Insight commercial case studies

Sector: Agri & Food

Insight
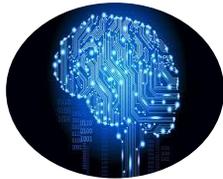SFI RESEARCH CENTRE FOR DATA ANALYTICS

Maths &Stats

Machine Learning

Recommender Systems

Artificial Intelligence

Covid in the workplace - a case study

Rapid response to the COVID-19 pandemic: infection prevention and control measures that can anticipate *the*

Executive Summary

Challenges	What Insight Delivered	Impact
Meat processing plants in Ireland and abroad have proved to be flashpoints for super-spreader and rapid fire events that threaten spill-over into broader society.	This project will enhance knowledge of the dynamics and underlying physics, chemistry and biology of such events, thereby safeguarding and enhancing the sustainability of Ireland's food production and processing sectors. The work programme will also enhance diagnostics capability in these settings, enabling real-time phylogenetic tracing of the spread of infection across space and time.	This technology will be valuable not only during the course of the current pandemic but also in building a foundation on which to build a rapid response to future emerging infectious diseases threatening animal and human health. Thus, the work envisaged aligns at multiple points with SFI's legal remit.

Background

Meat processing plants in Ireland and abroad have proved to be flashpoints for super-spreader and rapid fire events that threaten spill-over into broader society. Means of identification and prediction of Covid hotspots should be explored to help Irish society further mitigate potential outbreaks.

Solution and Outcome

Rapid response to the COVID-19 pandemic requires infection prevention and control measures that can anticipate the eruption of hot-spots throughout society and act effectively to exclude infection from such environments, while also building a series of urgent "fire-fighting" measures should initial defences fail.

Our proposal will enhance knowledge of the dynamics and underlying physics, chemistry and biology of such events, thereby safeguarding and enhancing the sustainability of Ireland's food production and processing sectors. The work programme will also enhance diagnostics capability in these settings, enabling real-time phylogenetic tracing of the spread of infection across space and time. This technology will be valuable not only during the course of the current pandemic but also in building a foundation on which to build a rapid response to future emerging infectious diseases threatening animal and human health. Thus, the work envisaged aligns at multiple points with SFI's legal remit."

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