

Scoping automation potential for EO data pipeline

Code: 19/22

Company: Omanos Analytics

Location: Glasgow

Company Description:

Omanos Analytics is a space technology start-up delivering bespoke space data knowledge to support the narratives of communities across the globe, presenting data in tailored, accessible formats in order to reveal impact on local environments and communities. Selected by the UK Government's Satellite Applications Catapult for Business Sprint support in 2018, the company has provided support to communities from Guinea to Cambodia, working with a range of international NGOs on issues including forced displacement, destruction of livelihoods, and environmental degradation. Omanos' work has been used in a variety of contexts including to successfully ensure corporate accountability before the World Bank's private sector arbitration mechanism.

Project Description:

Development and automation options for an EO imagery acquisition, processing and visualisation pipeline. Currently, standard procedure for acquiring case data involves manual search through visualised EO data using online visualisation tools such as EO Browser. Automated search, download and analysis procedures would allow a much faster turnaround and increased case capacity. Scoping the options for automation is needed before full time investment is made.

This is a junior software engineer-type role which will involve working with data from the Sentinel and Landsat satellites along with software tools written in Python for the processing of Sentinel data. The intern will scope the usefulness and value of these existing software tools and research alternative automation options.

Using existing processing software tools the intern will build prototype automation procedures facilitating search of online data repositories, download of data, and visualisation. There is also potential for creating a user interface for quickly requesting data of a coordinate and allowing for specification of multi-waveband analysis.

During the internship the successful applicant will gain experience working in the fast-developing UK space industry, applying software development skills to imaging-data applications, and the use of that data to solve real world problems. Working with Omanos will also give an insight into working with NGOs, humanitarian groups and community representatives to provide scientific analysis communicated in an accessible way that is tailored to their needs and the requirements of their response or intervention.

Applicant Specification:

Student (preferably postgraduate) of engineering, maths, physics, computer science or equivalent

Minimum Requirements:

- Good experience coding in Python and automation of data handling procedures
- Excellent written and verbal communication skills.
- Enthusiasm for expanding the use and understanding of EO data and its use in aid of environmental and humanitarian work

Preferred Additional Requirements:

- Familiarity with Earth observation and remote-sensing data analysis
- Experience with data analysis in Python, in particular imaging data.
- Experience or familiarity with geotiff images or multispectral imaging data.

Further details:

8 weeks minimum fixed term contract to be agreed with successful candidate but nominally with a start date around 17th June, 2019 to attend the SPIN Induction day at the Satellite Applications Catapult, and completion before 20th September for the Showcase the following week. Salary is £1,500 per calendar month gross.

Closing Date for Applications: 5pm on Thursday 28 March

Applications should be made through the online form attaching a CV, before the closing date. 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.