

## **Evaluating the Satellite Earth Observation ‘value add’ in a compute-abundant world: an evaluation of Geospatial Data Analysis Platforms**

**Project Code:** 19/16

### **Project Description:**

To date the international Earth observation community has failed to come to close to servicing the total addressable market. This failure in delivery has been associated to a number blockers including, but not limited to:

- Access to Scalable compute – EO data is the world’s third largest contributor of data
- Automated scalable analysis – The true value of the data can only be unlocked through intelligent analytics
- Visualisation/ information delivery – providing tailored intuitive and powerful visualisation

Emerging geospatial platforms exploiting ‘infinitely’ scaleable computing resources are changing the way in which Earth observation data is being manipulated to create novel applications across unexplored markets.

The successful candidate will work across the Catapult’s Geospatial Intelligence Directorate, with a focus on Earth Observation and Software Engineering Groups. They shall also collaborate with the Catapult’s AI4Space team, exploring innovative research opportunities with leading UK research institutions at the intersection of AI and Satellite Applications. Activities within the role relate to technically appraising the functionality of at least one geospatial platform in enabling development and deployment of computer vision techniques. These activities shall focus on the value proposition of using these techniques to address applications defined by the Catapult Market-Facing Value Streams (i.e. Intelligent Transport Systems, Agri-Tech, Extractive Industries, Blue Economy).

Specific activities will include:

- Working with Catapult programme heads and senior technical stakeholders to define market centred test scenarios based existing strategic goals
- Implementation of leading scientific techniques within prominent geospatial platforms
- Appraising research opportunities associated with the utilisation of Computer Vision techniques upon satellite EO datasets.

### **Applicant Specification:**

Applicants will need to have an understanding of EO data, have computing skill, be able to critically evaluate problems, suggest solutions, and show initiative in a supervised R&D

project. Target courses: Computer Science, Remote Sensing, GIS, Geography, Physics, Engineering, Mathematics and other similar courses

**Minimum Requirements:**

Experience in one or more of the following areas: computer science, physics, mathematics, remote sensing, GIS

**Preferred Additional Requirements:**

Knowledge/ experience of one of the Catapult Programme/ market areas would be advantageous

**Further Details:**

Through working in a very dynamic and diverse environment within the Catapult and as part of the Geospatial Intelligence Directorate the successful candidate will have the opportunity to develop a valuable soft and technical skills. This are expected to include:

- Familiarisation with leading commercial and open source image analysis technologies
- Familiarisation with a variety of commercial and freely available optical and SAR EO datasets
- Access to the latest geospatial tools
- An understanding of contemporary EO and geospatial developments shaping one of the UK's fastest growth sectors.
- Understanding of key market problems the Catapult is working with industry to address
- User centred design and requirements gathering
- Communication skills of dealing with a diverse set of technical, operational and sales stakeholders, including with international partners
- Project management

**Start Date:**

The Induction Day will be held at Harwell on Monday 17 June, it is intended this will also be the start date.

**The Nitty Gritty:**

Interviews will start the week commencing the 8 April. 8 weeks fixed term contract to be agreed with successful candidate but nominally with a start date around Monday 17 June which is also the SPIN Induction day at Harwell. With a salary of £1,500 per calendar month.

**Closing date: 5pm Friday 22 March**