



6th International Conference on Data Engineering and Communication Technology (ICDECT-2025) : Submission (253) has been created.

1 message

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Mon, Oct 13, 2025 at 12:28 PM

Hello,

The following submission has been created.

Track Name: ICDECT2025

Paper ID: 253

Paper Title: AI-Powered Models for Thai Banana Cultivar Conservation and Commercial Management Using YOLOv8n and YOLOv9t

Abstract:

This research developed artificial intelligence models for classifying Thai banana cultivars using advanced object detection networks, YOLOv8n and YOLOv9t, with a dataset of over 10 cultivars collected under diverse real-world conditions, including different lighting, camera angles, and ripeness stages. Experimental results showed that YOLOv9t trained for 88 epochs was the most suitable model, achieving the best balance of accuracy, robustness, and stability compared to YOLOv8n and YOLOv8s, while preventing overfitting in later training stages. A web-based prototype system was also created, allowing automated cultivar classification, product quality inspection, and commercial data management. Both quantitative and qualitative assessments confirmed the system's feasibility for real-world use, demonstrating AI's potential to connect Thai banana genetic conservation with sustainable commercial management, thereby supporting Thailand's progress toward smart agriculture.

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Secondary Subject Areas: Not Entered

Submission Files:

[ICDECT_2025_12_PID_xxx@icdect.com](#) (003) - Draft for Submission [2025-10-13] - no author.pdf (667 Kb, Mon, 13 Oct 2025 05:13:21 GMT)

Submission Questions Response: Not Entered

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