JF Work of 19/12/2024

Link Between the Smart Dryer Project and the Sustainable Development Goals (SDGs)

The smart dryer project for fruits and vegetables aligns with several United Nations Sustainable Development Goals (SDGs). The table below highlights the main SDGs and their connection to the project:

Table 1: the main SDGs and their connection to the project

Main SDG	Link to the smart dryer project
SDG 2: Zero Hunger	The smart dryer reduces food waste by extending the shelf life of fruits and vegetables, contributing to food security and better nutrition.
SDG 7: Affordable and Clean Energy	Intelligent sensors improve the energy efficiency of the dryer, and it can integrate renewable energy sources like solar panels.
SDG 8: Decent Work and Economic Growth	The smart dryer supports small farmers by adding value to their production, creates job opportunities, and fosters local economic growth.
SDG 12: Responsible Consumption and Production	The dryer promotes sustainable management of agricultural resources by reducing post-harvest losses and using recycled materials for its construction.
SDG 13: Climate Action	By limiting food waste and reducing energy consumption, the project contributes to lowering the global carbon footprint.

This addition serves as an introduction to the table, providing context for the relationship between the smart dryer project and the SDGs.

Ontology with the main subclasses of the dryer

The "Class-Relation-Object" table for the main classes of smart dryer is following

Table 2: the "Class-Relation-Object" table

User	User	Food_smart_dryer
Food_smart_dryer	Integrates	ESP32
User	Interacts with	User_Interface_(HMI)
Sensor	Send data	ESP32

Food_items	Is inserted in	Food_smart_dryer

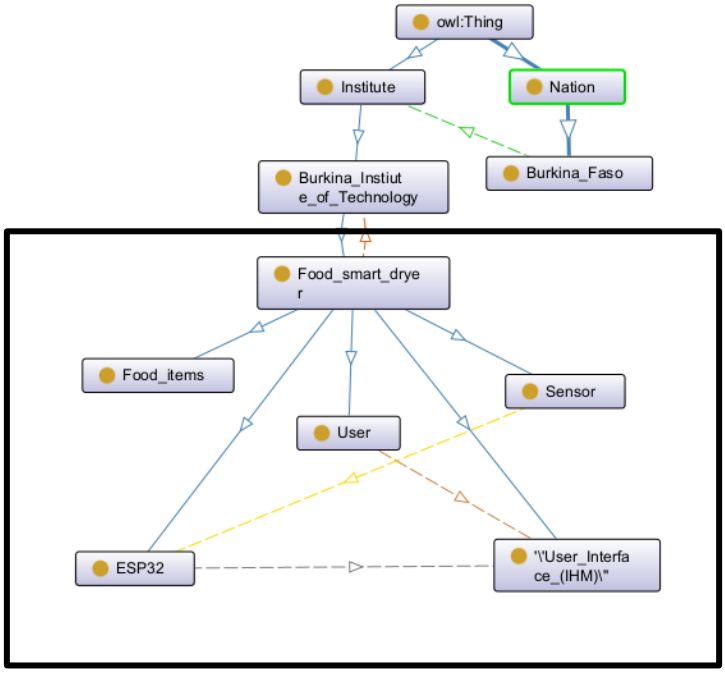

Figure 1: Ontology with the main classes