**LITERATURE SURVEY**

All research papers relevant to the development of the project are listed below.

1. Karthick, S., and A. Velmurugan. "Android suburban railway ticketing with GPS as ticket checker." *2012 IEEE International Conference on Advanced Communication Control and Computing Technologies (ICACCCT)*. IEEE, 2012.
2. Zhang et al. (2011), Study the IOT deployment for the railway system. The IOT-based technologies could assist with variety of operations, including train tracking and positioning, automatic fare collection, station train information sharing, cargo and warehouse management.
3. Shi and Wang et al. (2013), Enhance the flow of railway information. An intelligent railway information platform was established which relied on the basic environmental layer, application support layer and railway transportation application layer.
4. Aietal. (2015), Develop a wireless communication network for railway transportation for real-time sensing and intelligent analysis. The suggested methodology is anticipated to meet the requirement of high spectrum and high-data rate efficiency.
5. Gangwaretal. (2017), Design a new low cost IOT-based system for passenger service. It was found that the developed IOT-based solution was able to easily handle the condition information for the railway

infrastructure.

1. Ganga et al. (2019), Develop an IOT based methodology for passenger rail services. The requests from passengers like medical, catering services and emergency services were allocated among the crew based on the established priority schedule.Singh et al. (2021a), Study current trends in the deployment of autonomous trains. It was indicated that advanced IOT technologies would prevent potential conflicts between autonomous vehicles and further increase safety of users at level crossings.
2. Zantaliset al. (2019), Evaluate the ML and IOT applications in smart transportation systems. The study pointed out that ML and IOT could assist with route tracking and minimize traffic congestion at busy junctions and decrease associated emissions.
3. Akyildizetal.(2020), Study advanced wireless transmission systems. It pointed out the advanced wide range of features and attributes, including cell-free communication and database management systems.