Automatic Railway Barrier System, Railway Tracking and Collision Avoidance using IOT

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Abstract

IOT can be used to improve various aspects of the railway system. Automation of railways can transform the current legacy systems and help decrease the railway related accidents significantly. This research paper proposes a system where sets of infrared sensors are used to track the position of the train and its direction. This information is used to close/open the railway barrier automatically via a motor connected to a microcontroller unit. It is also used to warn the driver about a possible collision with a train coming from the opposite direction via an SMS sent from the GSM module attached to the microcontroller. The position of the train is sent to a webpage via the GSM module for tracking.

References

1. https://factly.in/indian-railway-accidents-statistics-review-last-5-years/
2. K. Ajith Theja, Dr. M. Kumaresan, Dr. K. Senthil Kumar, Automated Unmanned Railway Level Crossing System Using WSN, International Journal of Innovative Research in Computer


**Index Terms**

Computer Science  
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**Keywords**

Microcontroller, IOT, GSM, train collision avoidance, automatic, SMS, webpage