**Progressive Education Society's**

**Modern College of Engineering, Pune-05.**

**DEPARTMENT OF ARTIFICIAL INTELLIGENCE & DATA SCIENCE**

**217533-Project Based Learning-II**

**Second Year [Semester-IV]**
**Academic Year 2021-2022**

**Project Synopsis**

## A) Team Members :

1. Aditya Ladawa : 22542
2. Samiksha Dhere : 22519
3. Yash Wadekar : 22572
4. Tushar Pawar : 22552
5. Sayee Aher : 22501

## B) Title of the Project :

**"Smart Travel"**

## C) Problem Definition :

Smart Travel system allows a user to use public transportations such as city buses with ease and safety. It provides a user with RFID cards/ smart cards which he/she needs to scan before entering and exiting the vehicle. It will also display users traveling details such as distance traveled, time required to travel, total cost, etc. Smart Travel app also provides detailed information about bus routes, stops and timing for particular buses.

## D) Introduction :

In the era of smart and digitized, many advances have been made in different fields/ sectors. However, few public transportation systems like city buses still lack these digitalized advances. So, to overcome this problem, we came up with a system based on IOT i.e., "**Smart Travel**". Smart travel is a hardware-software based system implemented using RFID/ smart card technology. This application is specially developed for automatic ticketing systems for public transportations such as city buses. It will provide an ease for citizens using public transportation and will add work efficiency for revenue collecting sectors. This system will provide detailed information of city bus routes and timing. This system will help us come one step closer to gaining the title of developed and digitized India.

## E) Hardware & Software Requirement :

Software : HTML version 5, CSS version 4, Bootstrap version 4, Python version 10, SQL Alchemy, JavaScript

Hardware : ESP32, RFID sensors, DC motors

## F) Conclusion :

Smart Travel will help us to overcome the problem of manually ticket collecting system as it will be an automatic system which will reduce man power. This is a public friendly system and will also provide detailed information of the public using public transportations throughout the city.

## G) References/Bibliography :


1. Sanam Kazi, Murtuza Bagasrawala, Farheen Shaikh, Anamta "Sayyed Smart E-Ticketing system for public transport bus" by IEEE International Conference on Smart City and Emerging Technology (ICSCET) held in 2018.
2. Hamilton, P and Suresh, S. "Intelligent Agent based RFID System for On Demand Bus Scheduling and Ticketing", International Journal of Future Computer and Communication, Vol.2(5), pp.399-406 in 2013.
3. Oberli, C et al. "Performance Evaluation of UHF RFID Technologies for Real Time passenger Recognition in Intelligent Public transportation Systems", IEEE Transactions on Intelligent Transport Systems, Vol.11(3), pp.748-753 in 2010.
4. Xiao-Lei, M et al. "Transit Smart Card Data Mining for Passenger Origin Information Extraction", I Journal of Zhenjiang University Science C, Vol.13(10), pp.750-760 in 2012.
5. Antonia A Nunes, Teresa Galvao Dias, Joao Falcao e Cunha "Passenger Journey Definition Estimation from Automated Fare Collection System Data Using Spatial Validation" IEEE Transactions on Intelligent Transportation Systems ( Volume: 17, Issue: 1) held in 2016.