AuE 8230: Autonomy Science and Systems. Spring 2023

Department of Automotive Engineering, Clemson University

Dr. Venkat Krovi, Dhruv Mehta and Sumedh Sathe

ASSIGNMENT 1

(Due: Tuesday, 17th January 2023, 12:59 PM)

TASK 1:

You have been briefed about ROS as a convenient practical software framework for robot application development, both in an educational as well as an industrial deployment setting. Different variants of ROS exist, choice of which is contingent upon requirements of the application. Keeping your choices limited between ROS, ROS2 and ROS Industrial, perform a critical analysis (5-10 slides) focusing on:

- Which kind of robots use which system?
- How are they deployed?
- What ancillary support resources are available?
- By what features can they be differentiated? Study the pros and cons of each.
- Develop a specifications-based comparison to create a selection/decision table intended to allow for ultimate recommendation

SUBMISSION:

You will submit a presentation deck (5-10 slides in total) for this assignment. The assignment is due before class on 17th January 2023.