Paper 686 summary

1 message

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Here is submission summary.

Track Name: 5G and Beyond Communications, Internet of Things

Paper ID: 686

Paper Title: Deep Learning-Enhanced IoT System for Real-Time Identification of Ayurvedic Raw Materials

Abstract:
The aim of this study is to design an innovative system that leverages on-chip Internet of Things (IoT) and deep learning technologies for the identification of Ayurvedic raw materials. The system employs an ESP32-CAM module that possesses on-chip processing capabilities to immediately capture high-quality photos on the device, therefore addressing crucial concerns regarding the validity and quality of these materials. These photos are analyzed using robust on-chip deep learning algorithms that were trained on a large dataset of 4,500 photos from 15 different classifications. To increase the accuracy of their input material classification, the models use advanced preprocessing approaches to extract important aspects including form, color, and texture. This method ensures the precise identification of resources, which not only encourages sustainable harvesting techniques but also guarantees the quality and safety of Ayurvedic goods. This approach greatly increases the efficacy and dependability of Ayurvedic therapies by fusing innovative technology with conventional medical procedures. This has a huge positive impact on both practitioners and patients.

Created on: Sun, 15 Sep 2024 15:09:06 GMT

Last Modified: Sun, 15 Sep 2024 15:09:06 GMT

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Secondary Subject Areas: Not Entered

Submission Files:
Deep Learning-Enhanced IoT System for Real-Time Identification of Ayurvedic Raw Materials.docx
(465 Kb, Sun, 15 Sep 2024 15:08:57 GMT)

Submission Questions Response: Not Entered

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