Masters Dissertation Scheme
Project form

Company / Organisation Name:	HERE Technologies
Team / Department:	Spatial Data Analytics & Engineering
Address:	Eindhoven, the Netherlands

Provisional title for project:

Use of optimization algorithms for efficient map data feature collection.

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

Digital Map Data quality relies on quick and accurate collection of the changes in our environment. Given the variance of changes in terms of time and location, optimizing the data collection schedule becomes an operational problem.

This study focuses on the development of an optimization algorithm which, given a set of constraints and priorities, derives the optimal route(s) to visit the specified road segments for map data collection.

Note: this is a variation on the Multiple Traveling Salesman Problem with emphasis on road segments instead of point features as destinations.

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

- Road Network Data (HERE/OSM)
- HERE APIs (see *https://www.here.com/platform/*)

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

No

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

No, this project will use open data (OSM) and data/API access provided by HERE

Essential skills

- Data processing & analytics
- Programming (preferred Python/C++)
- Good communication, proactive attitude and ability to explain complex topics

Desirable skills

- Experience with REST APIs
- Experience with geospatial data

Preferred degree programmes (if any)

A program with Geographic Data Science, Computer Science, Data Science, GIS

Preferred selection method

Online interview

Support and training offered by the company

Online meetings every two weeks, guidance in working with HERE data/APIs

Financial assistance offered by the company

500 GBP

Any other comments

By the end of the project the student will be asked to present the result of the research with a HERE audience.

We are open to discuss the project scope with a student and academic supervisor to align to university research requirements and project complexity.

If there are any questions about the 2024 programme, please contact Richard Arnold at richard.arnold@ucl.ac.uk. The completed form should also be returned to this address.