

## **Aerial imagery data processing and automation with python**

**Code:** 21/43

**Company:** Satellite Vu

**Location:** Remote / Central London

### **Company Description:**

Satellite Vu was established as a limited liability company in 2016 to better commercialise Earth observation technology and services to a wider business market. We are focused on the new insights that thermal Earth observation can bring to the challenges of the globe including climate change and managing the maritime environment. We believe that better business decisions can be made on energy consumption and industrial processes by measuring the thermal output of structures. Financial and resource efficiencies can be made by business being better informed on economic activity metrics derived through thermal measurement.

Satellite Vu is currently resident at a central London working space following our graduation from the Seraphim venture capital accelerator in November 2019. We have been focused on the sale of infrared image data to export markets globally and specifically in the finance and energy sectors. The company has received a number of innovation awards from ESA, GITEX and the sustainability conference CLIX.

### **Project Description:**

Satellite Vu has collected a large amount of data throughout their aerial campaigns using their novel high resolution thermal camera. This camera will capture the heat output of any feature on the ground, day and night. Satellite Vu are planning on launching a satellite with this camera on it, and are using data acquired from aerial campaigns to perform early research and development.

You will be at the coalface of the data, working with the raw data and performing a variety of processes on it, continually evaluating the effect of various processing parameters on the quality of the output. This output of this pre-processing will be fed into a photogrammetry application which will allow for high quality mosaics to be created. Some parameter investigation and tweaking will be required in this software and once the workflow has been confirmed you will start looking at how to automate the entire process using python scripting. The tech team at Satellite Vu will support you throughout the process and once you have an end to end system in place, will help you deploy the application on a cloud processing environment. The output imagery will need to be accurately georectified in order for advanced feature detection and extraction to be able to be run.

You will be based in our offices in central London, however in the current climate we are fully geared up to remote working and will supply you with the tech that you need to work well at home.

**Applicant Specification:**

**Academic:**

- BSc in Geography, Remote Sensing, Computing, Maths or related field

**Minimum Requirements:**

- A good understanding of Earth Observation data and it's uses.
- Experience in using python for scientific data processing.
- An interest in image processing and analysis

**Preferred Additional Requirements:**

- Experience using python and producing data with it
- Previous EO data processing experience

**Further details:**

8 weeks minimum fixed term contract to be agreed with successful candidate. Virtual Induction Event to be held on 21 June 2021. Ideally to complete before the start of the next academic year. Salary is £1,500 per calendar month gross.

**Closing Date for Applications: 5pm Monday 7 June**

Applications should be made through the online form on the Satellite Applications Catapult website before the closing date.

<https://sa.catapult.org.uk/work-with-us/space-placements-industry-spin/>

Please note that elements of the form left incomplete will be deemed to render the application ineligible. They will be checked for eligibility and forwarded to the employer. Email applications made to the Satellite Applications Catapult, UK Space Agency, or host organisations will not be processed.