

Dept. of Computer Science and Engineering (Data Science)

Adichunchanagiri Institute of Technology, Chikkamagaluru

Mini Project Synopsis

TITLE: AI-Powered Academic Management system

Problem Statement:

The current manual process of preparing timetables, seating arrangements, attendance, and student result management is time-consuming, error-prone, and inefficient. The proposed system aims to automate these academic processes to ensure accuracy, reduce workload, and provide transparency for both students and faculty.

Description:

This project is an integrated academic management solution that automates the scheduling of timetables using AI to avoid clashes and allocate theory, lab, and tutorial hours efficiently. It generates exam seating arrangements randomly but allows teachers to make changes. Attendance management is digitized with real time notifications for absentees and alerts when attendance falls below 75%. The system enables teachers to enter marks for individual subjects, including tests, seminars, and assignments, while students can view their results and overall ranking without seeing others' individual scores. Additionally, teachers and administrators can generate timetables and seating arrangements in PDF format for easy distribution.

Expected Outcomes:

The system will provide an automated and clash-free timetable, flexible and randomized exam seating charts, digital attendance monitoring with notifications, and an accurate and private result management system. It will reduce manual effort, minimize errors, ensure transparency, and give students and teachers a single platform for academic information management.

Technologies & Tools:

Backend: Django

Frontend: React.js

Database: PostgreSQL / MySQL

AI/Optimization: OR-Tools / Genetic Algorithm

Analytics: Chart.js / Matplotlib

PDF Export: ReportLab / WeasyPrint

Team Members:

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Signature of the Guide with date:

Signature of the Coordinator with date: