Pattern Recognition and Machine Learning

Subject area: Computer Science/ICT

University:	CTU
Level:	BA2, BA3, BA4, MA all years, PhD
Teaching mode:	hybrid: some students participate online, other students attend real-life
Instructor(s):	Jiří Matas

Short description

The basic formulations of the statistical decision problem are presented and the basic principles and practice of machine learning explained. The course covers both well-established and advanced classifier learning methods, as Logistic Regression, AdaBoost, Support Vector Machines, Decision trees, Nearest Neighbour and Neural Nets, including Deep nets.

Full description

https://fel.cvut.cz/en/education/bk/predmety/43/58/p4358506.html
https://cw.fel.cvut.cz/b211/courses/be5b33rpz/lectures/start

Learning outcomes

The student will learn to formalize statistical decision making problems, to use machine learning techniques and to solve pattern recognition problems.

General information

Contact hours per week:	2 hours synchronous lectures + 2 hours synchronous seminars
Total workload:	150 (in student hours for the whole course)
ECTS credits:	6
Language:	English
Course start date:	19 September 2022
Course end date:	15 January 2023

Add. info about start date:	Start course date refers to start of the semester at CTU. Schedules will be available 1-2 weeks before semester starts. Lectures are taken place from 19.9.2022 until 15.1.2023. Examination period from 16.1.2023 until 19.2.2023.
Weekly teaching day/time:	
Time zone:	CET (Denmark, Germany, France, Netherlands, Switzerland, Czech Republic)
Further information:	Lecture recordings will be available to students.
Prerequisites:	Basics of linear algebra, calculus, probability theory and statistics
Activities and methods:	Lectures, Seminars, Self-study, Practices, Exercises, Tutorial sessions
Presence on campus:	

Final examination

Form:	written+oral+assignment
Date:	
Location/format:	online
Re-sit possibility:	yes
Transcript available:	end of semester
Add. info/requirements:	

Registration

To register for this course, follow the registration requirements of your **home university** as specified here: www.euroteq.eu/courses-registration.

Administration

Number of places:	40
Minimum participants:	The course will be opened in any case.
Internal course code:	BE5B33RPZ
Contact:	matas@fel.cvut.cz

This course is part of the EuroTeQ Engineering University joint course catalogue 2022/2023. This is a collaborative activity of the partner universities DTU, L'X, TU/e, TalTech, CTU, TUM as well as Technion. Students from these universities can participate in the offered courses. It is the responsibility of the student to check if you fulfil the requirements to participate in a specific course. Students are also advised to check with their home institution how to get recognition of the ECTS credits gained in courses of the EuroTeQ course catalogue. For further information about EuroTeQ Engineering University, visit www.euroteq.eu or get in touch with the above-mentioned point of contact.