TBMI26 – Computer Assignment Reports  
Boosting

Deadline – March 14 2021

Author/-s:

In order to pass the assignment you will need to answer the following questions and upload the document to LISAM. Please upload the document in PDF format. **You will also need to upload all code in .m-file format**. We will correct the reports continuously so feel free to send them as soon as possible. If you meet the deadline you will have the lab part of the course reported in LADOK together with the exam. If not, you’ll get the lab part reported during the re-exam period.

1. **Plot how the classification accuracy on training data and test data depend on the number of weak classifiers (in the same plot). Be sure to include the number of training data (non-faces + faces), test-data (non-faces + faces), and the number of Haar-Features.**
2. **How many weak classifiers did you use when training? How many of them did you use for the final strong classifier? Motivate your choices.**
3. **What is the accuracy on the training data and test data after applying the optimized strong classifier? Discuss your choice of hyperparameters and how they influence the accuracies.**
4. **Plot the Haar-features selected by your classifier (one for each weak classifier). If you have many weak classifiers, select some representative subset. Can you think of why they would be useful for classifying faces?**
5. **Plot some of the misclassified faces and non-faces that seem hard to classify correctly. Why do you think they are difficult to classify?**
6. **Are your results reasonable? Can you think of any way to improve the results?**
7. **Can we expect perfect results? Motivate your answer.**