

# Bachelor Thesis or Project

## Short Description

Rumination is an important parameter in determining the health of dairy cows. Changes in the rumination behavior are an indication of possible sickness or problems with food. Recently a sensor was developed that can determine rumination time by directly measuring peristaltic movement of the rumen. The aim of this project is to try to find abnormalities in the rumination data timeseries via applying unsupervised machine learning techniques.

## Your tasks

- Familiarisation with the data
- Literature survey
- Implementation of a proof of concept

## Your profile

- Motivation and interest in the topic
- Ideally you have prior experience with machine learning and/or signal processing
- You are familiar with python, experience with any libraries from the python data science stack such as numpy, pandas, scipy, scikit-learn, pytorch, tensorflow, matplotlib, plotly, etc. is a plus.

## Additional information

This project is a cooperation with the company smaXtec. smaXtec has developed a dairy cow monitoring solution that helps farmers keep track of their animals health, feeding and reproduction. The results of this thesis will help to improve the quality of health monitoring of dairy cows.