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(57) Abstract :
DEEP MONITORING SYSTEM TO FORECAST DEFECTS IN A BUILDING AND PROVIDE ALERTS TO BUILDERS ABSTRACT The present invention discloses a Deep Monitoring System designed to forecast defects in buildings and provide timely alerts to builders. The system integrates a diverse array of sensors, including structural health monitors, environmental sensors, and operational detectors, to collect comprehensive data. A sophisticated deep learning module, employing artificial intelligence and machine learning techniques, analyzes this data to identify patterns indicative of potential defects in real time. A defect forecasting component generates forecasts based on the analyzed data, and an alert generation system promptly notifies builders of forecasted defects. The invention enhances accuracy by incorporating historical data, employs probabilistic models for severity assessment, and features a feedback loop for continuous improvement. By prioritizing alerts and integrating with building management systems, the Deep Monitoring System contributes to proactive defect mitigation, ensuring the structural integrity of buildings.

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