

# IOT Based Bridge Collapse and Flood Detection System

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**Abstract:** Knowledge on the dynamic properties of bridges improves condition assessment, maintenance scheduling and emergency planning to better serve the public. The Crack inspection is an important task in the maintenance of bridge and it is closely related to structural health of the bridge. It is done through a very manual procedure, an experienced human inspector monitors the whole bridge visually and try to detect cracks on the bridge and marks the location of the crack. The proposed system is implemented using a real time wireless sensor network for bridge monitoring is of lossless data transmission over several minutes continuously. Overall information about the bridge will be stored on the cloud. The cracks will be detected automatically and send the real time data with location of crack to the PWD department. If bridge will be collapse because of any accident or a flood that time the barriers will be open and the Vehicles will stop at some distance, and also notify about the accident to the nearby government departments like Police station, Hospitals and Society. After the accident detected by system up to previous and next 5KM the alert notification will shows another route for travellers

**Keywords:** Structural health monitoring, wireless sensor network, Arduino

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