

Florian Havard

Space engineering student, 4 to 5 month internship from May 2027

florian.havard@estaca.eu | linkedin.com/in/florian-havard | florianhavard.com | France, open to relocation

PROFILE

Fourth year student at ESTACA, Space track (launch vehicles and satellites), seeking a 4 to 5 month engineering internship from May 2027, preferably abroad. I am looking to contribute to a technical study under the supervision of a practicing engineer, bringing my project management experience, my grounding in mechanical design and the habit of understanding the physics of a system to anticipate the cases where it might not work as intended.

SKILLS

Project management: planning, task allocation, budget tracking, subsystem coordination, leading teams of 5 to 6, technical documentation.

Design and CAD: Fusion 360, CATIA (3DEXPERIENCE), SolidWorks. Parts, assemblies, technical drawings, design for 3D printing.

Programming (basic): Python, C, C++, VBA.

Fabrication and integration: FDM 3D printing (PETG, nylon), machining, mechanical assembly and integration, basic electronics, wiring and soldering.

Languages: French (native), English (TOEIC 925/990, CEFR B2), German (CEFR A2).

TECHNICAL AND EXTRACURRICULAR PROJECTS

ESL program, Estaca Space Launcher (ESO student society)

2025 to present

Program lead, ESL-2 recovery team project manager in 2025-2026

Team of 5, EUR 400 budget

Analyzed the maiden flight of ESL-1 (July 11, 2025, about 2,800 m apogee) using onboard video and axial accelerometer data in Excel, tracing the premature deployment of the main parachute to the nose cone opening shock.

Fully redesigned the nose cone ejection system, fitting the mechanism into a 25 mm thick annular volume (200 mm outer diameter, 150 mm inner diameter) that also had to clear a 10 m² parachute.

Ejection by a spring-loaded catapult ring on linear rails, nose cone locked by 6 axial pins released by electric linear actuators. All the recovery system CAD in Fusion 360, spring stiffness sized in Matlab.

Searched for failure configurations before freezing the design. Linear rails to limit the risk of binding, and an unpowered lock to reduce the risk that a board reset under liftoff vibration frees the nose cone.

Built the prototype (machined steel tube, PETG and nylon parts) and integrated it, most subassemblies working the first time.

MiniRockets program, Estaca Space Odyssey

2023 to 2025

Project manager in 2024-2025, team member in 2023-2024

Led the team designing and integrating a small rocket. Nominal flight at C'Space 2025, with Planète Sciences and CNES.

Launch campaign troubleshooting. Failed a verification test after qualification, reworked board and code and swapped the Arduino to isolate the fault, inspected the wiring, found intermittent contacts, redid solder joints. Requalified, flew nominally the next day.

PROFESSIONAL EXPERIENCE

Hemeria, design office internship

2025 (5 weeks)

Engineering intern

Toulouse, France

Developed a C++ tool (OpenCascade) modeling connector clocking of 3D satellite harness cables from their STEP files.

RESPONSIBILITIES AND PROJECTS 2026-2027

ESL program co-lead and ESL-2 project manager. Leading the rocket (structures, avionics, Hermès flight software, recovery) and its integration with the NAGA hybrid engine, through to qualification testing of the recovery system.

NAGA avionics and onboard control, Hermès flight software. Team of 9, forecast budget of EUR 473 to 910. Taking over and extending the ESL-1 flight software, ignition sequencing and valve actuation, adapting the hardware to the new recovery system.

EDUCATION

ESTACA, French graduate school of aerospace, automotive and transport engineering

2023 to 2028

Five year MSc level engineering degree, Space track (launch vehicles and satellites)

Saint-Quentin-en-Yvelines, France