**ABSTRACT**

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| **Project Title** | **Live Train Ticket Booking Website using ML model** |
| **Roll Numbers** | **160121771-050, 160121771-051** |
| **Keywords** | **PNR (Passenger Number Record), Live Status, Booking, Machine Learning** |

This project aims to create a train ticket booking website using the MERN (MongoDB, Express, React, Node.js) stack. The website will allow users to book train tickets, view live tracking status, and store their travel history. Additionally, users can set alerts for booking a ticket for their desired trip. This project will consist of two main parts: the front-end and the back end. The front end will be built using React, a JavaScript library for building user interfaces. The back end will be built using Node.js and Express, a web application framework for Node.js. MongoDB will be used as the database to store user information, travel history, and ticket booking details. The first step of the project will be to design and implement the user authentication system. User authentication will be achieved using JWT (JSON Web Token) tokens. This will allow users to log in to the website securely and keep their personal information and travel history private.

Next, the ticket booking feature will be implemented. Users will be able to search for trains based on their origin, destination, and date of travel. The website will display the available trains and their timings, along with the fare for each class of travel. Users can then select the train and class of travel and proceed to the payment gateway for making the payment. Once the ticket is booked, users can view the live tracking status of their train. The website will display the current location of the train and the expected arrival time at each station. This feature will be implemented using the Indian Railways API, which provides real-time train tracking data.

Finally, the website will allow users to view their travel history and set alerts for booking a ticket for their desired trip. Users can view their previous bookings, cancel bookings if necessary, and set alerts for booking a ticket for their future travel. The alerts feature will be implemented using email notifications. Using a Machine Learning Linear Regression model this website recommends suitable trips for user.

In conclusion, this project aims to create a train ticket booking website using the MERN stack, which allows ticket booking and live tracking status with user login for ticket booking using JWT tokens and stores the display of all the travel history and allows to set an alert for booking a ticket.