

A brief note on ROS 1 vs. ROS 2, based on in-class discussion:

Based on our discussion in the lecture on February 3rd, this semester we will primarily be based on **ROS Noetic + Ubuntu 20.04 LTS**. You have the option to use **ROS 2 Jazzy + Ubuntu 24.04 LTS**, if you have difficulty installing the older systems (e.g., due to M-series chips used in Mac computers). Project write-ups and starter code for both ROS versions will be provided on the course website.

Please note:

1. Either option does **not** affect the difficulty of the projects. The main consideration is which version your computer hardware supports better, or whether you have prior related experience.
2. Once you're familiar with one ROS version, picking up the other should be quick, since they share the same core robotics concepts, including nodes, topics, services, and message types, maintaining a similar, familiar workflow for developers. In many cases, including our research, ROS 1 is often used within ROS 2 through the `ros1_bridge` package.
3. ROS 1 officially ended its long-term support last year, and this is the first time we are using ROS 2 for this course (although my former RAs and TAs have tested the projects several times).
4. Since ROS 2 cannot currently be deployed on physical Triton robots due to hardware compatibility issues, we have not created a Triton robot simulation for ROS 2. Instead, we use a different, commonly used educational robot, the TurtleBot 3 Burger, in the starter code for the ROS 2 version of the individual projects.
5. As this is the first semester offering the ROS 2 version, the TAs and graders have relatively limited experience with the ROS 2 projects. Fortunately, ROS has a very supportive community and a highly detailed wiki.

As the instructor, I'm happy to provide this flexibility, and I expect more dynamic questions about ROS 2, given that it is a relatively new open-source project. However, this flexibility will significantly increase the teaching team's workload in terms of question answering and grading. I therefore appreciate your patience with grading, as well as peer mentoring to help answer one another's questions on Piazza, along with support from the TAs and graders.