

Predicting the plague: Identifying probable locust movements using Earth Observation time-series analysis

Code

20/07

Company

Satellite Applications Catapult, Geospatial Intelligence Value Stream

Location

Harwell Campus, Didcot

Project Description

Locust swarms provide a severe threat to food security, swarms develop under specific environmental conditions, destroying vegetation and travelling large distances. In early 2020 Desert Locusts destroyed crops and natural vegetation across eastern Africa. Satellite data can provide an overview of ecological condition – such as vegetation and soil moisture – suitable for Desert Locusts.

This project aims to create a model based upon satellite data to assist in determining the probable locations of locusts based on vegetation characteristics using geospatial and time series analysis. We would be interested in talking to geospatial / remote sensing students with experience in python and google earth engine to assist in developing an earth observation product for determine sites suitable for locust.

The successful student will work within the Catapult's Geospatial Intelligence Team. They will be expected to investigate, design and develop a methodology for predicting the movement of locusts using earth observation and geospatial datasets

Applicant Specification

- A successful applicant will have a good understanding of Geospatial and EO data.
- He/she will have computing skills, an ability to critically evaluate problems, suggest solutions and show initiative in a supervised R&D project.
- Students who have taken courses in IT, Remote Sensing, GIS, Geography, Physics, Engineering, Mathematics and any other similar courses are preferred.
- Ability to work comfortably in an open and collaborative environment is a must.

Minimum Requirements

- Experience and interest in one or more of the following areas: IT, mathematics, remote sensing and GIS.
- Some knowledge and experience of web-app development is essential

Preferred Additional Requirements

- Experience in programming languages such as Python, gdal, Google Earth Engine would be beneficial.

Application Closing Date

5pm Monday 9 March

Interview Dates

19 & 20 March and 23 & 24 March

While sending in your applications, ensure you will be available for an interview for the days mentioned above.

Start date & salary:

The internship is for 8 weeks fixed term contract starting on 15 June 2020 and the salary is £1,500 per calendar month. The SPIN induction day will be on the start date.