Service ID S00247

Location   At user's premises, Remote,

Validation of Yield Estimation based on Computer Vision

Provider service

Universitat de Lleida (UdL)

Link to content

https://agrifoodtef.eu/catalogue-of-services/validation-yield-estimation-based-computer-vision

Type of Sector

Greenhouse, Horticulture, Tree Crops, Viticulture

Accepted type of products

Data, Software or AI model

Type of service

AI model training, Collection of test data, Performance evaluation, Test design, Test execution, Test setup

Description

Validation of fruit detections, diameter estimation, and yield estimates using artificial intelligence, in particular computer vision techniques. The service will help the solution provider check its performance using reference datasets or experiments conducted in testing fields. The service might also include the generation of reference datasets and expected detection, diameter measures, or yield values, which can be used both for validation and training of the artificial intelligence solution based on computer vision.

How can the service help you

The service helps solution providers validate the accuracy of their yield estimations, fruit detection, and diameter estimation using AI and computer vision techniques, ensuring reliable performance through reference datasets and testing.

How the service will be delivered

The service can be customised for your specific product.

Service customisation

The validation service will be conducted in designated testing fields or at your location, depending on availability and requirements. The execution of the service will take up to two weeks, allowing time for data collection and analysis. You will receive a comprehensive report detailing the validation results, including metrics on fruit detection accuracy, diameter estimation, and overall yield estimates. Additionally, metadata related to environmental conditions during testing will be provided. To facilitate this service, customers will need to supply access to relevant images or videos of fruit trees, as well as any specific criteria or parameters for the validation process. This service can be delivered year-round, although timing may be influenced by the fruiting cycle of the trees being assessed. However, you will also have the option of validating your yield estimation solution in a completely digital and simulated setting. Using the digital infrastructure of our data space, you will be able to run your yield estimation service against our datasets of images for different tree crops and get reports about the performance obtained that will help you further improve your solution.