Why this project

Graphs have always been my favorite data structure. To me, they're the most elegant way to represent the world—structured yet flexible, intuitive yet powerful. I've also been obsessed with **optimization** for as long as I can remember. So during my undergraduate studies, I dove deep into **optimization problems on complex networks**, and never looked back.
That's why when I saw this PhD project, I couldn't stop smiling. A graph-based model for real-time state estimation in uncertain systems? That's exactly the kind of challenge I love. Understanding structure, making predictions under uncertainty, and turning noisy data into actionable insights.
During my master's, I explored reinforcement learning, **combinatorial optimization**, and **simulation-based decision-making**—all of which taught me how to approach dynamic, imperfect systems with clarity and control. This project brings all those threads together in a real-world setting, and I can't wait to contribute.

Why me

I am a **master's student, CTO, full-stack engineer, and teaching assistant**—sometimes all at once. One second, I'm frantically revising my thesis for submission, the next, I'm explaining to students why their code won't compile, and then I'm discussing technical decisions at LUDev. I switch roles so often that I sometimes wonder if my life should include a `switch()` statement.
But if there's one thing that has never changed, it's this: **I love making things better.** Whether it's an AI struggling to generalize, a backend system refusing to scale, or a mechanism that just doesn't feel right, I want to fix it, optimize it, and make it not just functional—but elegant. Because to me, code, systems, and even knowledge itself should not just "work"—they should evolve.
At Hackathon, I led my team to victory, building an AI-driven system from scratch in 48 hours. As the CTO of LUDev (ludev.nl), I manage the development team and ensure projects are executed efficiently. At Leiden University, I am a teaching assistant for Software Engineering and Deep Learning. This semester, I will also be teaching undergraduate computer science students frontend, backend, testing, and deployment, helping them understand how to build complete software systems and optimize them under high concurrency.
I am never satisfied with just understanding theories. I want to **build them, challenge them, optimize them, and share them—making them truly work in the real world**.

Conclusion

Energy systems are messy, imperfect, and constantly changing—which makes them fascinating. To me, this isn't just another research project. It's an opportunity to bring together everything I love: graphs, optimization, imperfect information, and the chance to build something that actually matters. I'd be excited (and caffeinated) to contribute to this effort,node by node, model by model, until the lights stay on and the math checks out.