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8th International Conference on Smart Computing and Informatics : Submission (184) has been created.

1 message

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To: pratya.nu@up.ac.th

Fri, Jan 30, 2026 at 11:47 PM

Hello,

The following submission has been created.

Track Name: SCI2026

Paper ID: 184

Paper Title: Building and Validating OCR and Machine Learning Models for Classifying Medical Labels and Appointment Slips for Elderly Patients

Abstract:

This research aims to develop and validate an OCR and machine learning model for classifying medical documents from images to support elderly care in the Thai context. The focus is on commonly encountered documents, specifically medication labels and doctor appointment slips. A total of 1,323 images were collected from multiple healthcare facilities, including 1,149 medication labels and 174 appointment slips. The research process involved data preparation and image quality enhancement, text extraction using Google Cloud Vision OCR, text restructuring, and the construction of a document classification model. The results were evaluated using a confusion matrix and metrics such as Accuracy, Precision, Recall, and F1-score. Experimental results showed an overall model accuracy of 60%. Medication labels achieved 98% precision, 56% recall, and 71% F1-score, while appointment slips demonstrated 93% recall, 21% precision, and 34% F1-score. These findings highlight the potential of the proposed approach for document classification from images, while also addressing challenges related to data imbalance, variability in image quality, and the complexity of the Thai language. Overcoming these issues is essential for further development to improve reliability and support practical applications like medication reminders and appointment tracking systems for the elderly.

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Secondary Subject Areas: Not Entered

Submission Files:

[SCI_2026_04_PID_xxx@sciconf.co](#) (002) - Submission File [2026-01-30] - no author.pdf (348 Kb, Fri, 30 Jan 2026 16:35:17 GMT)

Submission Questions Response: Not Entered

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