Schedule

	Monday	Tuesday
9:00 - 10:45	Introduction ML for Dynamical Systems: Overview and Project Topics	Project Q&A
11:15 - 13:00	Solving Dynamical Systems in Julia	Project Work
14:00 - 15:45	Project Introductions and Q&A	from 15:00 Project Presentations
16:15 - 18:00	Project Work	

Projects

- Work in groups of ~4 people
- We'll introduce three main topics, and a few project ideas for each of them
- We prepared a lot of Jupyter notebooks with plenty of code to get you started

Resources

We prepared a lot of additional material for you!

- All workshop material is available at https://github.com/TUM-PIK-ESM/ML-DS-Workshop-23
- All lectures
- Project descriptions and Jupyter notebooks to get you started
- Programming Cheat Sheet

Projects

What can you do?

- How are of you are already familiar with the Julia language? It would be best if those people are spread across multiple groups
- Pick one of three methods
- Study the material about the method that we uploaded to the repository
- The Jupyter notebooks talk you through one example application of the method and provide with all the code you need for the example
- Do you have any problem from your own research that you like to apply the method to?
- No? Then, pick one of the topics we suggest in the notebook

Project Schedule

What can you do?

- After the lunch break, please find yourself back here in groups
- We'll talk to each group to help them get started and with ideas
- Approach us any time to have any questions
- Depending on the exact number of groups we'll start tomorrow ~15:00 with small presentations of your results

Projects

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Neural Differential Equations

Reservoir Computing

Symbolic Regression / SINDy (+ Neural DEs)