

Bridge Monitoring and Future Incident Avoiding System

Dhumane Pranav Arjun¹, Kamble Om Rameshwar², Kashid Dipali Ramnath³, Prof. V. S. Phatangare⁴

Department of Electronics Engineering^{1,2,3,4}

Amrutvahini College of Engineering, Sangamner, Ahmednagar, Maharashtra, India

Abstract: *Bridge Monitoring and Future Incident Avoiding System proposes an IoT-based solution to enhance bridge safety by continuously monitoring structural integrity and environmental conditions. Leveraging MEMS sensors, the system detects cracks, vibration variations, and potential fire risks, while also monitoring light levels crucial for nighttime visibility. Through wireless communication, data is relayed to a cloud-based server for real-time analysis and alerting. With a focus on bridges situated near riverbanks, prone to deterioration from heavy loads and environmental factors, this system provides vital insights for proactive maintenance and averts potential disasters through early detection and intervention.*

Keywords: Bridge, monitoring, IoT, safety, incident avoidance

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