

Artificial neural networks in practice

On-line Workshop

3. Nov. 2021, 12:30-15:30

In this workshop, you will learn about the use of artificial neural networks through practical examples from machine learning. In recent years, the use of neural networks has spread from academic circles and found its place in the industry, advertising, healthcare, banking, security and so on. In the workshop, we will present the most useful neural network architectures and their components. We will implement the models within the Colaboratory cloud service, which already includes all the necessary software and enables easy code sharing and execution on Google's high-performance infrastructure (GPU, TPU). Through examples, you will learn about the main types of data we encounter in machine learning and how we use them as input or output with neural networks. We will present guidelines that lead us in designing an appropriate model and the common obstacles we encounter in deep learning. The language of the instructions will be English or Slovene.

Lecturer: Rok Hribar, Computer Systems Department, Jožef Stefan Institute.

The participation is free! All welcome!

Registration until Nov. 2nd, 2021. More information: [Kompetenčni center CLEC \(clec@ijs.si\)](mailto:clec@ijs.si).

[Register now!](#)

Workshop contents:

- design of the Keras library
- neural networks training basics
- data handling
- useful regularizations
- recurrent neural networks
- convolutional neural networks
- embeddings
- learning from heterogeneous data

Prerequisites: Knowledge of the basics of machine learning and Python language is recommended.