IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
Impact Factor: 7.53
Volume 4, Issue 2, June 2024

# Railway Track Crack Detection

**Mrs. Suma K R[1], Chandana H[2], Dakshayini H R[3], Deeksha C[4]**
Professor, Department of Electronics and Communication[1]
Students, Department of Electronics and Communication[2,3,4]
Global Academy of Technology, Bangalore, India
chandanaec30@gmail.com,dakshayiniravindranath5@gmail.com
deekshagowda15@gmail.com

**Abstract:** *This paper presents three innovative solutions for enhancing safety and efficiency in rail transport systems. First, an automated level crossing gate system is proposed, integrating Machine-to-Machine communication and Internet of Things technologies to prevent accidents. Second, a crack detection system using Radio Frequency Identification grids is introduced, enabling early detection and prevention of track damage. Third, an automatic fire-initiated braking and alert system for trains is presented, designed to swiftly respond to fire incidents and ensure passenger safety. These solutions offer promising advancements in rail transport safety and efficiency, with potential for widespread adoption and impact*

**Keywords**: rail transport systems


DOI: 10.48175/IJARSCT-18803