

Module 2: Application of Machine Learning Algorithm for Agriculture

Instructor:

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Time: Summer Term 2018

Delivery: This module will be comprised of 6 weeks of 2 hour lectures/labs dealing with advanced supervised and unsupervised machine learning of MATLAB and Weka:

Background

This module will introduce graduate students in agriculture to the syntax of MATLAB, Peltarion and Weka. Particular topics especially supervised machine learning (SVM, KNN, etc.) and unsupervised machine learning (Fuzzy clustering, K-means clustering, Gaussian mixture model, etc.) which provide algorithms, pre-trained models, and apps to create, train, visualize, and simulate algorithms. MATLAB, Peltarion and Weka would be utilized as programming frame. The module ends with project work and report submission by each student, aiming at solving a problem related to his/her thesis or future project development.

Evaluation: Assessment of this module will be in lab coding, the form of weekly assignments and a single report to be submitted at the end of module.

- Laboratory exercise coding (20%);
- Weekly assignment (30%); and
- Individual project work (includes presentation and report) (50%).

Prerequisites:

Enrollment in graduate program