

Dr. Wannes Meert, KU Leuven, Belgium.

Date: May 3

Lecture: Learning, evaluating and verifying tree-based models;

Brief lecture outline: In this lecture we will dive into tree-based models such as Decision Trees, Random Forests, Boosted Trees. They are among the most popular methods for learning predictive models from data. This is because they are very fast to train and support various interpretation and verification methods. This course will introduce the basic methods used for learning (ensembles of) trees, how to deal with large datasets, and how to use interpretation methods.

Working programming language will be Python.

Michael Fairbank, University of Essex, UK.

Date: May 4

Lecture: Recurrent neural network and their application;

Brief lecture outline: During lecture feed forward neural and recurrent neural networks, as well as LSTM networks will be discussed. Application of RNNs to natural language processing (sentiment analysis; question and answering), text generation. Application to time series will be covered as well.

Working programming language will be Python.

Mindaugas Kavaliauskas, Kaunas University of technology, Lithuania;

Date: May 5

Lecture: Data classification using support vector machine;

Brief lecture outline: Support vector machine (SVM), a popular machine learning method, is introduced to the students. A few steps in the development of the method are presented. Students are provided with motivation and visualization for every of these steps. Usage of the method for big data analysis is discussed. The course alternates theory and exercises.

Content:

- SVM as a linear maximum margin classifier
- Soft margin SVM
- Using kernel for non-linear classification
- Other variations of SVM: support vector regression, one-class classifier
- SVM for Big data analysis

Working programming language will be Python.

Representatives of the companies:

Edita Lukaševičiūtė, Viktorija Grybauskaitė (Bank of Lithuania): Big Data and Central Banks: from data governance to enhancing financial stability assessments

Agnė Reklaitė (Vinted): Experimentation at scale