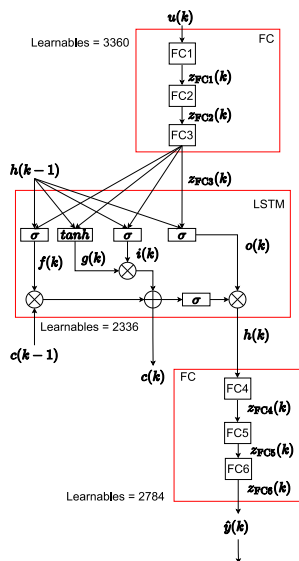




We are the Teaching and Research Area Mechatronics in Mobile Propulsion (MMP). Our heart beats for the technology of tomorrow's mobility. Around the interdisciplinary topics of mechanics, electrical engineering and information technology, we research sustainable and demand-oriented drive and vehicle concepts. We bring the future into drives!

You want to know more about us? Then you will find more information under the following links:

- Who we are
- What drives us
- What we research
- Where we are involved
- How we bring research into teaching



Teaching and Research Area Mechatronics in Mobile Propulsion
RWTH Aachen University
Forckenbeckstraße 4, 52074 Aachen
Phone +49 (241) 80 – 48148

Bachelor Thesis / Master Thesis

Start: from now

- Faculty 1 - Mathematics, Computer Science and Natural Sciences
- Faculty 4 - Mechanical Engineering
- Faculty 6 - Electrical Engineering and Information Technology

Machine Learning based Imitation of Model Predictive Control

Machine Learning (ML) approaches traditionally have been used to model systems or processes. However, they can also be used to replace Model Predictive Controllers (MPC) by imitating their behavior. This allows for a significant reduction in the required computational resources for the controller implementation and for real-time feasibility.

Your tasks:

- Analysis of existing MPC performance and ML based model
- Data collection using experimental MPC implementation
- Creation of ML model of the MPC performance
- Literature research of the above-mentioned topics

Your competences:

- Knowledge in Python and/or MATLAB
- Knowledge in ML is beneficial

Your benefits:

- Experience with cutting edge open source ML tools
- International, interdisciplinary research project
- Potential publication opportunities

Would you like to know more?

David Gordon, Ph.D.
gordon@mmp.rwth-aachen.de