

Cloud Native Geospatial: Putting Best Practice into Practice

Code: 21/08

Company: Satellite Applications Catapult

Department Name: Geospatial Intelligence

Project Description:

Satellite Applications Catapult (Catapult) is actively working on a wide variety of international projects across our Market and Technology Value Streams that exploit commercial and freely available satellite image datasets at local, continental and global scales. Industry best practices for effectively accessing and deriving information from datasets at such scales across local, cloud and hybrid processing environments have been rapidly evolving in recent years. Catapult is constantly adopting to and deploying these practices within our commercial and collaborative projects to ensure they remain competitive and innovative.

Two higher profile shifts toward putting cloud native geospatial into practice have been the maturing of cloud-optimised data formats (i.e. [Cloud-optimised GeoTiffs](#); COGs) and emerging of simplified, consistent, and searchable descriptions of online geospatial assets (i.e. [SpatioTemporal Asset Catalogs](#); STAC).

This project involves working alongside experienced Earth Observation and Geospatial Specialists within Catapult's Geospatial Technology team in translating recent advancements of these technologies and tools across to new satellite image datasets and geospatial products. The specific aim and objectives of the project shall evolve around the successful candidate's background, but is likely to involve making progress in one or more of the following areas:

- Creating a publicly accessible STAC catalogue of Catapult-hosted datasets (i.e., Sentinel-2, NovaSAR-1),
- Making a contribution to community initiatives such as [STACIndex](#) or [MLHub](#),
- Incorporating STAC and / or COGs within existing Catapult capability demonstrators or visualisation tools.
- Day-to-day activities will include technical research and solution design, contributing within agile software development lifecycles, and engaging with appropriate internal and external stakeholders.

Applicant Specification:

Applicants will need to have an understanding of Earth Observation data, computing skills, be able to critically evaluate problems, suggest solutions and show initiative in a supervised R&D project.

- Experience in one or more of the following areas: computer science, physics, mathematics, remote sensing, GIS
- Knowledge / experience of one of the Catapult Market Value Stream areas would be advantageous

Minimum Requirements:

- Understanding of or demonstrated interest in Geospatial and Earth Observation concepts and applications
- Proficiency with one or more programming languages
- Ability to learn new software and technologies quickly
- Ability to follow instructions and work in a team environment
- A 'can-do' attitude to challenges in the workplace
- Detail oriented

Preferred Additional Requirements:

- Awareness and understanding of open source and commercial satellite image missions and datasets
- Awareness and understanding of cloud computing concepts
- Demonstrated proficiency with one or more programming languages (i.e. code repository / website)

Further details:

8 weeks minimum fixed term contract to be agreed with successful candidate but nominally with a start date around June 2021 to attend the SPIN Induction day hosted by the Satellite Applications Catapult, and completion before September 2021 for the Showcase that month. Salary is £1,500 per calendar month gross (guide only).

Interviews:

Week of 15 March 2021 but will be confirmed.

Closing Date for Applications: 5pm on Friday 5 March 2021

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.