

RoboClean: Human-Robot Collaboration for Allergen-Aware Factory Cleaning

Aim of the project

- Investigate / demonstrate the potential of human-robot collaboration, integrated with IoT sensors for cleaning and allergen detection on a factory floor
- Engage with partners in industry (including bakeries and spice and tea blending companies) and the third sector (the Food and Drink Forum).

Outcomes

- Design, implementation, and evaluation of an interactive prototype
- Novel human-robot collaboration and sensor data analytics

Contributions

- *Techniques* (e.g., multi-agent coordination)
- Socio-technical understandings (e.g. human-robot collaboration in a manufacturing setting for the co-creation of consumer goods)
- Sensor data analytics (new mobile near infrared sensor technique to detect allergens).

Potential benefits

 safer, cleaner, more efficient, and more productive food factories, a £28bn sector in the UK

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