

Service ID S00089



Location Remote

Evaluation of AI solutions performance based on testing datasets

Provider service

Laboratoire National de Métrologie et d'Essais - LNE

Link to content

<https://agrifoodtef.eu/services/evaluation-ai-solutions-performance-based-testing-datasets>

Type of Sector

Arable farming, Food processing, Greenhouse, Horticulture, Livestock farming, Tree Crops, Viticulture

Accepted type of products

Software or AI model

Type of service

Collection of test data, Performance evaluation, Test design, Test execution, Test setup

Description

By having your AI system tested by the LNE, you ensure it meets the highest standards of safety and performance, boosting your product's reliability and trustworthiness in the market. Partnering with the LNE for rigorous testing of your AI technologies gives you a competitive edge, as their certification enhances credibility and opens doors to new market opportunities both locally and globally. LNE's AI performance evaluation service uses comprehensive testing datasets to assess the accuracy, robustness, and efficiency of your AI systems by comparing the outputs of the system with a dataset of reference values. By testing real-world scenarios, LNE ensures that your AI models meet industry standards and regulatory requirements, helping you improve performance, reliability, and market readiness. LNE utilises a diverse range of carefully curated datasets that simulate various operating conditions and environments in which the AI may be deployed. These datasets allow for in-depth testing of the system's ability to process information, make decisions, and produce accurate outputs. The service covers a broad spectrum of AI applications, from machine learning models and deep learning algorithms to computer vision systems, natural language processing (NLP), and autonomous robotics. The evaluation process examines key performance metrics such as accuracy, precision, recall, response time and scalability. It also identifies any potential biases in the system, ensuring that the AI behaves fairly and ethically across different user groups or environmental variables.

How can the service help you

This service can significantly benefit agricultural robotics and AI companies by providing a reliable and standardised way to assess the effectiveness of their AI systems.

Here's how:

Accurate AI performance assessment: Agricultural robots rely heavily on AI for tasks like crop detection, disease identification, or autonomous navigation. LNE's AI performance evaluation using test datasets allows companies to precisely measure how well their AI models perform in real-world agricultural scenarios, improving decision-making and overall system effectiveness.

Improved model accuracy and efficiency: by testing with diverse datasets, agricultural robotics companies can identify potential weaknesses or biases in their AI algorithms, ensuring more accurate detection, prediction, and classification. This leads to better outcomes in tasks like yield estimation, precision weeding, and pest management.

How the service will be delivered

The evaluation dataset, procedure and metrics are customised according to the customer needs of evaluation.

Service customisation

The service includes several technical meetings with AI and robotics evaluation experts to define the evaluation dataset, the strategy and the testing procedure. Once the evaluation is complete, the LNE provides a detailed report that includes both quantitative and qualitative analyses of the AI's strengths. This report is invaluable for developers looking to refine their systems and for businesses needing to demonstrate compliance with industry standards and regulations.