

INTERNSHIP OFFER

Title: Ground Station setup for receiving Satellite data for SatNogs

1 UNIVERSITY SPACE CENTER OF MONTPELLIER

The University Space Center of Montpellier (CSUM) 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.

2 INTERNSHIP DESCRIPTION

Description of the tasks: [SatNOGS](#) is an open-source project that aims to create a network of Ground Stations around the world to receive satellite data. The project incorporates and provides the software and hardware tools to build the receiving station and start receiving packets from space. The data can then be used by the amateur radio and scientific community. New Ground Stations can be added to SatNogs' database to help this community by increasing the coverage range and reception time window. The aim of this internship is to set up a Ground Station terminal in CSUM's facility in Montpellier to continuously receive data and send it to SatNogs observations database.

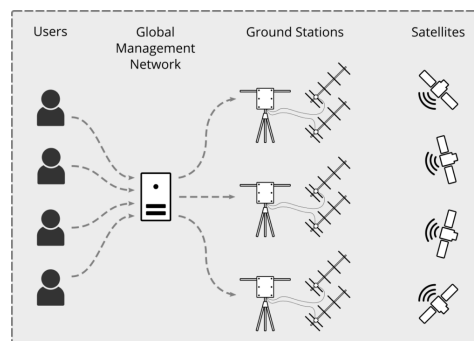


Figure 1: The SatNogs ground station network.

With that goal, the intern will be involved in the process of registering CSUM in the platform, setting up the hardware to acquire data from satellites, installing and configuring the software tools to track these satellites and send the data packets to SatNogs. During this project, you will be in contact with the following technologies/topics:

- Python programming language;
- Linux Operating System;
- Radio Frequency in the UHF band;
- Software Defined Radio technologies and tools (ex: Gnuradio);
- Communications systems for space applications;
- Raspberry PI setup and configuration;

Skills/Languages: General Knowledge of any programming language (C, C++, Python, etc...)

Plus (not required):

- Communications Systems
- RF Systems
- Linux

Location: Montpellier - France

Preferred starting date: 01/10/2019

Duration: 6 months

Supervisor, Function at CSUM: Rafael Duarte - Radio Frequency Engineer

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3 CONTACT

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