



<b>Company Name:</b>	Sainsburys
<b>Team / Department:</b>	Property Insight & Analytics
<b>Address:</b>	Sainsburys Supermarkets Unit 1 Draken Drive Ansty Park Coventry CV7 9RD

**Provisional title for project:**

Using satellite imagery to detect supermarket car parks and their levels of occupancy

**Short description of the problem that would be addressed by the project:**

Recently, efforts have been made to gauge economic conditions using new forms of data such as satellite imagery and the movements of shipping into and out of ports. This project will apply similar techniques to understand the levels of occupancy in supermarket car parks, how these have changed through time and explore the complexities of using satellite imagery in locations where space is at a premium and car parks are multi-storey. The outputs of the project will be a database of store locations which have been enriched with information about whether or not the store has a car park alongside the level of occupancy. It will also evaluate the potential of detecting how occupancy changes over time and the relationship to changing retail markets.

**Short description of the data sources that would be used in the project, and how they would be used.**

The student will use Geolytix Open Retail Points dataset for store locations, as well as sourcing satellite imagery that can be used for training and test datasets, to be encoded by the student.

**Would any work by the student need to be carried out on site at the Company with the exception of supervisory meetings?**

Yes - at the Coventry address provided

**Any issues of data confidentiality and IPR that would need to be resolved**

No

**Essential skills**

The ability to code (though help will be provided), experience with satellite imagery, knowledge of image recognition techniques is required.

**Desirable skills**

Perform spatial analysis tasks, present findings and explore results via maps.

**Preferred degree programmes (if any)**

Geography/GIS, Computer/Data Science, Urban Analytics

**Preferred selection method**

Face-to-face interview and telephone interviews if required.

**Support and training offered by the company**

1 hour every 2 weeks, plus any ad-hoc support as necessary.

**Financial assistance offered by the company**

The organisation will pay the honorarium (£500)

**Any other comments**

Bring your enthusiasm:)