SMART SOLUTION FOR RAILWAYS

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Domain Name	Internet Of Things (IoT)
Project Name	Smart solution for railways
Team ID	PNT2022TMID03026

Objective:

Indian Railways is the largest railway network in Asia nd 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. Today's fast moving world won't like to stand in a queue and book tickets. As people possess smartphones it will be easy to book tickets using the method proposed by us. In fact, compared to the traditional method of booking tickets standing in a queue, our method has a lot of advantages.

Our solution is to design a website where we can book ticket and receive QRCode which can be scanned during boarding. Passengers can also monitor thetrain status and as well as they are alerted through mobile before their destination arrives.

And Finally, Digitizing the booking and verification process & alert passenger before their destination arrives. Digitizing the works reduces manual paper pen work and it becomes easier and time saving. Because of the smart changes that can be introduced by implementing in the railway system, we can call our railway system as SMART RAILWAYS.

LITERATURE SURVEY

PAPER NAME	AUTHOR	YEAR	METHOLOGY	MERITS
Passenger Monitoring Model for easily AccessiblePublic City Trams/Trains.	Roman Khoeblal, Teeravisit Laohapensaeng, Roungsan Chaisricharoen	2015	Passenger monitoring, passenger control RFID distance reading, ticket control, RFID ticketinspection.	It is possible to travel cross country with a single public transportation card, using transport systems of several transport operators.
Application of smart computing inIndian Railway Systems.	Parag Chatterjee, Asoke Nath	2014	By Interlinking unique identification system with train ticket reservation system by using video surveillance,rail sensors, biometric input devices and multimedia displays.	Reduces manual effort in passenger data entry. Provides security verification.
Android Suburban Railway Ticketing with GPS as Ticket Checker.	Sana Khoja, Maithili Kadam	2012	Android, SQ lite, Cloud Database, ASR, QR Code.	E-Ticket facility, enabling reuse and replacement ofcomponents.

Railway track fault detection system using IR sensors and Bluetooth technology	B. Siva Rama Krishna et al.	2017	In the event of any defect on the track it will detect track defect using IR sensors and then it sends a message to the androidphone using Bluetooth module.	Detects track defect using IR sensors and then it sends a message to the android phone
Novel Approach for Smart Indian Railways.	Sujith Kumar, K.M.Yatheendra Parvan, V.Sumathy, Thejeswari C.K	2017	Digitalization, Smart Railways, Aadhar Card, Smartphone, Identity Verification.	Employ a mobile application through which passengers can access various ticketing optionsin user friendly and efficient manner.
Automated Railway Track Fault Detection System Using Robot	Mansi R. Sarwan et al. (2018)	2018	The system lets the passenger to have a comfortable journey by checkingthe temperature first for normal andthen the count for avoid crowd using the QR Code.	An IR (Slot sensor) assembly that tracks the exact location of a faulty track was quickly repaired so that many lives could be saved.

Reference:

1. Roman Khoeblal, Teeravisit Laohapensaeng, Roungsan Chaisricharoen, "Passenger Monitoring Model for easily Accessible Public City Trams/Trains" (2015).
2. Parag Chatterjee, Asoke Nath, "Application of smart computing in Indian Railway Systems" (2014).
3. B. Siva Rama Krishna "Railway Track Fault Detection System by Using IR Sensors and Bluetooth Technology", Pragati Engineering College, East Godavari, Andhra Pradesh, India, 2017.
4. Sujith Kumar, K.M.Yatheendra Parvan, V.Sumathy, Thejeswari C.K, "Novel Approach for Smart Indian Railways" (2017).
5. Sana Khoja, Maithili Kadam, "Android Suburban Railway Ticketing with GPS as Ticket Checker" (2012).