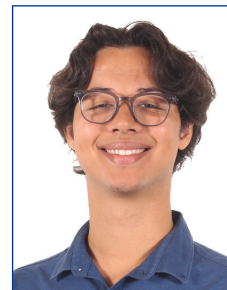


# Renato DE CARVALHO MARTINS FILHO

Double Degree Engineering Student | Aeronautics & Data Science

Mobility: France & Brazil | Available for Internship: June 2026

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Double Degree engineering student (Centrale Méditerranée & USP). **Winner of the ActInSpace 2026 Hackathon (CNES/ESA) and Embraer HackSEA winner.** Expert in flight mechanics and data-driven optimization (Python, AI). Focused on aerospace innovation and complex systems. Projects at **Karyus Labs**.

## EDUCATION

### École Centrale Méditerranée (ECM)

Master's Degree in Engineering (Double Degree), Marseille, France

2025 – Present

S5-S8 Cycle

- Generalist Excellence Program. Focus: Applied Mechanics, Control Systems, Material Science.

### University of São Paulo (EESC-USP)

B.Sc. in Aeronautical Engineering, São Carlos, Brazil

2023 – Present

GPA: 8.2/10.0

- Ranked 1st in Latin America. Major: Aerodynamics, Flight Dynamics, Structural Calculus.

## ENGINEERING EXPERIENCE

### ActInSpace International Hackathon (CNES & ESA)

European Space Agency Challenge - Toulon Hub

3rd Place | 2026

- Solved complex technical challenges based on space patents within 24 hours.
- Developed a business case and pitched to an industrial jury (Airbus, Safran).

### HackSEA Challenge (Embraer & USP)

Technical Lead – eVTOL Thermal Management

Winner | 2024

- Developed an optimized cooling solution for eVTOL batteries under high-load conditions.
- Integrated thermodynamic constraints and structural efficiency, validated by Embraer engineers.

### EESC-USP AeroDesign Team

Stability & Control Member | Sponsorship Director

2023 – 2025

- **Aero:** Stability analysis and control sizing for aircraft prototypes using **AVL**, **XFLR5**, and **MATLAB**.
- **Validation:** Calibrated inertia derivatives via **VBA** tools to match simulations with flight telemetry.
- **Management:** Led the sponsorship department: secured **17 industrial partners** (e.g., STMicro, Henkel).

### Aeronautical Engineering Week (SEA)

Organizing Committee Member | Logistics & Relations

2023

- **Corporate Relations:** Recruited industry experts and managed speaker curation.
- **Logistics:** Coordinated technical plant visits for groups of 50+ students.

## DATA SCIENCE & RESEARCH

### Karyus Labs | Data Systems

Lead Developer & Data Architect

2025 – Present

- **Data Engineering:** Real-time monitoring systems using **Node.js** and **MongoDB** for unstructured data.
- **Algorithmic Design:** Record disambiguation and deduplication algorithms to ensure database integrity.
- **Optimization:** Automated data pipelines (ONS APIs): **reduced processing time from 2 hours to seconds**.

### PICME Research (IMPA & CNPq)

Undergraduate Researcher | Data Intelligence

2023 – Present

- **Data Engineering:** Node.js scraping pipeline to process over **140,000** consumer reviews.
- **Machine Learning:** Python (NLP/Sentiment Analysis) to categorize automotive defects.
- **Mathematics:** Research on Graph Theory and optimization algorithm complexity.

## TECHNICAL SKILLS

**Aerospace Engineering:** Flight Mechanics, Stability & Control, **CFD** (Ansys, XFLR5, AVL), **FEA** (ABAQUS), MATLAB/Simulink, Aerodynamics (Steady/Unsteady).

**Data Science & Software:** **Python** (NLP), **Node.js** (Web Scraping), SQL, Git, Excel/VBA (Macros).

**Languages:** **Portuguese** (Native), **English** (Advanced/C1), **French** (Intermediate/B1+).