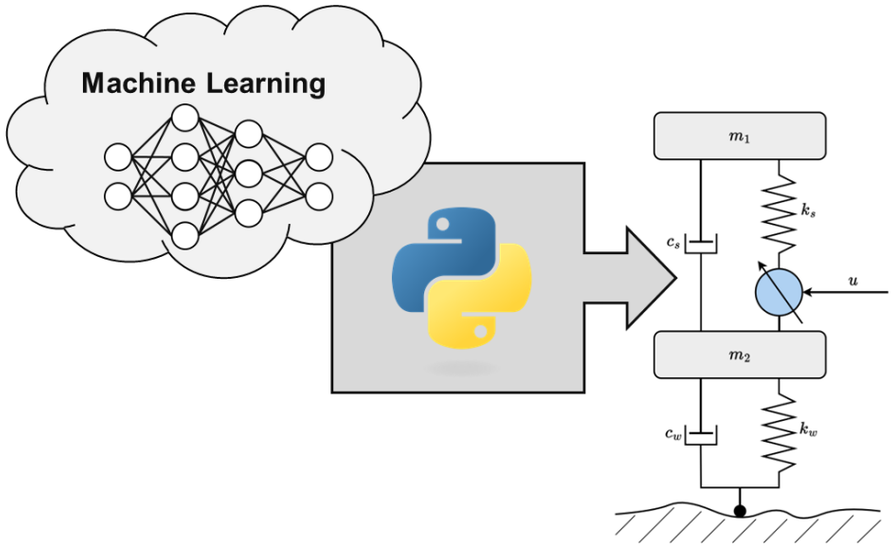
Machine Learning for System Identification

Description

The goal of this master's thesis is to **apply and compare various machine learning approaches**, particularly neural network structures, to the **identification of dynamical systems**. This project involves **developing models that can capture and predict the behavior of dynamical systems** in various real-world laboratory setups. The work focuses on implementing, training, and testing different neural network architectures.

Additionally, **a Python-based interface** will be developed to **streamline interaction with laboratory setups**, allowing for efficient data acquisition, model testing, and real-time performance evaluation.

The **thesis combines theoretical machine learning approaches with practical experimentation** to provide a comprehensive evaluation of neural network-based system identification methods.



Objectives

- **Literature review**
- Development of a **Python-based interface to streamline the interaction with laboratory setups**
- **Implementation and verification** of the concepts on **real laboratory setup(s)**

Start: today

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