

# **SMART LEARN AI FOR AUTOMATED ASSESSMENT AND PERSONALIZED LEARNING**

## **ABSTRACT**

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This project aims to develop an AI-powered Learning Management System (LMS) with two types of users: Students, Instructors. Instructors can upload courses and study materials through an uploader tab, allowing students to access and learn from these resources. The system leverages AI to schedule assessments automatically based on student progress. It also analyzes student performance, groups students based on their marks, and provides personalized training. Lowscoring students receive foundational-level questions to help them improve, while high-performing students are challenged with advanced-level questions to enhance their learning. To achieve this, the system will use Generative Adversarial Networks (GANs) for intelligent assessment generation and personalized content creation. GANs will analyze student performance data and generate customized quizzes and study materials to help students improve. The AI model will also create realistic exam questions and automate grading using Natural Language Processing (NLP). The LMS is developed using React.js for the frontend, Node.js for the backend, and Firestore/MongoDB for database storage. By integrating GAN-based machine learning for adaptive learning, this system enhances student engagement, improves learning management. The LMS

contains an attendance tracking module, ensuring accurate participation and maintaining the records.