

Loraine Monteagudo

FULLSTACK ENGINEER · Tampa, Florida

lorainemonteagudo@gmail.com · [Portfolio](#) · [GitHub](#) · [LinkedIn](#)

Fullstack engineer who owns products end to end: SvelteKit and Vue interfaces, FastAPI services, the databases behind them, and the pipelines that ship them. Six years across smart-building IoT, flight-deal detection, and smart-city street lighting, with a machine learning background that still does real work.

EXPERIENCE

Software Engineer, Blue Frontier

Boca Raton, Florida · Remote · May 2025 - Present

- ♦ Built two internal tools (**SvelteKit** + **FastAPI** on **Azure**) for a maker of ultra-efficient smart air conditioners: a sales simulator and a fleet operations console.
- ♦ The sales tool runs a year of a building's energy use against real past weather, compares the customer's current AC with a Blue Frontier unit, and writes the proposal (PDF, Excel, Word).
- ♦ The console watches and controls every unit in the field: live status, remote control, and commissioning runs that stream progress to the browser over **WebSockets**.
- ♦ Added **single sign-on** with **Microsoft Entra ID** and **role-based permissions** to both apps, from login down to each endpoint.
- ♦ Moved the core energy model from an old **Excel/VBA** workbook to **Python (Pandas/NumPy)**: about 16x faster, and closer to the reference sheet.
- ♦ Wrote shared tools the company still uses: a **Svelte** component library on private **npm**, reusable **GitHub Actions**, and a library that checks the controllers inside each unit.
- ♦ Ran infrastructure and delivery: **Terraform** on **Azure**, **CI/CD** pipelines that redeploy only what changed, secrets in **Azure Key Vault**, and **OpenTelemetry** across services.
- ♦ Set up tests in four repositories, backend and frontend, running on every change.

Full Stack Developer, Arealec

Zaragoza, Spain · Remote · Feb 2022 - Mar 2026

- ♦ Built a smart street-lighting platform on **LoRaWAN**, from the lamp controllers in the field to the operator dashboard: lamps report energy use and status, and operators control one lamp or a whole group.
- ♦ Wrote the backend in **Python (FastAPI, SQLAlchemy, MySQL)**: nested installation trees, schedules and calendars with exceptions, work orders, alarms, energy reports, and a full audit log.
- ♦ Built the **Vue 3** dashboard: a map of every device, live status over **WebSockets**, manual control of lamps and groups, schedule and calendar editors, user management, alarms, and work orders.
- ♦ Designed permissions that follow the installation tree: a grant on a group flows down to everything under it, so a city gives each contractor just what it needs.
- ♦ Built a scheduler that cuts energy use: lamps switch at the true sunrise and sunset for their GPS location and dim through the night on set programs. If a lamp does not confirm, the system raises an alarm.
- ♦ Wrote the device layer: a **binary protocol** small enough for low-power radio messages, plus multi-step device jobs that retry and recover.
- ♦ Ran the platform as **Docker** services behind an HTTPS reverse proxy, with **GitHub Actions** deploys to several environments, database migrations, backup and restore scripts, and written guides.
- ♦ Built tests for protocol encoding, permissions, schedules, and work-order states. They run on every change.

Senior Full Stack Developer, Jack's Flight Club

Tampa, Florida · Remote · Sep 2024 - Apr 2025

- ♦ Built a **compiler** for the shorthand deal writers use for routes, prices, and conditions: a grammar turns it into a typed tree that gives both the stored data and the text readers see, in place of a manual step that often went wrong.
- ♦ Led the redesign of the platform's core map data (airports, routes, regions). One fast central store replaced copies in two databases, which simplified the code and ended a whole set of data bugs.
- ♦ Sped up deal scanning by tuning queries, batching writes, caching, and running work in parallel, so more data did not slow it down.
- ♦ Set up **Sentry** on every service and tied it to deploys, so we found the cause of a fault much faster.

- ♦ Automated **Google Sheets** reports and regional deal alerts, which cut hand work and caught high-value deals in time.
- ♦ Automated database chores people used to do by hand: backups, cleanup of old data, and a weekly refresh of the test environment from production.
- ♦ Added new data sources, including sites behind anti-bot protections.

Full Stack Developer, Jack's Flight Club

Tampa, Florida · Remote · Dec 2022 - Sep 2024

- ♦ Built a flight-deal tracker as a set of small services: scrapers collect prices from many sources, a cleaning stage makes them consistent, and a detector compares each price with its past average to find real deals.
- ♦ Built an internal **Svelte** dashboard where the team sorts, checks, and publishes deals as they arrive, with a live view of what the system finds.
- ♦ Built a **Slack** bot that became the team's main tool: commands, forms, and daily updates that cut status checks by about half.
- ♦ Built the data pipeline: it collects daily across 6 regions, cleans messy source data (airports, currencies, languages), and keeps every version.
- ♦ Automated delivery with **GitHub Actions**: tests on every change, one-click deploys, and over 20 scheduled jobs that run tracking, reports, and upkeep on their own.
- ♦ Packaged every service with **Docker** so it runs the same in development and production.
- ♦ Linked the platform to the rest of the business: the email marketing system, **Google Sheets** and **BigQuery** for reports, and AI help with editing deal write-ups.
- ♦ Set up tests from the start, which made it safe to change and ship code fast.

Assistant Professor and Researcher, University of Havana · Jan 2022 - Aug 2022

Full Stack Developer, Deepdatatech

Havana, Cuba · Remote · Jun 2021 - Jan 2022

- ♦ Built a web app for psychological testing in hiring: candidates take personality tests based on Carl Jung's theory, and the results guide the hiring decision.
- ♦ Built the candidate's side with server-rendered templates (**Jinja**) and **Vue** where the page had to react, which kept it fast without a heavy framework.
- ♦ Built a tool (**Streamlit**) so the team could write and publish new tests - questions, structure, and scoring - without code. Tried a CMS (**Strapi**) first and chose the lighter tool.

Undergraduate Student Researcher, University of Havana · Sep 2017 - Dec 2021

SKILLS

- ♦ **Languages:** Python, TypeScript, JavaScript, C#, Go, HTML & CSS
- ♦ **Backend & Databases:** FastAPI, Flask, ASP.NET Core, SQLAlchemy, PostgreSQL, TimescaleDB, MySQL, Redis
- ♦ **Frontend:** Svelte, Vue, React, TailwindCSS, Hugo
- ♦ **DevOps & Cloud:** Docker, GitHub Actions, GitOps, Terraform, Azure, Linux, Git, Aspire, Portainer, Caddy, Prometheus, Grafana, OpenTelemetry, Cloudflare, Home Assistant
- ♦ **Protocols & Messaging:** REST APIs, WebSockets, MQTT, gRPC, MCP
- ♦ **Testing & Monitoring:** Pytest, Playwright, Sentry
- ♦ **Data & Machine Learning:** Pandas, NumPy, Scikit-Learn, TensorFlow, Keras, spaCy, MLFlow, NLP, AutoML, Streamlit, Google BigQuery

EDUCATION

BSc. Computer Science, University of Havana · 2016-2021 · GPA 4.81 / 5

Member of the Artificial Intelligence research group, with publications, conferences and competitions.

Certifications

- ♦ [Associate Data Scientist in Python](#) - DataCamp, 2022