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Line-up Sensei: The Smart Timetable Management System

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Abstract: *This project presents "Line-up Sensei," a system based on AI that will transform timetable planning for schools. It applies CSP to generate schedules automatically conflict-free with all the constraints: availability of faculty, capacity of rooms, and enrollments of students [1]. It has a strong backend by the Node.js using Express framework and MySQL database for real-time updates as well as cross-platform accessible web applications [5][6]. Through overcoming the inefficiencies of the conventional methods, "Line-up Sensei" enhances the efficiency of operations, lessens mistakes, and largely lessens the scheduling time [4]. The system demonstrates how AI is able to change academic operations [3]..*

Keywords: AI, Timetable Management, Constraint Satisfaction Problems, Automation, Real-Time Scheduling, Node.js using Express Framework

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