



SENPAIN / NODE ORIENTATED NEURAL NETWORK ENVIRONMENT

Topic Summer 2024

The SENPAI research group focuses on improving the computational times of different simulation tools and solutions and making them provide the user with good estimates of results through the use of artificial intelligence.

The challenge of applying modern day Neural Network solutions are that they vary greatly in scope, implementation and structure. The person wanting to utilise such networks must have knowledge in programming and at least a basic understanding of Neural Networks. The goal of this IDP is to reduce these requirements for laypeople with little such experience and make the creation of such solutions more available for the public. There are several focus areas in which the IDP can be done, with the main task being the development of a visual programming environment to allow for the intuitive development of Neural Network architectures. Due to the nature of the project experience with python is needed and additionally any experience with Qt/PySide6 and Tensorflow/DL would be advantageous. The project can be done in a group or as a solo IDP and the tasks will be scaled to match the group size.

Focus Areas:

- Introduction of NN concepts as Nodes
- Expansion of UI/UX
- Handling of various types of input data
- Code Generation Pipeline
- Training Pipeline inside of the Environment

Contact

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