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(57) Abstract :

The present invention discloses a computer-enabled platform (100) for energy-efficient smart classrooms, comprising an occupancy sensing unit (101), environmental monitoring sensors (102), a smart lighting control module (103), an HVAC optimization unit (104), an AI-driven prediction engine (105), and a centralized dashboard interface (106). The system dynamically regulates lighting and HVAC operations based on occupancy and environmental data while leveraging predictive algorithms for proactive resource management. The invention provides significant energy savings, improved comfort, and seamless integration with existing classroom infrastructure, ensuring sustainable and intelligent educational environments.

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