

Company Name:	Experian Ltd
Team / Department:	Marketing Analytics
Address:	Nottingham

Provisional title for project:

Retail Centre Health Scoring

Short abstract of what the project would probably entail, and the data to be used:

Experian holds data on retail centres which details relevant groups of shops and business premises within towns and cities. These centres can be used for location planning and identifying market opportunities by a range of clients. As well as location, there is a wide array of financial and demographic data relating to the centres that is of interest for identifying similar successful locations or advantageous starting locations for businesses. With rapid changes in the way consumers shop; it is also of a wider interest to understand the behaviour within these centres, and to be able to track changes and predict trends or forecast viability.

Recent trends in the retail sector have seen a shift from 'high street' shopping towards the convenience of online shopping, and this can create an uncertain future for retail spaces within towns and cities. This work would work towards quantifying the level of these changes to help retailers and local authorities have a consistent view and be able to plan and invest more strategically as a result.

Experian holds data relating to:

- Demographics
- Economics
- Daytime Populations
- Centre Catchments
- Retail Spend
- Online Retail Behaviour
- Gravity Modelling of Spend
- Business Credit Scorecards
- Business to Business Records

The aim of this project is to use a selection or all of this data to create an index scoring model, similar to a credit score, that estimates the probability of different behaviours of a retail centre. Most notably the score should give a sense of the overall health of a retail centre, but could also be made from a combination of scores relating to financial, demographic and business behaviours.

Data preparation will be required to collate a selection of these datasets and to compile historical data. A repeatable modelling methodology will also need to be defined to create forecast data and scoring.

The scoring methodology doesn't have to be limited to traditional techniques and could use predictive analytics, survival analysis, geospatial analytics, machine learning or a combination of these. Depending on the relevance it may also be possible to acquire additional external or open source datasets.

The final scoring solution can be presented as a model or additionally can be visualised in an exploration or comparison tool.

Essential and desirable skills that the student would need to have:

Essential skills (NB):

- Analytical background; awareness of statistical techniques
- Ability to communicate technical results to non-technical stakeholders

Desirable:

- Experience applying analytical methods to real life business problems
- Experience in working with large datasets
- Confidence converting a real life problem into a pipeline of analytical tasks
- Data visualisation techniques and best practise
- Interest in Location Analytics/Insight and/or digitally-derived data.
- Knowledge of the retail landscape

Preferred degree programmes (if any):

- Any degree with significant analytical element

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

This is to be confirmed. We are hopeful that extracts of the data sets could be accessed securely enable primarily off-site working (but we should be able to accommodate the student on-site in Nottingham when required, subject to them completing our standard pre-employment checks)

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

We will need to work through what data we will be comfortable releasing off-site for the analysis itself. We may also need the student to go through some 'pre-employment checks' and will definitely require them to sign an Experian confidentiality agreement to protect both the student and Experian. We recognise that for the work to be of value to the student then it will need to be publishable/shareable in some format and, subject to Experian reviewing the content and having the right to edit/sign-off (especially regarding insuring that nothing commercially sensitive is included) then we're confident a workable solution can be found. However, for the project to be of value to Experian, Experian must be free to commercially exploit and build on the outputs of this work, without restriction, and will own any IPR arising from this work.

Preferred selection method

Face to face interview/Skype interview preferred

Support and training offered by the company

This is likely to vary – but is likely to average an hour's face-to face meeting every 2 weeks (with potentially some additional telephone check-ins at key stages of the project)

Financial assistance offered by the company

I agree to pay the student £500 (plus travel expenses) ...

Any other comments

The data used for this project is derived from a commercially sensitive source. We hope to anonymise the data sufficiently so this won't be a problem, however depending on the visualisation techniques used we may ask for some granular levels of data to be omitted.

For details on how to apply, please visit:
<https://www.cdrc.ac.uk/retail-masters/details-for-students/>