

CEG5306 Robotics and Embodied AI:

Homework #5

Important note: the due date is **14/11/2025**. You should submit your scripts to the folder in CANVAS. Late submission is not allowed unless it is well justified. Please include the Python code in the appendix of the report if computer experiment is involved.

Q1. (10 Marks)

Please read the actor-critic algorithm code used in the drone flying example from Homework #3.

Describe the **network architecture** of both the **actor network** and the **critic network**, including the type of neural network, the number of layers, and the dimensions (size) of each layer. Please indicate where you found this information in the code.

Hint:

- The learning algorithm library used in the drone project is stable-baselines3 v2.0.0 ([package info](#))
 - The detailed choice of the algorithm can be found in the file in learn.py ([link](#))
- To explore the source code to answer the question, you can clone the Stable-Baselines3 v2.0.0 repository using the following command:
 - `git clone https://github.com/DLR-RM/stable-baselines3.git`
 - `git checkout v2.0.0`

Q2. (10 Marks)

Based on the provided code, briefly explain the **loss function** coded in that chosen actor-critic algorithm.

A kind hint:

For Q2, you might need to use the concepts that will be taught in Lecture 11.