This factsheet is a result of the first Wageningen University & Research (WUR) Data Science and AI Fellowship program. With this program we aim to increase and integrate our expertise in DS/AI throughout the entire organisation. The variety of projects highlights the potential for DS/AI across the WUR domains.
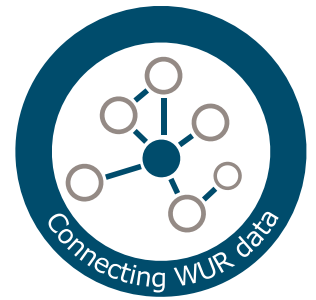
Authors: Akke Kok and Iris Boumans

Sharing knowledge about sensor data analysis in Animal Sciences

Education and cooperation within WUR

Connecting WUR data

Objective

To gain expertise in sensor data analysis, with special focus on repeated measurements and time series analysis, and to share this knowledge with other researchers through discussion, cooperation, and education.

Method

We contacted and interviewed people from various disciplines within WUR with demonstrated experience in data science and/or repeated measurements and time series analysis. Next, we had follow-up discussions and workshops, and studied course material we were given access to. Finally, we developed course material and discussed what we had learned in a group for time-series analysis.

Results

Main outcomes of the interviews included (potential) further collaboration, as well as access to other WUR courses. In in-depth and hands-on sessions, we gained knowledge on a Kalman filter as a time-series forecasting approach. This was developed into a tutorial for the novel course SenDAS: Sensor Data in Animal Sciences, and the application was presented in a time-series discussion group to PhD candidates and researchers of WU and WR. Other in-depth meetings resulted in guest lectures and potential collaboration in education.

Impact

The fellowship provided the means and a reason to discover and approach data scientists within WUR we would otherwise not have met. Through meetings and self-study, we learned about data science research and education with different approaches and goals. The fellowship proved valuable for connecting with other data scientists, sharing knowledge and establishing potential future cooperation.

Future plans

- We aim to keep exchanging knowledge with other data scientists and align the SenDAS course with other courses within WUR.
- People interested in time-series analysis with a Kalman filter can have a look at the presentation and R script in the deliverables (supplements).

Cow 2: 2 (373 days)
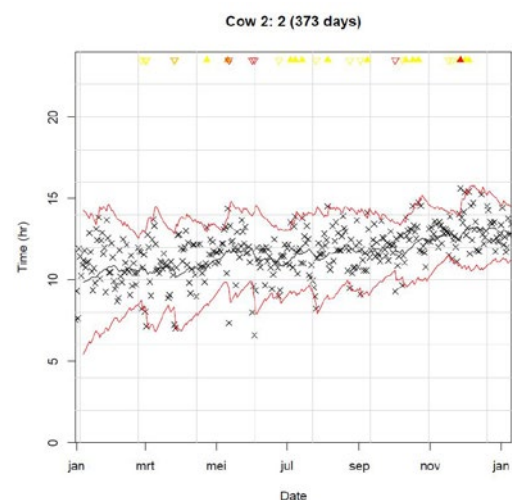
Further information

- The course SenDAS targets students in the MSc Animal Sciences (ADP31306, https://tinyurl.com/35xsyfd4)
- For further information: contact Akke Kok (Adaptation Physiology Group) or Iris Boumans (Animal Production Systems Group), Animal Sciences.

WAGENINGEN
UNIVERSITY & RESEARCH

Wageningen Data Competence Center   www.wur.eu/data