1. Machine Learning in Plant Identification

Study: Plant Identification System Using Machine Learning (IJCRT, 2023)

This study developed a web-based plant identification system using machine learning a nd the Mendeley leaf image dataset. It applied convolutional neural networks (CNNs) to classify 10 plant species based on leaf images. The system was built using Python and Flask, demonstrating how ML can support agricultural diagnostics and biodiversity track ing.

Key Contribution: Showed how lightweight ML models can be deployed in web apps for r eal-time plant recognition, useful for agriculture and education.

2. Online Exam Management Information Systems (MIS)

Study: Machine Learning in Information Systems – A Bibliographic Review (Springer, 20 21)

This review explored how machine learning is being integrated into information systems, including online exam platforms. It highlighted the slow adoption of ML in traditional MI S fields but noted growing interest in predictive analytics for student performance, cheati ng detection, and adaptive testing.

Key Contribution: Identified gaps in ML adoption in educational MIS and proposed future research directions, including real-time proctoring and personalized assessments.

3. Student Information Management Systems (SIMS)

Study: Integrating Machine Learning into Data Analysis and Plant Performance (MIT The sis, 2021)

Although focused on industrial plant performance, this thesis is relevant for SIMS becau se it demonstrates how ML can be used to analyze large datasets for performance optim ization. The methodology—integrating ML into existing MIS workflows—can be adapted for student data to improve retention, academic advising, and resource allocation.

Key Contribution: Provided a framework for embedding ML into operational systems, whi ch can be adapted for educational data environments.