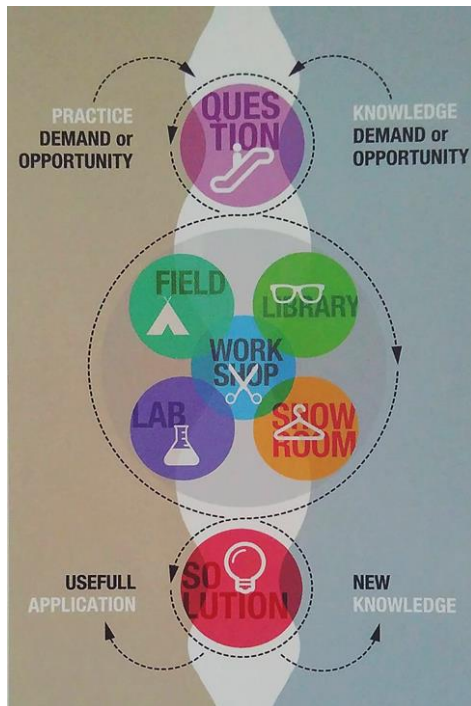


Main question:

To what extend and in what way, can different unsupervised data science techniques be used on kinematic recordings to contribute to a more valid and more reliable diagnosis, made by a doctor, on shoulder disability.

Sub questions:



- [library] What kind of different methods of unsupervised machine learning models are there?
- [Library] What is a kinematic recording, how must the data be interpreted?
 - [library] Can an expert help me validate what I found out on Kinematic analysis?
 - [library] How is this kinematic data recorded / converted?
- [Library/Field] How are kinematic recordings used by the doctors?
- [Library] Is data science used earlier to analyze medical data?
 - [Library] Understand the results from last group, who used supervised methods.
- [Field] What kind of parameters are (ideally) used by the doctors / researchers?
- [Field] In what setting can new techniques be used?
- [Workshop] Analyze the results of previous research to:
 - Validate their result
 - Find a minimal set of parameters.
- [Workshop] Can new parameters be found? (easier to measure, more meaning)
 - T-SNE (combine parameters to get new meaning out of them)
- [Workshop] Can kinematic analysis tell something about the entropy?
- [Workshop] Can unsupervised models find the 'bad' arm?
- [Workshop] Test different clustering techniques, with different parameter sets. (what groups do the different models create for us)
- [Lab] Do the groups found in the workshop have a meaning in medical sense?
- [Lab] What (new) parameters do have value for doctors?
- [Showroom] Write an article with the validated results of the supervised models.
- [Showroom] Write an article with the results of the unsupervised models.
- [Showroom] Present the results of the unsupervised models on the symposium (of the data science minor)