

## INTERNSHIP OFFER

### Title: Development of CSUM's Ground Station Web Application

## 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 part of CSUM's ground station and are connected to a series of software tools that encode/decode satellite data. The operation of this system is performed via a web application called Mission Control Center (MCC) that manages, displays and stores any received data. The goal of this internship is to implement additional features on top of CSUM's current MCC. These features might include security layers, different display views and so on.



Figure 1: CSUM GS Room

In this project, the intern will be involved in the development of the source code of the MCC, including the backend and frontend code of the web application. You will be in contact with the following technologies/topics:

- Python programming language ([Django Framework](#));
- Linux Operating System;
- Front-end Web design;
- Database management and basic devOps concepts;

### Skills/Languages:

- General Knowledge of Python, Javascript and HTML;
- GIT and Continuous Integration tools;
- Knowledge of communication systems is a plus but not mandatory;

**Location:** Montpellier - France

**Preferred starting date:** 01/09/2021 (flexible)

**Duration:** 3 to 6 months

**Supervisor, Function at CSUM:** Rafael DUARTE - Ground to Space Division Manager

**THIS INTERNSHIP IS REMUNERATED.**

File name: CSUM-M-RH-PROP\_GS\_web\_dev\_v1.0.0  
Author: DUARTE Rafael



### 3 CONTACT

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