now on the right side of the screen. For more detailed instructions on the registration process, see be
   1. Register with first name, last name and email. Leave the 2 optional fields blank.
   2. Look for the temporary password sent to your email and use it to create new password and a secret question and answer.
   3. When you login the portal should show "My Courses", click on driver safety.
   4. Click launch on following page(s) and the module will launch in a new window.
   5. Use the 'Next' and 'Prev' buttons on the bottom right of the page to navigate through the module.
4. **IMPORTANT**: After you have completed and passed the exam, e-mail a photocopy of your (1) certificate of completion, (2) NUID card, (3) valid driver's lic your driving record from your home state to both Darlene Montgomery (d.montgomery@northeastern.edu) and Michael Jocelyn (m.jocelyn@northeastern Darlene will then schedule your road test.
5. Finally, email your TA and instructor the certification documents.

Vehicle Information:

1. The car is a Lincoln MKZ modified with a Dataspeed ADAS package.
2. Reservations:
   Here is a link to the google calendar for the vehicle. Any team that wants to use it needs to email me and get a confirmation. Please give me at least 24 h the vehicle. Also please try to limit your use between 9-5pm. If you absolutely have to use the vehicle outside of those hours, please plan to exchange the Finally, to ensure fair usage, limit the use of the vehicle for about 2 hrs at a time so that all teams have a chance to use it. When reserving the vehicle sen information:
   Date:
   Driver (Graduate Student):
   Navigator:
   Time Checked out:
   Expected Time back:
   Cell Phone 1:
   Cell Phone 2:
3. Location:
   The car is located in a locked cage in the basement of the Gainsborough Garage (You need to enter through the back alley - see map). Please note the c the basement along with all other NEU vehicles and the only sure way to get there is from the back alley. The key ring has a key to enter the garage (in ca and another key to open the cage.
4. Instructions on using the car:
   1. Turn the car ON, make sure it can move back and forth and then set it to P-Park
   2. Once the car is on, make sure that the inverter in the trunk is ON (green light)

3. Unplug the power from the extension cable and plug it into the Inverter.

4. Unplug the **Grey Ethernet cable** from the wall and stow it.



5. DRIVE!!! Avoid turning Off the car while you are using it, leave it in Park as much as possible. When idling the car turns off automatically every 15 m clock, you can shift the car to Drive and then back to Park.
6. **Once done, do not turn off the car yet.** Open the trunk and move the power from the inverter back to the wall outlet.
7. Plug the grey ethernet connector back into the wall
8. Make sure it is turned on (check monitor)
9. Ping car.coe.neu.edu to make sure that the server is up and connected to the network.

5. Data Collection -
   1. Use the eece5698-sp18 account on the server for any experiments. Get the password in class or from your TA.
      The above account doesn't have admin privileges, so if you need anything installed on on the server, please contact your TA.
   2. To collect image data from the cameras, in a terminal run:

      ```
      roslaunch datacollection_neu acquisition.launch
      ```

   3. To collect Lidar data and car data, power on the port and starboard lidars from the touch screen in the center console. Then in a terminal run:

      ```
      roslaunch agv agv_system.launch
      ```

   4. To record any of the data use rosbag record. Note if you record the full dataset, the bagfiles will get to 100s of GBs very quickly. So thoughtfully sele like to record.
   5. **Offload your data**. Disk space on the server is very limited, so transfer and delete your data immediately. All teams are allowed to delete other tean on space. So do not leave your data on the server. You can use the USB hub in the backseat to plug in your drive OR you can transfer via ethernet u server's address when plugged into the ethernet is **car.coe.neu.edu**

6. Gas - If the tank is less than half, please top it off and give Hanu the receipt.
7. Once done, email Vikrant Shah with the following information:
   Time Checked back in:
   Gas Gauge out:
   Gas Gauge in:
   Key Returned to (next driver or back in lab):

Contact Information:
Vikrant Shah
Email: shah.vi@husky.neu.edu
Cell: 281-804-2741

lab3 lab4 lab5 project logistics

Updatec

followup discussions *for lingering questions and comments*