LITERATURE SURVEY

All research in the field of digital assistants demonstrates the benefits, development, and threats that exist in the IOT for enabling smart solution for railways. They are summarized in the paragraphs below.

1. 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.

2. 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.

3. Ai et al. (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.

4. Gangwar et al. (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.

5. 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.

6. Zantalis et 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.

7. Akyildiz et al.(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.