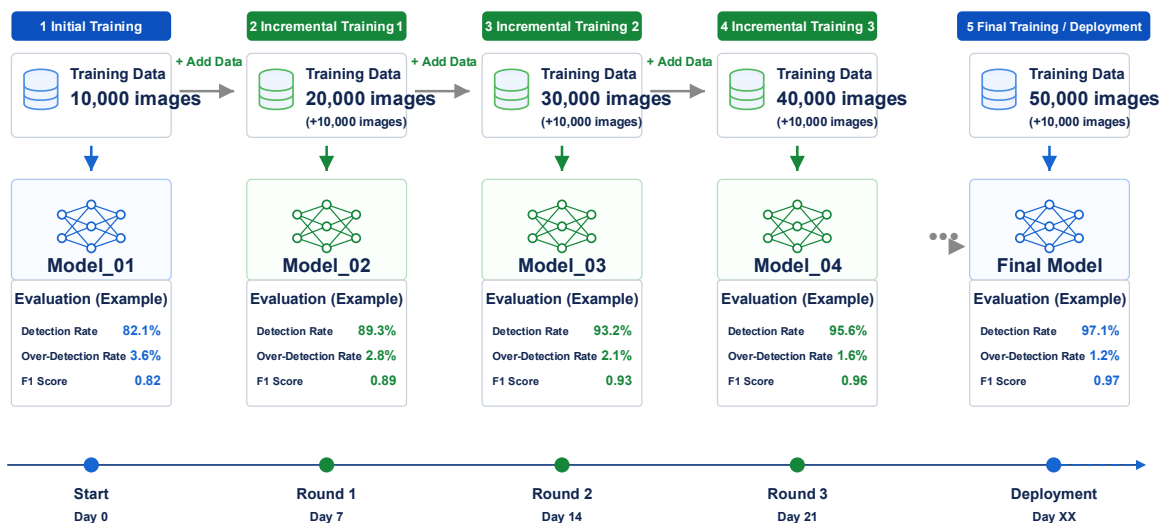


Model Training Progress

The model is trained and improved step by step as additional data is collected

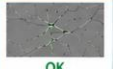
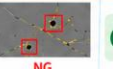
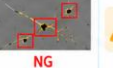
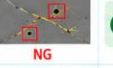


Key Points

- Continuously adding data improves model accuracy
- Review evaluation results and retrain the model as needed
- Once the required accuracy is achieved, deploy the model for production use.

Evaluation Results (by AI Model)

Quantitatively evaluate and compare the inspection performance of each AI model.

Overall Summary (Average of All Models)								Good (Target Achieved) Caution (Needs Check) Needs Improvement (Target Not Achieved)		
	Detection Rate (Recall)		False Positive Rate (FPR)		F1 Score		Average Inference Time		Number of Evaluated Images	
	96.3%		2.1%		0.95		85 ms/image		12,456 images	
No.	AI Model Name	Number of Evaluation Images (images)	Evaluation Metrics				Example Samples (Inspection Results)		Overall Judgment	Comments
			Detection Rate (Recall)	False Positive Rate (FPR)	F1 Score	Average Inference Time (ms/image)	OK (Good Product)	NG (Defective Product)		
1	Model_01 (Sub-Model 01)	2,000	97.2%	1.8%	0.96	78				- Detection rate: target achieved - False positive rate: good - Stable and high accuracy
2	Model_02 (Sub-Model 02)	2,000	94.5%	2.6%	0.93	82				- Detection rate: slightly lower - Some missed defects - Recommend adding more training data
3	Model_03 (Sub-Model 03)	2,000	96.8%	1.9%	0.95	88				- Overall stable performance - Good balance
4	Model_04 (Sub-Model 04)	2,000	90.1%	3.8%	0.88	95				- Detection rate: target not achieved - High number of false positive - Recommend retraining and parameter tuning
—	Ensemble (Model 01+02+03)	6,000	98.1%	1.5%	0.97	92				- Improved performance through ensemble effect - Minimizes missed defects - Recommended as the primary candidate

※ Metric definitions: Detection Rate (Recall) = TP / (TP + FN), False Positive Rate (FPR) = FP / (FP + TN), F1 Score = 2 × (Precision × Recall) / (Precision + Recall)

Key Features

Product AI Studio (AI Development Excellence)

Application Inspection AI Development, Data Preparation, Training & Evaluation

Data Data Collection / Sorting / Augmentation / Dataset Management

Training Model Training / Parameter Tuning / Project Management

Evaluation Accuracy / False Positive Detections / Overfitting / Missed Defects / Failure Cases
Repeatability / Robustness to Environmental Changes / Model Comparison

Output Model Export for AI InspeX or AI ScanX

Languages Japanese · English · Vietnamese

OS & Mode Windows 11 / Development Mode

※ Customization is available to meet specific customer requirements. Please contact us for details.

AI Studio (AI Development, Data, Training & Evaluation Platform)

AI **Development** Excellence

Data

Training

Evaluation

Develop AI inspection models on a single platform.

AI Studio is a software platform for organizing large volumes of data, training AI models, and exporting models for deployment.

An AI model performs tasks such as prediction, classification, recognition, and generation based on input data.

➤ AI models that pass evaluation can be deployed to AI InspeX or AI ScanX for production inspection.

Data → Training → Evaluation in a Unified Development Flow

End-to-end support from data preparation to training, evaluation, and continuous improvement



Features

① Data Collection & Preparation

Collect, sort, and augment image data.

Organize the OK and NG samples required for training by product type.

➤ **Note:** Synthetic data may reduce detection accuracy. Use real, raw data whenever possible.

③ Evaluation

Evaluate and analyze detection accuracy, false detections, missed defects, repeatability, and robustness to environmental changes.

➤ Record failure cases to optimize the dataset and check for overfitting to improve model performance on unseen data.

② Training

Use the data to adjust the AI model's internal parameters so that it produces appropriate outputs for the given inputs.

The model is optimized during this stage.

Model Export

Export AI models that pass Step ③ Evaluation for deployment to AI InspeX or AI ScanX.

Contact Us — Free Work Test & Demo Consultation

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■ Optimized AI models can be saved individually with different parameter settings.

■ Switch between saved models by selecting them from a list.