SMART SOLUTIONS FOR RAILWAYS

FACULTY MENTOR:Dr. B. Bhuvaneshwari
TEAM ID:B5-5M1E

PROJECT STUDENTS:

Abisheak S. - CITC1904063

Arunagirish.B-CITC1904069

Dhaswanth N.G. -CITC1904074

Gokul R. - CITC1904077

OBJECTIVE

- To Create a user friendly webpage in order that user can have an ease access to the webpage and book their train tickets as their wish as per the availability, through paperless transactions.

INTRODUCTION

- 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 the personal details.
- A GPS module is present in 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.

NEED FOR THE PROJECT

- To reduce the work load of the employees and the end user.
- Ease to store information and fast accessing of the information.

LITERATURE SURVEY

S.NO	TITLE	MODEL / TECHNIQUES USED	MERITS/ DEMERITS	OUTCOMES
1.	Dr.Velayutham.R,Sangeethavani.T,Sundaralakshmi.K,"Controlling railway gates using smart phones by tracking trains with GPS"(2017) International Conference on Circuit ,Power and Computing Technologies (ICCPCT)	▪ GPS (Global Positioning System) ▪ Microcontroller ▪ SDK (Software Development Kit)	Gps is used to avoid railway gate level crossings accidents	It is better than conventional process of monitoring using sensor, gps tracking is efficient and needs less repair work
2.	Francesca Righetti, Carlo Vallati, Giuseppe Anastasi,"Failure management strategies for IoT-based railways systems"(2020) IEEE International Conference on Smart Computing (SMARTCOMP)	▪ wireless and Power Line Communication technologies ▪ Iot is used	▪ all-in-one railway system. ▪ a good level of performance even when failures occur	failure management strategies on rail-road switches to improve the level of reliability

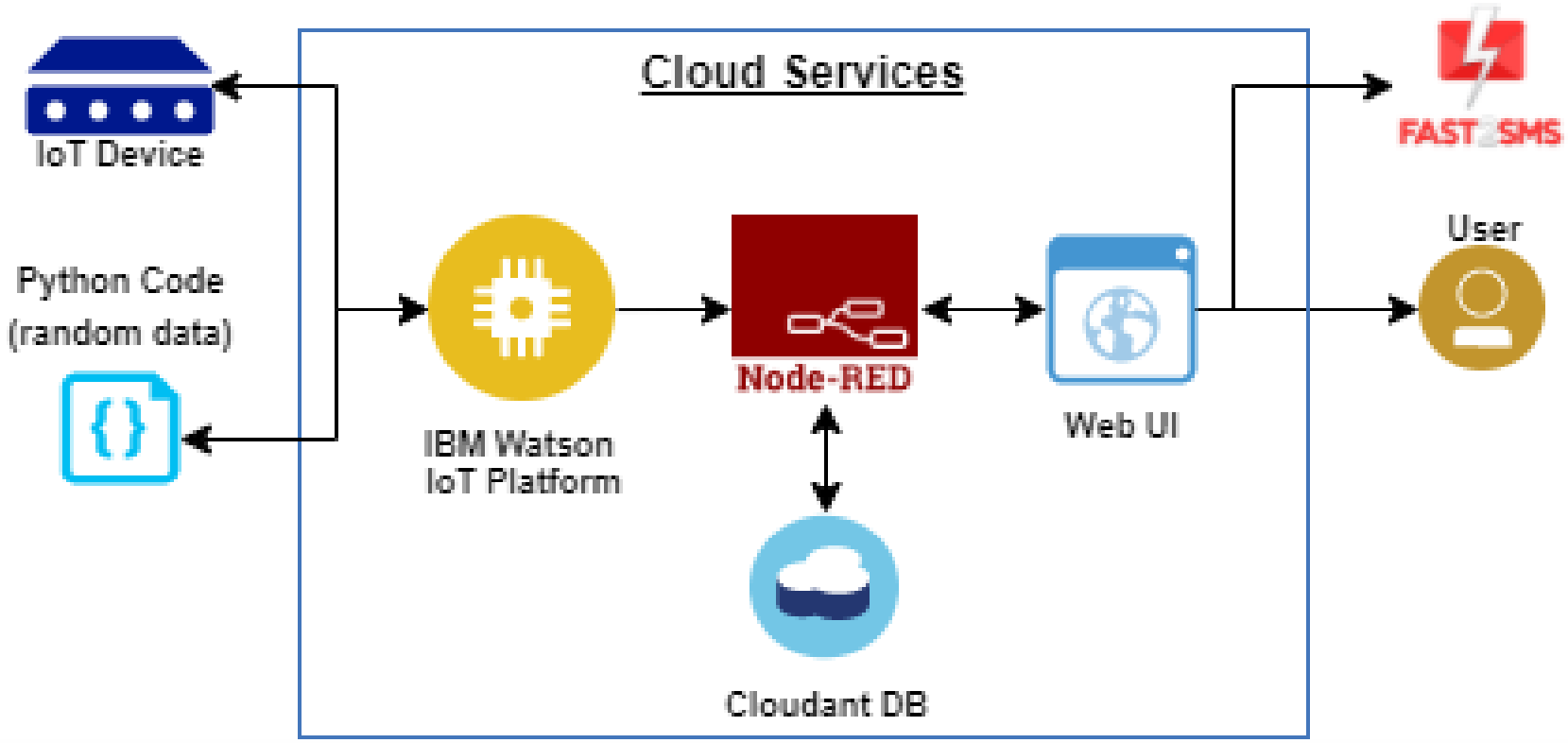
LITERATURE SURVEY

S.NO	TITLE	MODEL / TECHNIQUES USED	MERITS/ DEMERITS	OUTCOMES
3.	Gauransh Singh et.al, "Security System for Railway Crossings using Machine Learning", 2020 2nd International Conference on Advances in Computing, Communication Control and Networking (ICACCCN)	▪ OpenCV ▪ Machine learning ▪ Arduino	Display concept is used to know the exact timing for closing of gates. It reduces the human efforts to a great extent and also increased the accuracy of the system.	Effective security level and accuracy of the system.
4.	Taslim Ahmed et.al, "Into the Binary World of Zero Death Toll by Implementing a Sustainable Powered Automatic Railway Gate Control System", 2020 IEEE International Conference on Electronics, Computing and Communication Technologies (CONECCT), 2-4 July, Bangalore, India	▪ ATmega16 ▪ Proteus ▪ Code Vision AVR	Power consumption of the system is very less compared to others since it uses solar power.	Increased efficiency of railway gate control.

INFERENCE FROM LITERATURE SURVEY

- Efficient usage of GPS tracking
- IoT for all in one railway system
- Machine learning can be used to increase the accuracy of the system.
- Solar power can be used to reduce the actual cost spend over the power consumption of the system.

PROPOSED SYSTEM MODEL



REFERENCES

[1].Dr.Velayutham.R,Sangeethavani.T, Sundaralakshmi.K, "Controlling railway gates using smart phones by tracking trains with GPS"(2017) International Conference on Circuit ,Power and Computing Technologies (ICCPCT)

[2].Francesca Righetti, Carlo Vallati , Giuseppe Anastasi, "Failure management strategies for IoT-based railways systems"(2020) IEEE International Conference on Smart Computing (SMARTCOMP)

[3].Gauransh Singh et.al, "Security System for Railway Crossings using Machine Learning", 2020 2nd International Conference on Advances in Computing, Communication Control and Networking (ICACCCN)

[4].Taslim Ahmed et.al, "Into the Binary World of Zero Death Toll by Implementing a Sustainable Powered Automatic Railway Gate Control System", 2020 IEEE International Conference on Electronics, Computing and Communication Technologies (CONECCT), 2-4 July, Bangalore, India