

A Major Project Report on

BLUETOOTH BASED RAILWAY TRACK CRACK DETECTION

ROBOT WITH LOCATION

Submitted to

Jawaharlal Nehru Technological University, Hyderabad

In partial fulfillment of the requirement for the award of degree of

BACHELOR OF TECHNOLOGY

in

ELECTRONICS AND COMMUNICATION ENGINEERING

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2022-2023



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CERTIFICATE

This is to certify that the Major project entitled “**BLUETOOTH BASED RAILWAY TRACK CRACK DETECTION ROBOT WITH LOCATION**” submitted to JNTUH is carried out by the following students of **IV B.Tech** in the partial fulfillment of requirement for the award of degree of Bachelor of Technology in **Electronics and Communication Engineering** during academic year **2022-23**.

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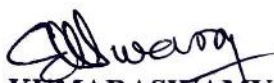
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ABSTRACT

The Indian railway has one of the largest railway network in the world, crisscrossing over 1,15,000 km in distance, all over India. However, with regard to reliability and passenger safety Indian railways is not up to global standards. Among other factors cracks developed on the rails due to the absence of a timely detection and the associated maintenance pose serious questions on the security of operation of rail transport. A recent study revealed that over 25% of the crack length is in need of replacement due to the development of the cracks on it. Manual detection of cracks is cumbersome and not fully effective owing to much time consumption and requirement of skilled techniques. This project works is aimed at addressing the issue by developing an automatic railway tracking detection system. This work introduces a project that aims in designing robust crack detecting scheme a system which avoids the train accidents by detecting the cracks on railway tracks. And also capable of alerting the authorities in the form of wireless messages along with via bluetooth. The system also includes a distance measuring sensors which displays the crack deviation distance between the railway tracks.



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