

# JUAN LIBONATTI

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## SUMMARY

Aerospace engineer with strong hands-on experience in embedded systems, software development, and propulsion systems. Passionate about building real-world solutions through multidisciplinary skills in electronics and programming.

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## PROFESSIONAL EXPERIENCE

**Junior Engineer, Instituto de Aeronáutica e Espaço - IAE** Jan 2024 - Present

- Worked on the MFPL 25 liquid rocket engine project, providing technical expertise mainly on pump design.
- Assisted on the development of a python based calculation library for rocket motor performance and design calculations.

**Internship, Centro Espacial ITA** Mar 2024 - Jul 2024

- Designed PCBs for a balloon cubesat platform that sucessfully measured radiation in the upper atmosphere.
- Wrote C++ firmware using ESP32 framework and FreeRTOS.

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## PROJECTS

**Personal Website** Mar 2025 - Jun 2025

- Built a react personal website with language and theme support from scratch using a express backend and a react frontend using MUI.
- Deployed on AWS, using EC2 and route 53.

**Small Rocket Test Bench** Jan 2024 - Jun 2024

- Designed a device for acquiring rocket motors thrust using a load cell sensor, an ESP32 microcontroller and an ADS1256 ADC.
- Built a python client for the bench for running tests while checking the data in real time.

**Sounding Rocket Avionics Board** Jan 2023 - Jun 2023

- Created a control board for sounding rocket recovery using a STM32 microcontroller as the main processing unit.
- Wrote C++ firmware using STM32 HAL.

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## SKILLS

**Languages:** Javascript, python, C++, HTML, CSS, SQL, MATLAB.

**Technologies:** Git, Linux, AWS (EC2).

**Hardware:** Arduino, STM32, ESP32, PCB Design.

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## EDUCATION

**Bachelor of Aerospace Engineering** Jan 2020 - Dec 2024

Instituto Tecnológico de Aeronáutica

- Relevant coursework in Process Design and Project Management.

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## ADDITIONAL INFORMATION

- **Languages:** English, Portuguese.
- **Awards/Activities:** Project technical excellence award (2024).
- **Interests:** game creation with Unity, video editing with Hitfilm editor.