Syllabus for **INF519 Machine Learning 2**

1) Course description

The main objective of this course is to guide students to have an advanced level on Machine Learning. The topics addressed in this course are discriminative models and generative models, Gaussian Mixture Models (GMM), Hidden Markov Models (HMM) and variational autoencoders (VAE).

2) Course program

Session 1 (September 30&October 2, 2020)

[Lecture 1]
1) Discriminative models and generative models

[Lab 1 / Homework 1]
1) Discriminative models and generative models

Session 2 (October 8, 2020)

[Lecture 2]
1) Gaussian Mixture Model

[Lab 2 / Homework 2]
1) HW2: Gaussian Mixture Model

Session 3 (October 16&17, 2020)

[Lecture 3]
1) Hidden Markov Model

[Lab 3 / Homework 3]
1) Hidden Markov Model

Session 4 (October 30, 2020)

[Lecture 4]
1) Variational autoencoder

[Lab 4 / Homework 4]
1) Variational autoencoder

3) Course evaluation

Continuous Evaluation: 50% (Homework: 50%)
Exam: 50%

4) Details about homework

- Due: Look at the course program for each homework due
- Evaluation: code and explanation about the code (in groups of two or three people)

Remark 1: Only groups of two or three people accepted. Forbidden groups of larger number of people.
Remark 2: No late homework will be accepted.
Remark 3: No plagiarism. If plagiarism happens, both the lender" and the borrower will have a zero.
Remark 4: Code yourself from scratch. No homework will be considered if you solve the problem using any ML library.
Remark 5: Do thoroughly all the demanded tasks.

5) Absences

- Presence is mandatory.
- To excuse absences, official documents are required.
- Non-excused absences for Homework evaluations will imply zero grade.