

In this homework, you are invited to provide a solution for the Multi-UAV conflict prediction problem described in the seminar "Multi-UAV conflict risk analysis", using the data set available in the link below.

<https://drive.google.com/file/d/1y1cYzIRa10z35FT9Yp7bTVCAtitlhe0n>

To solve the problem, you can use any method, any tool, any programming language. Exception: you cannot use solutions based on neural networks, as this will be the topic of Homework 2. It is your choice to pre-process the input data in any way it is useful for the method you are using.

The output of the assignment should be:

- 1) A report (PDF file of about 10 pages excluding code, with your name and matricola code) describing the implemented solution: how data have been preprocessed, which method/algorithm has been used, which configurations of the method have been tried, description of the evaluation method used, and obtained results using appropriate metrics. The report should compare at least two different solutions, obtained, for example, by changing the value of some hyper-parameter of the used method, by testing different ways of preprocessing, etc. Conclusions should discuss the comparative results. Computational training time can also be interesting to report and comment.
- 2) A ZIP file with the code you used in the project.

Submit the two files through this assignment, make sure to turn the assignment in, otherwise it will not reach the teachers. NOTES: 1) do not put the PDF report into the ZIP file! 2) no other submission mode will be considered (e.g. do not send submissions by email).

This assignment must be individual (i.e., one submission for each student) and original (i.e., not equal or too similar to other works either from other students in this class or from other sources). Evaluation will be based on the appropriateness and correctness of the described solution, regardless of the numeric results (as long as they are reasonable). The results on the blind test also do not affect the evaluation of this homework.

Deadline: 9/12/2022 11:59 PM CET