Machine Learning Workshop

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What do you expect?

What would you like to learn?

Content of the Workshop

- Introduction
- Creation of pseudocode
- Generation data for training
- Quick Break
- Creation and training of NN
- Comparison of performance of NN and MPC
- Collaborative work in groups and discussion of achieved results

Creation of Pseudocode

Data Generation

data_generation_ns.m

- Generate datasets:
    - **Small** dataset
    - **Medium** dataset
    - **Corrupted** (bad) dataset
    - **Large** dataset

Quick Break

Until 15:40

Creation and Training of NN

training_ns.m

Simple Optic Comparison

comparison_ns.m

Split Into Groups of Two

Goals

Create and sufficiently train NN to “perfectly” mimick MPC

1. Satisfy **input bounds** (try to use different **activation functions**)
2. Satisfy **state bounds** (try with different number of neurons):
    - **Wide** architecture
    - **Deep** architecture
3. Try your champion NN **on other datasets**
4. Create **general NN** that works on most of them

Discussion of Results