EnergySHR:
A platform for energy dataset sharing and communications

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Key words: Energy Research | Energy Transition | Data Collaboration Platform | Open Data Ecosystems |

The EnergySHR platform was born out of a bold ambition: to create a global, community-driven space where data and ideas can flow freely. Officially launched to the public on June 11, 2025, this project brings together data science principles and social media functionality to support researchers, startups, and stakeholders working on energy challenges. It could be seen as a combination of Facebook and Kaggle, but tailored for the data-sharing world, including community platform features like user dashboards, posts, comments, likes, follows, and even project rating tools. Users can not only share datasets but also analyse them in Jupyter notebook, which has been integrated into the EDC Data Sandbox, and even build and share machine learning algorithms.

Erasmus Data Collaboratory | House of AI collaboration

This platform is a collaborative initiative of the AIDD Convergence Centre for Energy Systems Intelligence (CESI) and EDC. From a technical perspective, the platform is powered by 58,000 lines of custom-built Python and JavaScript code and a robust backend built on Django, a Python application building framework. This framework was used to develop and code all the platform's features. To keep costs down and ensure scalability, the platform relies on Leafcloud's green-powered infrastructure, which provides virtual machines, database support, and S3 Bucket-compatible object storage. EDC was able to provide the infrastructure and storage to support the creation of the EnergySHR platform. Furthermore, institutions like TU Delft, Erasmus MC, and Erasmus University Rotterdam were all involved in shaping this secure, accessible, and flexible ecosystem for data collaboration.

Impact

EnergySHR showcases EDC's strength in enabling ambitious digital projects. By supporting the platform's development through coding expertise and infrastructure guidance, the EDC team transformed a bold concept into a functioning, publicly accessible research and innovation infrastructure. The platform not only allows users to share and analyse data but also fosters connections between projects, people, and disciplines, building a foundation for open innovation. This project was also chosen to be presented at the ACM e-Energy Conference, where EDC lead developer Dr. Zaman Ziabakhshganji presented a demo of the platform. Looking forward, EnergySHR will explore ways to integrate external data sources and selective open-source components, balancing openness with sustainability. For researchers, policymakers, and industry alike, it represents a powerful step toward more connected, data-informed solutions to complex energy-related challenges.

Stakeholders: TU Delft | Erasmus MC | Erasmus University Rotterdam | Convergence | Convergence AIDD | Centre for Energy Systems Intelligence

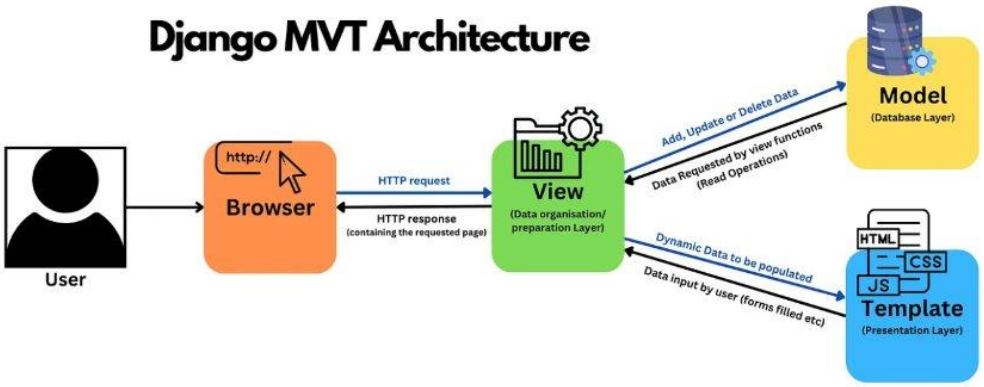
Tech/tools used: Python | JavaScript | Django | Jupyter Notebook | Leafcloud | EDC Data Sandbox

Specific EDC expertise used: Platform engineering | Infrastructure Consulting | Python | JavaScript| APIs | Interface Engineering | AWS S3 | Sustainable Computing & Storage | EDC Data Sandbox

Testimonials by CESI Leadership:

"I was surprised how quickly a very decent version of the platform had been set up. The process required limited interaction and resulted quite soon in a product with almost all desired functionality. I was particularly impressed by the attention given to the security of the platform." — Mathijs de Weerdt, TU-Delft

"With such an ambitious wish list for the platform, it was impressive to see how quickly and comprehensively it was developed. It has already become a highly useful and versatile tool. Given the strong need for such a platform, I have no doubt it will soon attract many users and significantly accelerate interdisciplinary energy research. I strongly encourage every researcher to open an account and start using it." — Yashar Ghiassi-Farrokhfal, EUR



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