



<b>Company / Organisation Name:</b>	Kainos Software plc
<b>Team / Department:</b>	Data & AI Practice
<b>Address:</b>	4-6 Upper Cres, Belfast BT7 1NT

**Provisional title for project:**

Recommendation System: Implementation and Evaluation

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

This project will research the various methods used to build recommender systems, based on user preference data, for example data on the rating of movies. Exploration of methods could start with simple non-personalised business rules (e.g., Actor = A, Genre = B, Rating => 10), and then moving to more advanced approaches like collaborative filtering (including matrix factorization approach). Further methods could also be experimented with, including ensemble and deep learning methods, and each of the methods could be compared against one another by using consistent method of evaluation. Final extensions to the work could be a Customer Lifetime Value metric and / or a customer segmentation system.

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

There are various open data sources available to complete the project, including data on movie ratings and video game reviews.

**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

**Essential skills**

Machine learning, statistics, visualization, programming in Python, familiarity with working with different data types

**Desirable skills**

Deep learning, NLP

**Preferred degree programmes (if any)**

Computer Science

**Preferred selection method**

Online interview

**Support and training offered by the company**

TBC

**Financial assistance offered by the company**

The organisation will pay the honorarium (£500)

**Any other comments**

For details on how to apply, please visit:

[www.cdrc.ac.uk/education-and-training/masters-dissertation-scheme/details-for-students](http://www.cdrc.ac.uk/education-and-training/masters-dissertation-scheme/details-for-students)