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(57) Abstract :  
 ABSTRACT Robot assisted Real-time Multi-surface Crack Detection and Alert System The present disclosure describes a robot assisted real-time multi-surface crack detection and alert system 100. It comprises of robot platform 102, camera 104, sensor unit 200 comprising of vibration sensor 202, LiDAR sensor 204, Depth Sensor 206, data storage and processing unit 300 including Central Processing Unit 302, Graphic processing unit 304, SSD 306, Communication unit 400, Power Supply Unit 500. The system is based on deep learning and provides comprehensive and innovative approach to detecting cracks across multiple surfaces in infrastructure by combining automation, deep learning, and real-time monitoring techniques.

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