Inter-subsystem communication test bench

Internship offer

University Space Center of Montpellier (CSUM)

The University Space Center of Montpellier is the French leader in the development and operation of nanosatellites developed by students. It has acquired in-depth competences in the field of design, manufacturing, testing and operation of nanosatellites and their subsystems, as well as in the area of space project management and product assurance in the framework of university space projects. The CSUM has an AIT (Assembly Integration and Test) Facility, a CDF (Concurrent Design Facility) and both UHF and S-band Ground Stations. The CSUM develops its own 1U and 3U CubeSat nanosatellite platforms with the support of the Van Allen Foundation and both the French and the European space agencies.

Internship description

Subsystems of the 3U-CubeSat developed at CSUM communicate via the CAN bus and the protocol CSP. A parameter/command database has been created in order to define parameters and commands that can be sent from subsystem to subsystem.

This internship is to continue the development of a Python script (with GUI) allowing users to send commands/messages over the CAN bus in order to test subsystem responses. A second objective of this internship will be to use the developed tool to implement automated test system where subsystem replies are compared to expected behaviors.

The student will have to be autonomous and be able to propose solutions to encountered problems. He will work in an environment of different professions and would have to be able to explain his work to the whole team even though they're not Python experts.

Skills/Knowledge: Python, Tkinter, C/C++
Level: 1st/2nd year of MSc or equivalent
Languages: English – being able to have a technical discussion with experts

Duration: 2 to 4 months
Preferred starting date: Position open immediately
This internship is remunerated.

Location: Centre Spatial Universitaire de Montpellier, Campus Saint-Priest, Montpellier France
Supervisor, Function at CSUM: Benoît Heintz, ADCS engineer

Contact

Please upload your application at: http://csu.edu.umontpellier.fr/en/job-offers-internship/