Laser Security System

Phase 1: Component Selection and Circuit Design

Choose appropriate laser modules, LDR sensors, and ESP32. Design the circuit and test basic laser tripwire functionality.

Phase 2: Encryption and Communication Setup

Implement AES-256 encryption in ESP32 for secure alert transmission. Set up MQTT/WebSockets for real-time data transfer.

Phase 3: Web Dashboard Development

Develop a Flask backend to receive and decrypt alerts. Design a React-based dashboard for monitoring security logs.

Phase 4: System Integration and Testing

Combine hardware and software components. Test for accuracy, efficiency, and security under different conditions.

Phase 5: Deployment and Optimization

Deploy the system in a real-world environment. Optimize power consumption and encryption speed.

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