

Project assignment at Østfold Hospital autumn 2021

Implementation and use of a Digital Twin (DT) for the clinical pathway for prostate cancer used in Precision Production of Healthcare (PPH).

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Østfold Hospital Trust (SØ) and [Prediktor](#), a spin-off company from ITK, are carrying out a project to

1. implement a Digital Twin (DT) for prostate cancer package *pathways*.
2. use Machine Learning (ML), as a decision support tool, on data DT collects from the daily production of healthcare.
3. View a patient's status in a care pathway in a web interface

The project assignment may include work related to the implementation of a Tracking Machine, ref. links to the Tracking School below, and the use of ML when/if a sufficient amount of data has been collected. Implementation of the Tracking Machine entails the establishment of interfaces for data capture from databases and possibly medical technical equipment (sensors). The tracker formats data for use by ML.

The project assignment is a sub-activity in SØ's focus within PPH.

Pph

- uses data related to medical/clinical quality, logistics and finances collected from the daily production of health services.
- includes precision medicine.
- adapts industrial production technology and methodology, e.g. [Quality by Design](#) (Qbd) and Process Analytical [Technology](#) (PAT), for use in healthcare.
- adapts existing industrial OT/IT architecture and functionality for use in healthcare.

Links to the Tracking School:

<https://www.tu.no/artikler/sporbarhet-fra-a-til-a/218458>

<https://www.tu.no/artikler/fullstendig-fabrikksporing/218459>

<https://www.tu.no/artikler/merketeknologi-og-sporingstyper/218460>

<https://www.tu.no/artikler/komplett-kjedesporing/218461>

The project illustrates the relationship between [data engineering and datascience](#).

The proposed project assignment continues the project and master's thesis carried out at ITK h.h.v. autumn 2020 and spring 2021.

Feel free to contact me for more information.

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