

Casebook illustrates potential usage and exploitation of company data

06 June 2023, 13:03

In its new casebook 'How to exploit usage data with AI and ML technologies', the EluciDATA Lab by Sirris presents a variety of industry-driven project cases that illustrate the potential of artificial intelligence (AI) and machine learning (ML) technologies to tackle real-world problems. With this casebook the EluciDATA Lab experts want to inform companies of the opportunities offered by data science and AI for the exploitation of their data.

Product design, development and maintenance typically do not consider detailed information about the end users, their purposes and the specific usage conditions.

Conservative and unfounded assumptions then lead to (expensive) overdesign, long lead time, the inability to detect errors, and endless discussions on warranties and reliability issues.

Digitisation offers an opportunity for improvement. Continuous, large-scale data collections can provide insights into products and their actual implementation. AI and ML technologies can help exploit these data collections to make more accurate assumptions and address the abovementioned challenges.

Inspiring example cases

Sirris's Data and AI Competence Lab (EluciDATA Lab) bundles Sirris's expertise in data science and AI. The Lab's mission is to stimulate data innovation and the uptake of AI in the Belgian technological industry.

The EluciDATA Lab initiates and executes industry-driven research and innovation projects, organises trainings and dissemination events, and supervises master's theses and internships on industrial topics. For more than 15 years (and counting), these activities have enabled the EluciDATA Lab to acquire extensive knowledge and experience in various industrial domains, such as manufacturing, energy, mobility, and more.

The cases the EluciDATA Lab experts collected in a new casebook represent **several data innovation projects in multiple sectors**. With these example cases the Lab aims to describe the iterative and creative path that links business understanding and data exploitation.

A **key finding** of working with asset data is the (usually) limited meta-data available for each data stream/source. When processing and analysing data, a data expert needs to know in what context this data was acquired to make good assumptions and use the right technique.

One take-away when working with edge devices is the **identification of important or useful data**. When storage space is limited, only interesting data should be kept, which can only be identified by a domain expert before an intelligent data reduction technique can be applied on the device.

This casebook was created in the COOCK project 'AI4DETAIL: Artificial Intelligence for distributed asset usage monitoring & analysis', funded by VLAIO. This project aims to build knowledge regarding the challenges related to product design, development and maintenance by using detailed information about the end users, their purposes and the specific usage conditions, and to spread it to a broad target audience.

By reading through the casebook 'How to exploit usage data with AI and ML technologies' you may be inspired to start your own data-driven project!

Download the casebook

Authors