

Jacques Thomazo

Battery Systems & Data Platform Technical Lead

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15+ years of experience from cell chemistry to connected-fleet diagnostics. I design and build the telemetry, diagnostic and engineering-data systems that turn vehicle data into battery decisions.

CORE ENGINEERING CAPABILITIES

Battery system design	Requirements & duty-cycle analysis · System sizing · Ragone analysis · Cell selection · Series/parallel architecture
Battery modelling & analytics	SOH estimation & prediction · Energy management strategies · Power/energy simulation · MATLAB/Simulink/Simscape · Python
Vehicle diagnostics & IoT	CAN · ISO-TP · UDS · OBD-II · J1939 · DID/DTC · Gateway configuration · Telemetry pipelines
Backend platforms & software delivery	Python · FastAPI · Pydantic/OpenAPI · REST/WebSocket APIs · MongoDB · Docker/Linux · Versioned schemas · Testing & CI/CD

PROFESSIONAL EXPERIENCE

Forsee Power Nov 2020 – Present

Chasseneuil-du-Poitou, Nouvelle-Aquitaine, France

Senior Battery Data Scientist May 2024 – Present

Build an IoT telemetry service and data platform end-to-end.

- 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/OpenAPI models, MongoDB persistence, and resilient external API integrations.
- Define CAN diagnostic strategy (UDS, J1939, OBD-II, DID/DTC) and configure gateways for 100 vehicles across 8 customers, 7 products and 2 generations.
- Architect and deliver a versioned, multi-repository IoT platform as the primary developer in a two-person team, using CI-gated AI workflows to preserve service compatibility and software quality.

Technical Lead — Battery System Development Nov 2020 – May 2024

- Reworked SOH estimation and prediction algorithms for the embedded application, bringing accuracy to $\pm 3\%$.
- Built a hybrid fuel-cell battery system model to explore optimised energy management strategies (MATLAB/Simulink/Simscape, Git).
- Led development of a next-generation, high-cell-integration-density battery platform (cell-to-pack mass ratio $>80\%$).
- 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 against tender requirements — 43 kWh, 600 kW, 284 kg, 220 L, 800 V.
- Defined, tracked and analysed results of a cell performance test plan.

ARRIVAL Jan 2018 – Jul 2019

London, United Kingdom

Functional Safety Manager Aug 2018 – Jul 2019

Led ISO 26262 functional safety analysis and implementation (HARA, FMEA) across HV battery (ASIL C), steer-by-wire and brake-by-wire products (both ASIL D).

Lead Battery Engineer Jan 2018 – Aug 2018

Owned the development lifecycle for HV & LV batteries, PCBs and electrical systems: requirements, concepts, design reviews, testing and validation. Modular 2 kWh, 400 V architecture.

Vantage PowerJul 2015 – Dec 2017

Greenford, Greater London, United Kingdom

Senior Battery EngineerJul 2017 – Dec 2017

Implemented a long-term (6 months) cell-level test bench (0–5 V and 25 A/channel × 16 channels) for performance and durability testing, from specifications through to continuous data monitoring pipelines.

Battery EngineerJul 2015 – Jun 2017

Multidisciplinary battery engineer working across HV component sizing and selection (600 V architecture), small-batch production (4 × 15 kWh battery systems), 3D prototyping (10-part batch of PETG PDU enclosures) and cooling-system simulation (dual 15 kWh pack system, immersion cooling).

RenaultApr 2011 – Jun 2015

Guyancourt, France

Li-ion Battery Specialist Engineer

Built, led and owned battery safety validation (mechanical, thermal, electrical) for hybrid and electric vehicle battery systems, from 48 to 400 V — projects: Twizy, Fluence, Kangoo, ZOE Gen 1 & 2, 48 V LTO mild-hybrid battery.

EDUCATION

École Nationale Supérieure de Chimie de Paris (Chimie ParisTech)2007 – 2010

French Engineering Diploma (Diplôme d'Ingénieur), Renewable Energy, Chemistry, Electrochemistry, Physical Chemistry and Semiconductors

LANGUAGES

French

Native

English

Fluent (5 years in the UK)