

University of Stirling

Rachel Norman

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University Partner:

University of Stirling

Academic Supervisor - Name and Email Address:

Rachel Norman - r.a.norman@cs.stir.ac.uk

Suggested Project Title:

Using data science to understand the food system

Suggested Project Summary:

I am a mathematical modeller who works on problems in food security but with a very broad remit. I am particularly interested in the dynamical structures, trade offs, feedback loops and tipping points in the food system.

In this project I would propose to look at available data on some aspect of the food system and see if we can use that to inform modelling and make predictions about how to improve or optimise the system. The area could be at the food production end of industry or the retail end. It depends on who has got data that they think they could make more of, in terms of using it to make forecasts about yield, or sales, for example.

The potential technical outcomes would be an analysis of data and/or development of a model parameterised from the data which could be used to optimise a system or make predictions. It could also result in a decision support tool.

Collaboration Sought for the Project:

A company working in the food sector that wants to use its data to inform future decisions under uncertainty. Could be at the production, processing or retail end of things.

Benefit to the Industry Sponsor:

This does depend on the industry. I am aware this is very vague, it would need to be developed in detail with the company to ensure we are answering a question that they are interested in. I anticipate the project would either look at optimising resources in some way, reducing risk, predicting future directions or the development of a decision support tool which would determine the best option under different scenarios.

Published or Private?:

Yes