Jacques Thomazo

Backend Software Engineer — EV Battery Telematics Platforms

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Python backend engineer building telemetry, diagnostics and data platforms for connected EV fleets. Backed by 15 years of battery engineering, from cell chemistry to battery systems design.

SKILLS

Backend	Python · FastAPI · Pydantic · REST/WebSocket APIs · MongoDB · Docker · Linux
Quality & delivery	uv · ruff · ty · pytest · pre-commit · GitHub Actions
Vehicle data integration	CAN · UDS · J1939 · Telematics gateways
Domain	Battery systems · SOH/SOC estimation algorithms · Energy management strategies · MATLAB/Simulink/Simscape · ISO 26262 · HARA · FMEA

PROFESSIONAL EXPERIENCE

Forsee Power

Nov 2020 – Present

Chasseneuil-du-Poitou, France

Senior Battery Data Scientist (Backend & Platform Engineering)

May 2024 – Present

Creator and maintainer of the fleet data platform: 8 repositories and 13 Python packages, from telematics gateways to the reporting API.

- Automate remote diagnostic reporting for telemetry-equipped vehicles, cutting per-report turnaround from 1 day to 200 seconds and cost from €1,000 to €0.50.
- Build the IoT backend in Python and FastAPI (REST and WebSocket APIs, Pydantic models, MongoDB), deployed on-prem with Docker on Linux.
- Configure telematics gateways to monitor CAN/UDS/J1939 traffic for 100 vehicles across 8 customers, 7 products and 2 generations.
- Architect a versioned multi-repository platform as primary developer in a two-person team, with every repository gated in GitHub Actions by a shared standard (uv, ruff, ty, pytest, pre-commit).

Technical Lead — Battery System Development

Nov 2020 – May 2024

Battery system development, from embedded algorithms to prototype packs.

- Reworked the embedded SOH estimation algorithms, bringing accuracy to ±3 %.
- Led development of a next-generation, high-cell-integration-density battery platform (cell-to-pack mass ratio >80 %) as functional lead of a 5-person team across 2 sites.
- Built Python tooling to extract, filter and analyse gigabytes of UDS/CAN logs from pack-level SOH test campaigns.
- Quantified fluxgate vs shunt current-sensor drift and its impact on SOC/SOH estimation accuracy.
- Built a hybrid fuel-cell battery system model to explore energy management strategies (MATLAB/Simulink/Simscape).
- Delivered five in-house manufactured prototype packs (17 kWh, 800 V, LTO) for a key railway project.

McLaren Applied

Aug 2019 – Aug 2020

Woking, United Kingdom

Principal Engineer — Battery Systems

Technical lead on a top-tier, high-performance racing EV battery concept.

- Simulated and optimised battery system sizing in MATLAB/Simulink against tender requirements: 43 kWh, 600 kW, 284 kg, 220 L, 800 V.

ARRIVAL

Jan 2018 – Jul 2019

London, United Kingdom

Functional Safety Manager

Aug 2018 – Jul 2019

ISO 26262 functional safety across HV battery, steer-by-wire and brake-by-wire products.

- Led functional safety analysis (HARA, FMEA) for the HV battery (ASIL C) and the steer-by-wire and brake-by-wire products (both ASIL D).

Lead Battery Engineer

Jan 2018 – Aug 2018

Development lifecycle owner for HV & LV batteries, PCBs and electrical systems.

- Owned requirements, concepts and design reviews for a modular 2 kWh, 400 V architecture.

Vantage Power

Jul 2015 – Dec 2017

Greenford, United Kingdom

Senior Battery Engineer

Jul 2017 – Dec 2017

Cell-level test bench for performance and durability testing.

- Built the continuous data monitoring pipelines for a 6-month, 16-channel cell-level test bench.

Battery Engineer

Jul 2015 – Jun 2017

Multidisciplinary battery engineer across HV components, production, prototyping and simulation.

- Simulated immersion cooling for a dual 15 kWh pack system.

Renault

Apr 2011 – Jun 2015

Guyancourt, France

Li-ion Battery Specialist Engineer

Battery safety validation for hybrid and electric vehicle battery systems, from 48 to 400 V.

- Validated the battery systems of Twizy, Fluence, Kangoo, ZOE Gen 1 & 2 and a 48 V LTO mild-hybrid battery.

EDUCATION

École Nationale Supérieure de Chimie de Paris (Chimie ParisTech)

Sep 2007 – Jun 2010

Master's degree (French Diplôme d'Ingénieur), Renewable Energy, Chemistry, Electrochemistry, Physical Chemistry and Semiconductors

LANGUAGES

French Native

English Fluent (5 years in the UK)