SMART SOLUTION FOR RAILWAYS USING IOT
IDEATION PHASE
LITERATURE SURVEY

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Dr. A. Benjamin Joseph1, Mohan kumar aradhya M S2, N phaneendra3, Ranjith kumar G M4 1,2,3,4Electronics and Communication Department, Kammavari Sangham Institute of Technology, Bengaluru. Even with greatest of ideas to avoid railway accidents, many trains accidents still happen worldwide. This paper shares an idea on how to avoid train collision by using an automated control incorporated in the trains. In this proposed paper we have implemented ideas such as pre-crashing using RFID sensor, ultrasonic sensor in-order to choose an array of commands which would run as per the conditional algorithm created in the microcontroller.We would also have a EPM to control the speed of the motor to lessen speed. This system will be more efficient since it was fully automated and also it was cost effective.

Prof. Sushant M. Gajbhiye Assistant Professor, Dept. of Civil Engineering, Prof. Zen P. Raut Assistant Professor, Dept. of Civil Engineering, Prof. Raju A. Bondre Assistant Professor, Dept. of Civil Engineering, , Guru Nanak Institute of Technology, Nagpur (MS), India. The main purpose of this research paper is to reduce the railway accidents occurring at the level crossings (Intersection Points). Railway is the vast mode of the transportations in India and it is the cheapest way for travelling. So there are more numbers of rail users and it is not easy to stop railway anywhere to obstruct accident, due to that there are major drawbacks of that. At present anunmanned system is available at level crossings and hence, lots of accidents occur at such crossings, since there is no one to take responsibility of the functioning of the railway gate when a train reaching the crossing. The objective of this research paper is to handle and control the system of railway gate by applying the microcontroller. This model includes infrared (IR) sensors, radio frequency indication device (RFID), Liquid Crystal Display (LCD),Light-emitting diode (LED), Lights, buzzer, motor driver and microcontroller. In the self-regulating railway gate control system, at the level crossing the meeting of the train is identify by the IR sensor and RFID placed close to the gate.

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additionally world's second largest network operated underneath a single management. Due to its large size it is difficult to monitor the cracks in tracks manually. This paper deals with this problem and detects cracks in tracks with the help of ultrasonic sensor attached to moving assembly with help of stepper motor. Ultrasonic sensor allows the device to moves back and forth across the track and if there is any fault, it gives information to the cloud server through which railway department is informed on time about cracks and many lives can be saved. This is the application of IoT, due to this it is cost effective system. This effective methodology of continuous observation and assessment of rail tracks might facilitate to stop accidents. This methodology endlessly monitors the rail stress, evaluate the results and provide the rail break alerts such as potential buckling conditions, bending of rails and wheel impact load detection to the concerned authorities.