

L-51 cooperation potential within area of artificial intelligence

Aim

This note provides short description of a potential for cooperation between division L-51 and other CUT institutes or external academic and industrial partners within the area of **applications of artificial intelligence methods in engineering**.

Cooperation scope

We are able to provide **industrial solutions** in terms of expertise, services and network infrastructure in the broad scope of applications of artificial intelligence methods in engineering.

In particular we are able to:

- participate or consult development of scientific middleware, especially in the stack of machine learning tools based on TensorFlow, Scikit-Learn, etc.,
- advise on selection of advanced computer vision libraries (OpenCV, Scikit-Image) and help in incorporation of them as a part of client tools stack,
- help in application of the machine learning, neural network and computer vision libraries in projects involving advanced analysis of multidimensional data (for example digital images),
- perform measurement and postprocessing of full field displacements of structural elements based on digital image correlation (DIC), using the built in-house vision system CivEng Vision,
- support in development of neural network-based surrogate models for use in advanced numerical simulations,
- help in development of computational models for uncertainty quantification (UQ) based on Bayesian inference methods and neural networks.

Contact

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