M7

Validation inside the firewall

A protocol for evaluating synthetic data in a hospital's secure environment, where raw records never leave.

Master's · 30 credits | Health informatics · Implementation | Suits: KI (LIME, Health Informatics) · KTH (Health systems)

The question

What does it take for a diabetes or cardiology clinic to host a synthetic-data validation, so that raw patient records stay inside its environment and only synthetic data and evaluation results come out?

Why it matters

The strongest evidence for synthetic data comes from real clinical records. We start in cardiometabolic care, at a diabetes or cardiology clinic, with oncology as a later stage. Hospitals will only take part if governance is clear: ethics approval, DPIA, roles, access controls and exit criteria. A tested protocol lowers the barrier for the first sites.

What you would do

01 Review existing secure-processing models (e.g. trusted research environments, MONA-style remote access) and Swedish requirements.

02 Interview data stewards, ethics and IT security staff about their conditions for participating.

03 Draft a step-by-step validation protocol: approvals, roles, what runs inside, what may leave, stop criteria.

04 Pilot the protocol end-to-end on public cardiometabolic data in a simulated environment.

What you would produce

- A governance and validation protocol hospitals can review
- Interview findings on adoption barriers
- Checklists and templates for a first site

Good fit if you have

Health informatics or health systems background; interviewing and qualitative analysis; basic technical literacy.

Data and access

Public seed data (CMS DE-SynPUF) and synthetic releases from day one. Work on real patient records only inside a partner's approved secure environment, with ethics approval. We hold no Swedish patient data.

Timing and place

Spring or autumn 2027, 20 weeks / 30 credits. Stockholm (Solna) or hybrid.

Supervision

Gaurav Raj Chattarki, Founder, Synthetix Health, together with your academic supervisor.

Questions or a proposal of your own? gaurav@synthetixhealth.com · synthetixhealth.com/careers#thesis

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