



Advanced Programming Laboratory Instructions

- 2 exercises will be held during laboratory sections.
- Second exercise will be done individually and grading will be done according to that performance.
- Exercises will be about the topics which have been held by Prof. Dr. Selim Akyokuş in that week.
- **Submissions after Friday 6:30 PM will not be accepted.**
- **For second exercise, any type of plagiarism is not allowed.**
- Please submit your exercises as YourDept_StudentID_Lab#.py and zip it as YourDept_StudentID_Lab#.zip
- Your codes should have comments. Codes with no comments will not receive full credit.
- For any questions, please contact me via Teams.

Exercise 1 (Quiz Question)

a) *(MNIST Handwritten Digits Hyperparameter Tuning: Changing the Kernel Size)*

In the MNIST convnet that has been presented, change the kernel size from 3-by-3 to 5-by-5. Re-execute the model. How does this change the prediction accuracy?

b) *(MNIST Handwritten Digits Hyperparameter Tuning: Changing the Batch Size)*

In the MNIST convnet that has been presented; we used a training batch size of 64. Larger batch sizes can decrease model accuracy. Re-execute the model for batch sizes of 32 and 128. How do these values change the prediction accuracy?