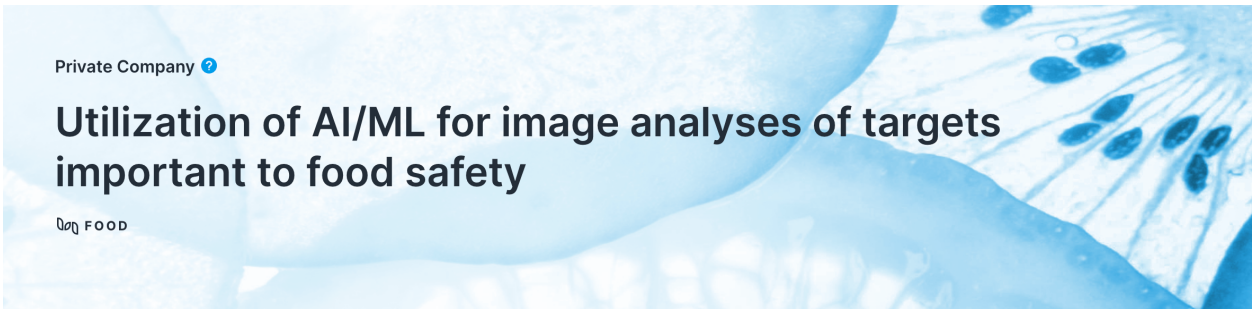

Background

The rapid development of machine learning (ML) models has enabled the analyses of large datasets for predictive and confirmatory analytics. Pairing ML with images of diagnostic test kit results and/or raw data outputs from a device have provided new ways to detect targets of interest for food safety applications.

What we're looking for

We are looking for a partner to develop ML models for datasets that are provided by our organization. The data sets may be images of diagnostic test kit results, digital readouts from a device or other output. The model should be able to effectively identify the result of an event with accuracy equal to a gold standard test.

Solutions of interest include:

- Machine Learning
- Artificial Intelligence
- Imaging
- Hyperspectral Imaging
- NIR or MIR

Our must-have requirements are:

- Provide examples of previous models that have been able to accurately detect or measure a target.

Acceptable technology readiness levels (TRL): Levels 2-4

1. Basic principles observed
2. Concept development
3. Experimental proof of concept
4. Validated in lab conditions
5. Validated in relevant environment
6. Demonstrated in relevant environment
7. Regulatory approval
8. Product in production
9. Product in market

What we can offer you

Eligible partnership models:

- **Sponsored research**
- **Gift (Unrestricted grant)**

Benefits:

Sponsored Research

We are able to provide funding for model development, funding amounts to be discussed at the appropriate stage of engagement.

Gift (Unrestricted grant)

We are able to provide gifts for model development, funding amounts to be discussed at the appropriate stage of engagement.

Compounds and Reagents

We will provide all standards needed for model development.

Data

We will provide all materials and gold standard paired data for the initiative.

Please contact the University of South Florida Technology Transfer office representative for submission – Karla Schramm at kschramm@usf.edu