

SMART SOLUTIONS FOR RAILWAYS

ABSTRACT:

Almost all the countries across the globe strive to meet the demand for safe, fast and reliable rail services. Lack of operational efficiency and reliability, safety and security issues, besides aging railway systems and practices are haunting various countries to bring about a change in their existing railway systems. The global rail industry struggles to meet the increasing demand for freight and passenger transportation due to lack of optimized use of rail network and inefficient use of rail assets. Apart from this major problem, people are suffering while booking tickets. So the web application is designed to reduce the workload of the user and also the use of paper. Here in this project, we are going to design a web application which is useful for booking tickets.

INTRODUCTION:

Smart solutions for railways is an idea where we can many problems while booking ticket. Our project is based on the web application for booking ticket .Nowadays people are working in busy schedule, They can't able to go for railway station and fill the form and waiting there for when will the counter is free. So avoid these kind of this sensible activities. We can handle booking the ticket in this web application. while applying this we can reduce the paper, and printing machine. and the ink we are giving to the machine. The passenger reservation system of Indian railways is one of the worlds largest reservation models. Daily about one million passengers travel in reserved accommodation with Indian railways. In this vast system, it is a herculean task to efficiently handle the passenger data, which is a key point of consideration nowadays. But the implementation of the latest technological updates in this system gradually turns inevitable due to increasing demand for providing the most efficient passengers services. Handling the passenger data efficiently backed by intelligent processing and timely retrieval would help backing up the security breaches. In this paper, we exploring some issues and solutions for railways which is affect the peoples who are often traveling in the train.

Software requirements specification:

Software requirement:

Python idle

Hardware requirement :

RAM-Minimum 4GB Processor-Min. Configuration OS-Windows/Linux/MAC, 250 GB hard disk space and other standard accessories.

The IoT-connected trains:

The IoT can interconnect all objects and devices that were previously not part of a network for predictive analytics. Its application increases safety, efficiency and ease of use with train management systems. Control and surveillance systems reduce the risk of collisions and regulate speed. Advanced consumer technologies help maximise connectivity and allow passengers to continue their activities on smart devices while travelling. Train-to-train communication through the cloud enables operators to transmit data about equipment, tracks and stations among themselves.

The IoT enables monitoring of areas on railway crossings remotely, such as barrier operations and end positions, switch end positions, space between barriers, system operations, connections and signals. This allows users to accelerate their projects, from engineering and runtime to maintenance with fast detection and localisation of errors and faults.

Here are some potential use cases presented by rail operators for using IoT to create a connected railway.

Solutions for Smart Railways for future

it can be designed to reduce the work load of the user and it is also the use of paper. Here in this project, we have all the features are like a Web page is designed for the public where they can book tickets by seeing the available seats. After booking the train, the person will get a QR code which has to be shown to the Ticket Collector while boarding the train. The ticket collectors can scan the QR code to identify personal details. A GPS module is present on the train to track it. The live status of the journey is updated in the Web app continuously All the booking details of the customers will be stored in

the database with a unique ID and they can be retrieved back when the Ticket Collector scans the QR Code.

SURVEY:

1. Railway passenger frequently need to know about their ticket reservation status, ticket availability on a particular train or for a place, train arrival or departure details, special trains etc.
2. Customer information centers at the railway stations are unable to serve such queries at peak periods.
3. The number of the reservation counters available to the passengers and customers are very less'
4. On most of the reservation systems they are long queries, so it takes along time for any individual to book the ticket'
5. As now there are no call centers facilities available to solve the queries of the passengers.
6. The online railway ticket reservation system aims to develop a web application which aims at providing trains details,train availability,as well as the facility to book ticket in online for customers,
7. So, we thought of developing the web based application which would be provide the users all these facilities from his terminal only as well as help them in booking tickets.The application was to be divided into two parts namely the user part, and the administrator part and each of these has their corresponding features.
8. Our website has various kind of information that's helps regarding booking of tickets railways.
9. It also reduce the paper work. Its totally going to be a online based.
10. In future there is going to be a ticket booking counter.