ENERGY MARKETS · PYTHON

Martin Beck



I build the Python pipelines, alerts and dashboards that traders and operators in power markets work from.

I study Economics and Business Administration at Aarhus University and graduate in 2027. In autumn 2026 I'm on exchange at NUS in Singapore.

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About

I was the family's IT support growing up. In high school I picked programming, mostly to get out of physics and chemistry, and found that code was the cheapest way to make the things I wanted.

Then I decided I was a business person and went to Aarhus University for Economics and Business Administration. That lasted about a year, until a student job at MindEnergy had me writing code again. There I built the tools a renewable asset desk worked from: automated reports, alerts, dashboards and a live map of the wind and solar portfolio.

That job showed me where I fit, close to a market and writing code people use to decide things with money on them. Power is a good market for it. Prices settle every quarter-hour and move with the weather, and on a windy Sunday they can go negative.

At NUS I'm taking predictive analytics and econometrics. I'm also learning Rust for the parts where Python isn't fast enough. On the side I build apps for iPhone and Mac, and the ones I've open-sourced are on the tools page (martinbeck.dev/tools).

Experience

MindEnergy

Oct 2025 to Jul 2026

Student Data Analyst

A student job next to my degree, writing Python for the department that runs wind and solar units for their owners.

Ancillary services data platform and dashboard

A Python pipeline that collects, cleans and normalises ancillary service bid data from different sources into typed time series. New price areas are added in one definitions file. A Streamlit dashboard on top lets sales compare more than 30 data series across price areas, and gives other teams clean history fast.

Python · Streamlit

Unit map

An interactive satellite map of the department's units, used as its central dashboard. Python loads and transforms the data and serves it through FastAPI. The frontend is TypeScript and React, and it groups units together as you zoom out.

Python · FastAPI · Next.js · TypeScript

Operations monitoring and SMS alerts

A Python program that runs every 15 minutes and texts the trading team when a renewable asset's actual operation differs from the plan. Errors get found sooner, which lowers the risk of compensation claims later.

Python

All Out Africa

Summer 2025

Volunteer, marine conservation · Mozambique Marine Research Centre

I cleaned leopard shark datasets from different sources and built a regression model to measure how their numbers change with the seasons. For the field data, I standardised the observation logs from 24 dives at 10 sites and GPS-logged sightings of mantas, whales and sharks.

Projects

● iPhone and Apple Watch app · in development

Health logging by chat

You send it a photo, a text or a voice note, and it logs your food, drinks, caffeine and workouts. On the Apple Watch you can log a workout or add water quickly. The AI model picks the foods and the amounts, and plain Swift code does every sum.

I use it every day, and it runs on a Swift library I wrote. The working name is HealthData. A TestFlight beta is next, so email me if you'd like to try it.

Swift SwiftUI SwiftData watchOS OpenAI API

German day-ahead price forecast

NUS group project · Python

We forecast tomorrow's hourly German power prices and use the forecast to pick when a factory should run its one 8-hour shift. The model is Lasso followed by XGBoost, and we tested it on a year it had never seen.

github.com/martin-gbeck/dba-group-project

Murmur and Spool

Open-source Mac tools · Swift, Rust

Murmur turns what you say into cleaned-up text at your cursor. Spool reads the text you select aloud. Both are on GitHub under the MIT license.

martinbeck.dev/tools

Typed document pipeline

Python

A strongly typed, modular Python pipeline that parses structured Word files, resolves their source references and extracts text and images from PDFs. I used it to generate curriculum summaries with AI-written descriptions from academic sources.

github.com/martin-gbeck/Generate-descriptions

Education and skills

2024 to 2027 — **Aarhus University**
Bachelor of Economics and Business Administration

2026 — **National University of Singapore (NUS)**
Exchange semester. Predictive Analytics and AI-augmented Econometrics

2021 to 2024 — **Aarhus Gymnasium**
Technical high school (HTX)

CORE

Python, SQL, Excel

ALSO

Rust, VBA, R

COURSE

Harvard CS50AI: Introduction to Artificial Intelligence with Python

LANGUAGES

Danish (native), English (fluent)