

Literature Survey

Title & Author(s)	Year	Technique(s)	Findings/Pros/Cons
Smart Computing Applications in Railway Systems - A case study in Indian Railways Passenger Reservation System, Parag Chatterjee, Asoke Nath	2014	UID-based Reservation System	Using this UID-based technology, it is possible to decentralize the task of reservation from booking clerks (in railway reservation counters) to automatic ticket vending machines (ATVM) also. Since the unreserved tickets are already getting issued through ATVMs, the reservation feature can also be implemented in the ATVMs.
Railway Train Ticket Generation through ATM Machine: A Business Application for Indian Railways, Amit Kumar Gupta, Priyanka Ahlawat Mann	2011	ATM Module for Railway Ticket Generation	A model for the integration of ATM machine and railway ticket booking is proposed. In this model we proposed a change in architecture of ATM machines by adding an option for railway ticket module. This module will work on the railway reservation server and bank server. This model provides user to book railway tickets (general/reservations) through ATM card. This feature will also help user to check the waiting list of railway reservation
The Recent Reliable Advancements In The Indian Railway Ticketing System, Pardeep Kumar	2020	UID-based technology, RFID card	The passengers may travel using these cards and once the amount gets finished in the card they can again recharge it. He suggested this recharge in the card can be done on a monthly basis or on a quarterly basis. proposed the SMS ticketing system.
Finding trend of advanced ticket booking in Indian railways, Anuj Budhkar, Sanhita Das	2017	TransCAD, Cube Voyager	The mobile-based train ticketing system provides a better service to the passengers by enhancing the ticket issuing process. Dynamic QR codes, E-Wallet system, Ticket booking system, Report generating system, and Admin backend panel are the main processes of the mobile-based train ticketing system.
"TrainGo App" -Mobile based Train Ticketing System, Supun Nimesh, Sunesh Hettiarachchi, Samanthi Wickramasinghe	2020	Java and MySQL for App Development	A mobile-based train ticketing system is developed by carefully analyzing the collected requirements. Navigation must be simple, easy to set up and use, make quick the response,

			user training are the expected requirements from the solution.
Railway Online Booking System Design and Implementation, Wang Zongjiang	2012	DBMS ER Model	Seat distribution problems occur when a flexible seat reservation system is implemented in which passengers are allowed to reserve seats by submitting their demands instead of specifying trains.
Smart Ticketing and Seat Reservation System, Sachinthana Virajith, Isuri Gamage	2021	Global System Mobile Communications-Railway, 5G, and Wireless Sensor Networks.	According to that process, passengers need to visit the counters in railway stations, pay for the tickets, and get the tickets. The tickets currently issued by the Railways are valid only from the date of issue and to the given destination only.
A Combinatorial Auction Based Algorithm for Flexible Seat Reservation Systems, Kazutoshi Otomura, Norio Tomii	2005	Adaptive Data fusion	To solve the seat distribution problem, we have formalized it as a winner determination problem of the combinatorial auction mechanism. It should be noted that difficulty of the seat distribution problem varies depending on instances of the problem.
A multiobjective planning model for intercity train seat allocation, Yu-Hern Chang, Chung-Hsing Yeh	2004	Fuzzy Logic programming	The plan determines how many reserved and non-reserved seats are to be allocated at each origin station for all subsequent destination stations on each train run operated within a specified operating period.
Smart Computing Applications in Railway Systems - A case study in Indian Railways Passenger Reservation System, Parag Chatterjee, Asoke Nath	2014	UID-based Reservation System	Basically, this proposed smart model approach for passenger reservation system depends on some requirements, without which the benefits would not be fully enjoyed. This includes the UID registration of all passengers who needs to travel.
Smart ticketing system for railways in smart cities using software as a service architecture, Godson D'silva, Anoop Kunjumon Scariah, Lukose Roy Pannapara, Jessica John Joseph	2017	AWS IOT, AWS Dynamodb	
SMART RAIL RESERVATION AND VERIFICATION SYSTEM WITH UNIQUE IDENTIFICATION IN IoT USING CLOUD DATABASE, Adapa Sri Kumar Satya Ganapathi, S.Praveen Kumar, P.Madhusudhanan, S.Ranjith Kumar, M.Ganesan	2018	IOT using Cloud Database	In the current system there are many disadvantages which are to be rectified. The main thing which comes under is about allocation of lower berths. During Verification there are possibilities for fake identification also.

An optimization model to assign seats in long distance trains to minimize SARS-CoV-2 diffusion, Md Haque, Faiz Hamid	2022	Neural network	The unprecedented spread of SARS-CoV-2 has pushed governmental bodies to undertake stringent actions like travel regulations, localized curfews, curb activity participation, etc. These restrictions assisted in controlling the proliferation of the virus; however, they severely affected major economies.
IoT Based Ticket Checking System, Kirti Dhiman , Er. CK Raina	2017	IOT based System	In this paper we represent main layered architecture of IOT. We make a system that checks the ticket of passenger in trains through IOT based System. After entered in train ticket is checked by a System. We studied the entire layer that is used in IOT. This system describes the whole architecture of IOT.
A new railway line planning model considering multinomial LOGIT-based traffic assignment, B.H. Park, C.-S. Kim, T. Lim, H.-L. Rho	2011	Fuzzy Extension Constraint Algorithm	A system split is a procedure to distribute passengers' demand over an entire network. This distribution is based on a value assigned to a route which is determined primarily from the total travel time, the number of transfers and the maximum headway (or minimum frequency) of a route.