# Quentin PETIT
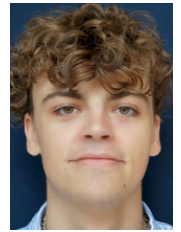
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## Academics

**IFP School Apprenticeship**                                                              *2025-2026*
*Powertrain Engineering (BAC+6)*
Li-Ion Batteries, Power Electronics,  Powertrain Architectures, Electric Machines…

**IFP School, ENS Paris Saclay (#1 in France),** Paris, France              *2024-2025*
*Master of Science in Electrification and Automotive Propulsion*
Li-Ion Batteries, Thermal Transfer, Electric Drives, Hybridization, Power Electronics…

**ISAE-SUPMECA,** Paris, France                                                      *2022 -2025*
*Engineering School in Mechatronics*
Optimization, Automation, Mechatronics systems, C++, Python, Computer Vision

**Preparatory Class MPSI-MP\*,** Pierre Corneille, Rouen                *2020-2022*
*Equivalent of Bachelor of Science*
Highly rigorous programs that prepare students for competitive national exams

## Work Experience

**ETCS Design Intern at Alstom,** Charleroi, Belgium                *Mar 2025 - Aou 2025*
*Global Leader in sustainable and innovative Rail Transport Solutions*
- Implementation of a data acquisition process on a train (**Python**)
- Creation of a validation environment for sensor fusion algorithms in compliance with SIL 4

**Mechatronics Intern at KNDS France Robotics,** Versailles, France      *Sep 2023 - Feb 2024*
*European Leader in the Defense sector for armored vehicles and artillery systems*
- Designed a mechanical test bench for the electronic boards of armed robots with **Catia**
- Developed test automation with an intuitive interface (**Python**)

**Operator Intern at RATP,** Velizy, France                                              *Jan 2023*
*Major global public transport operator headquartered in Paris*
- Conducted pre-operational inspections and maintenance on over 40 tramways
- Analyzed operational data through CAN from tramway sensors to troubleshoot faults

## Projects

**Characterization of the aging of a cell with EIS**
- Accurately model the EIS signature of various cells in order to assess their performance.

**UWB Real-time Tracking System for the 'Theatre de Strasbourg'**
- Developed a robust real-time tracking solution, with a strong focus on performance optimization using advanced filtering algorithms (Kalman, EMA..) for high accuracy and efficiency.

## Skills & Languages

**Simulation :** Matlab, Simulink, Amesim, Dymola
**Software :** Python, C, C++
**CAD :** Catia, Altium, Solidworks, NX
**Project Management :** Jira, Asana, Trello (Scrum)
**Languages :** French (Native), English (Fluent) and Italian (A2-Basic, since 2023)