

INTERNSHIP OFFER

Title: Design of a miniaturized Weather Station for Ground Station monitoring

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: CSUM has a set of antennas on the roof of the building to send and receive data to/from its satellites. These antennas are exposed to weather conditions that might affect their performance and durability. For this reason, weather parameters must be continuously monitored from CSUM's control center. The goal of this internship is to design and set up a weather station on the roof of CSUM's building. The station will collect the weather data and send it via the internet to the control center, where it will be processed and displayed to operators. The main sensors and devices will be acquired from third-party suppliers.



Figure 1: The SatNogs ground station network.

In this project, the intern will be involved in the procurement process of the weather station components and its installation. The internship will also encompass the design of the software to communicate with the station, parse the acquired data and display it in CSUM's control room. You will be in contact with the following technologies/topics:

- Python programming language;
- Linux Operating System;
- Internet of Things concepts and tools;
- Front-end Web design;
- Raspberry PI setup and configuration;

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

Location: Montpellier - France

Preferred starting date: 01/10/2019

Duration: 3 months

Supervisor, Function at CSUM: Sébastien HESSE - Assistant Engineer

3 CONTACT

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