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The Exowatt software team

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A small team inside a solar energy company that writes the software for our hardware and helps everyone else at Exowatt ship code with AI agents.

SOFTWARE-TEAM AGENTS ABOUT

The problem

Exowatt builds the P3, a modular system that captures sunlight as high-temperature heat, stores it, and converts it into electricity when it’s needed. Running a fleet of them takes a lot of software. Each plant needs control code that keeps working when the internet drops and speaks the protocols that batteries, solar arrays and gensets use. Across sites we need a fleet view, plus simulators to test against before anyone touches hardware.

A hardware company growing this fast also runs on internal tools, and the people who know what those tools should do usually sit outside the software team.

So the team has two jobs. We build the energy management system (EMS), which we call our north star: the software for our hardware. And we make it easy for anyone at Exowatt to build software of their own, because AI coding agents made that possible this year.

What we built

The team is five engineers and four interns.

Person	Role
Tim Child	Chief Engineer, Software & AI

Person	Role
Collin Rijock	Lead Software Engineer
Felipe Arce	Lead Full-Stack Engineer
Taner Scott	Lead Full-Stack Engineer
Rene Gonzalo Infante	Software Engineer
Puranjay Prashanth, Anthony Reyna, Ruth Hammond, Andrew Liu	Interns

The EMS runs each plant on site and the whole fleet from the cloud. It speaks OPC UA, Modbus, SunSpec and IEEE 2030.5, and site control carries on if the connection drops. An AI assistant can propose a command, and a person confirms every one before it goes out.

Around the EMS we built the pieces this series covers, one paper each:

- Every app and engineer calls models through one self-hosted gateway, the router, that we can meter and route from a single config.
- On the apps platform, anyone with a GitHub repo gets a signed-in internal app on our own servers without filing a ticket.
- Copper is a Mac browser that agents can drive. Felipe and I started it, and both of its repos are public under MIT.

How it works

We build with agents, and we built most of the tooling they run on. Our own servers host every internal app. The LLM gateway gives each person and each app one key for every model. Engineers drive coding agents through phi, our fork of the pi agent harness, and through P3 Code, our agent IDE. Forca runs several agents in parallel, each in its own git worktree.

When a new 207 kWh battery arrived this summer, one engineer and a set of coding agents wrote the first line of its driver at 3:25 pm on July 30. The driver merged at

8:57 the next morning with 7,798 lines and 5,190 passing tests, and a register-for-register simulator of the battery was deployed that afternoon. When we connected the real unit on August 3, it answered on the first request.

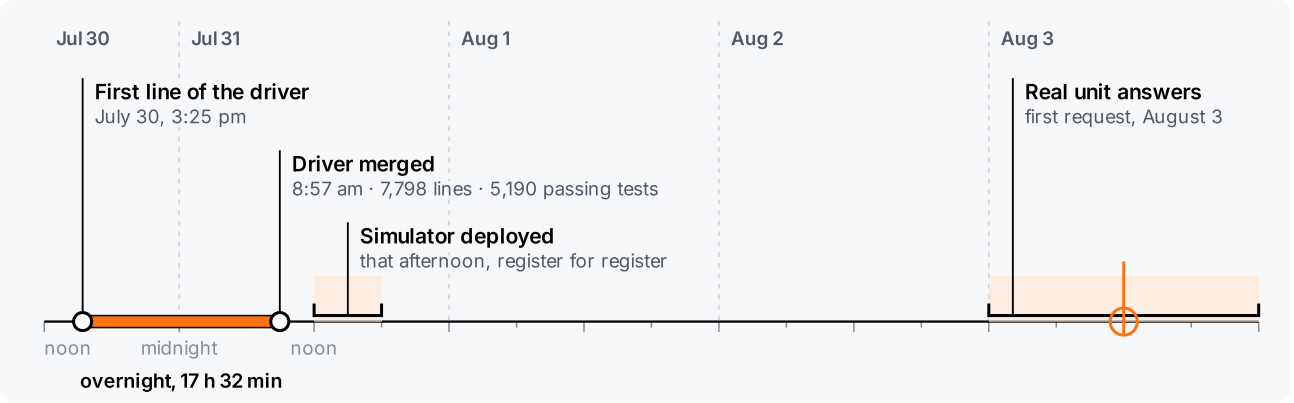


Figure 1. The 207 kWh battery driver on a real clock, from noon on July 30 to the end of August 3. The orange bar is the overnight stretch between the first line and the merge. Press play or drag through the four moments.

Agents also made it practical for people outside the software team to ship code. The apps platform gives them somewhere to put it, and the same automated code review covers their changes and ours. In the first week of October, 11 of the 19 people who merged code at Exowatt were not on the software team.

Results

Pull request counts cover the Exowatt-Labs and Exowatt-EMS GitHub organizations, use UTC days, and exclude bot authors such as Dependabot, Renovate and the Copilot agent.

Measure	Value	Basis
Merged PRs, October 2025	18, by 2 people	both orgs, bots excluded
Merged PRs, September 2026	2,687, by 28 people, in 185 repos	both orgs, bots excluded
Merged PRs, October 1 to 7, 2026	1,534, by 19 people, in 175 repos	both orgs, bots excluded

Measure	Value	Basis
PRs that week from outside the software team	171, by 11 people	same window
Repositories in the two orgs	367	GitHub, October 8, 2026
Live internal apps	205, all healthy	apps catalog, October 8, 2026
AI use across the company	89% of 89 seats in the last 30 days	AI adoption app, October 7, 2026
Engineers using coding agents	36 in the last 7 days	same app

A year ago two people on this team merged 18 pull requests in a month. In September, 28 people across the company merged 2,687. The software team and its interns wrote 2,221 of those, and 19 people from other teams wrote the other 466.

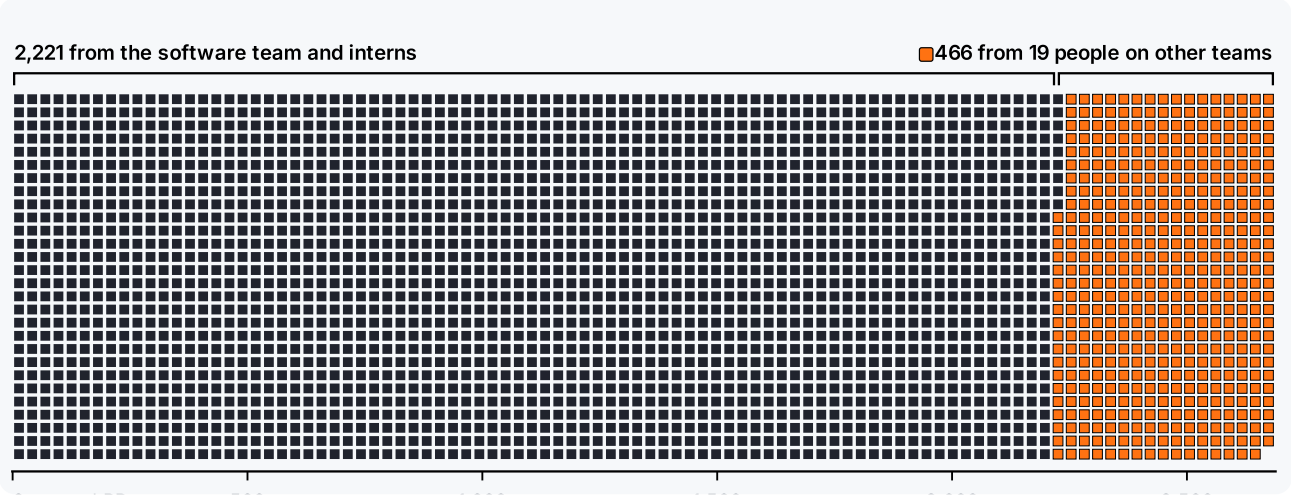


Figure 2. One square per merged pull request, both GitHub organizations, bots excluded. Switch between a month a year ago, last month and the first week of October, and hover or tab to a group for its count. Orange squares came from people outside the software team.

What’s next

The apps platform’s next phase lets people ship from Claude Desktop or Cowork without a laptop on the company network. On the gateway, the `auto` model now logs each choice it makes, and real agent traffic will decide whether its routing policy holds up.

About Exowatt — Exowatt is a next-generation renewable energy company providing modular dispatchable energy solutions for energy-intensive applications. Inquiries: