

Satellite Data Analysis for Disaster Resource Management

Code: 20/18

Company: Global Geo-Intelligence Solutions Ltd.

Location: Nottingham

Company Description:

Global Geo-Intelligence Solutions (GGIS) is a geospatial data analytics company. We provide geospatial intelligence and engineering solutions for resource and infrastructure monitoring and management. We utilise data from earth observation satellites, global navigation satellite systems (GNSS), IoT devices and other data sources to provide decision support intelligence to end users.

Recent projects include:

- Disaster Resource Management in the Caribbean using Satellite Data for Post Disaster Management and Risk Assessment in the agriculture sector impacted by the severe hurricanes in the 2017 season.
- **Foresight Crops:** utilising satellite remote sensing data and other inputs to model and predict insect infestation and swarming activities, in particular locust swarms.
- **Foresight DRM** service enables geospatial data collection post disaster and provides analysis of damage and future risk to relevant stakeholders.

Project Description:

The ability to quickly and efficiently quantify the losses and damage to the agriculture sector is a vital enabler for speedy recovery and resilience. In the Caribbean recent hurricanes such as Irma & Maria in 2017 and Dorian in 2019, have caused significant devastation in many islands. This impact has included significant losses in agriculture, damage to crops, change to river courses and landslides impacting farmers. Disaster resource management with respect to agriculture is therefore important.

The project will involve satellite data analysis to identify high risk/vulnerable areas such as unstable slopes prone to landslides, areas prone to flooding, etc. In addition, previous work done by GGIS in damage detection and crop type detection will be further developed and extended. The region of interest would be the UK and selected islands in the Caribbean.

The role of the intern will include:

- Satellite Data analysis:

- Download and pre-processing of satellite earth observation data
- Land use classification
- Risk vulnerability mapping
- Crop type identification
- Data visualization
- Integration with geo-tagged data from user app
- Documentation

Applicant Specification:

A motivated and socially conscious candidate with remote sensing experience and a passion for making a positive impact on people's lives through the application of science and engineering.

Subject Requirement:

BSc, MSc or PhD student in subjects such as remote sensing, geography, agricultural science, surveying, computer science, or engineering.

Minimum Requirements:

- Analytically minded and adaptable.
- Understanding of Remote Sensing Fundamentals.
- Experience of working with geo-spatial data.

Preferred Additional Requirements:

- Experience of working with satellite earth observation data (optical and radar imagery).
- Programming Experience (e.g. Python, R, Java).

Further details:

8 weeks fixed term contract to be agreed with successful candidate but nominally with a start date around 15 June 2020 to attend the SPIN Induction day at the Satellite Applications Catapult, and completion before Mid-September for the Showcase the following week. Salary is £1,400 per calendar month gross.

Closing Date for Applications: 5pm Tuesday 14 April

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.