

A neural network approach to on-board maneuver control

Bachelor, Master, Practical

With increasing performance of on-board controllers in satellite missions the possible utilization of these for neural network approaches should be evaluated. Currently the control of satellites is based on deterministic calculations to perform maneuvers. To examine feasibility a software in the loop setup should be designed to test against real satellite data.

Task Description

Bachelor/Master thesis/Practical

- Choose input and output vectors
- Prepare and collect data from former missions
- Evaluate different network structures for the task
- Match results with current deterministic approaches in simulation

Preliminary Knowledge

- Background/Lectures in data science and machine learning

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