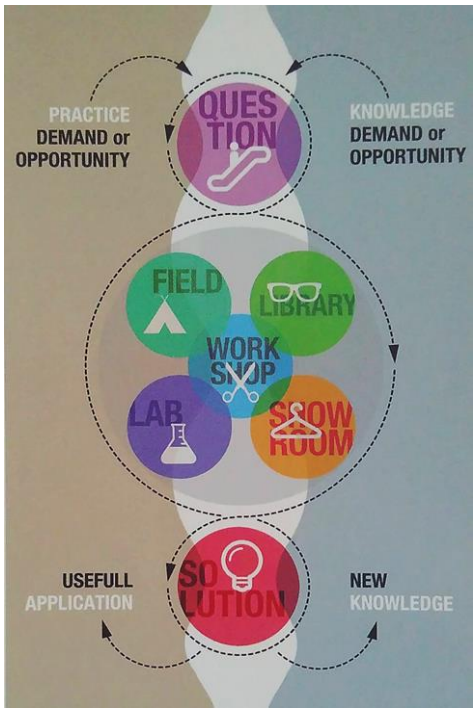
Main question:

To what extend and in what way, can different supervised 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)

What datascience techniques should we use?

How can kinematic recordings be reshaped(organized) into a valid/reliable data set.

What other datascience techniques could we use and (how) can they improve the classification

What parts of the kinematic recordings are contributing?

Do we validate the reliability of the diagnosis the Datacience techniques made.

How is our outcome contributing to the medical domain?(classification/research)