Artificial intelligence

Requirements
2021 February

Learning environment

- Currently, Internet technology requirements relate to the online learning environment due to the coronavirus situation.
- Online courses will be available via Microsoft Teams.
- Should the online classes be changed to on site classes, the corresponding decision will be published by the University / Faculty. I will also send a notification via neptun.

Schedule

- Week 2. 12 February
  Week 4. 26 February
  Week 6. 12 March
  Week 8. 26 March
  Week 11. 16 April – mini topics
  Week 12. 23 April – mini projects #1
  Week 14. 7 May – mini projects #2

Special examples

- Architecture example
  Chemical engineering example
  Public transportation example
  Project scheduling example
  Production planning example

- Please note that some of the examples will be discussed with invited lecturers / professors.

Neptun Meet Street

- Summary of the lectures and all homeworks will be uploaded into neptun.
- Tests and exams are related to the uploaded documents, including homeworks plus all information what was discussed during the classes.

Mini topics documentation

- Each student has to prepare a document about the following topics.
1. Every student: The model of the artificial neuron and artificial neural network.

Plus

2. One individual topic: Please select one topic from the list: https://docs.google.com/spreadsheets/d/18Ml1yQKniwv49LVRfmlinrNzWPFigi8cqoCuNToHuIA/edit?usp=sharing

List of mini topics

1. Naïve Bayes Classification
2. Hidden Markov Model
3. Ant Colony Optimization
4. Particle Swarm Optimization
5. Principal Component Analysis
6. Autoencoder
7. Density Based Spatial Clustering of Applications with Noise
8. Multiple matching algorithm
9. Support Vector Machine
10. Long-Short Term Memory
11. Gate Recurrent Unit
12. Back propagation
13. Maiximal Flows
14. Minimal flows

Mini topic evaluation

- The ready made documentation about the mini topics has to be uploaded into neptun. Submission: via neptun, deadline: Week 11. 12 April, 10:00.
- Each mini topic has to be presented: Week 11. 16 April.
- Each separate topic will receive points between 0 and 5.
  - Missed / delayed / unsatisfactory work: 0 point.
  - Excellent work: 5 points.

Mini projects

- Each student selected a mini project in the previous semester. The work has to be continued and finished now.

Neptun kód	Mini project
F8PTSQ	címkézés
PCKQIQ	pollen
DQFNG8	pollen
J69RK2	pollen
HMBWHT	pollen
BXTOKA	architecture project
JKV94E	voice recognition
X72GDZ	voice recognition
SDXOB0	text detector
TL97UA	voice recognition

Mini project evaluation

- The final documentation should be submitted by 18 April (week 11). The document should relate to the individual contributions also.
- A detailed project presentation should be held at week 12 and/or week 14.
- Based on the documentation and the presented results, each student will receive points between 0 and 5.

Signiture condition

Min. 4 points for the two mini topic documentation has to be gathered.

AND

Min. 2 points for the mini project has to be gathered.

All other situations are grounds for failing the course.

Exam and evaluation

i) The exam starts with a written test.

ii) In case the performance of the test is below 50%, the test is said to be failed, it is grounds for failing the exam.

iii) Should the result be 50%+ there is a short oral part, automatically.

ii) Final evaluation:

0-50%	Fail
51-70%	2
71-80%	3
81-90%	4
91%-	5