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## TRAIN INDICATION AND SAFETY MANAGEMENT

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**ABSTRACT:-** This paper gives idea about train indication and safety management. This system contains circuit components like micro switch, zigBee module, microcontroller (AT89S51), LCD display, IR Anti collision sensor, platform direction indicator, relay, driver, etc. It makes a multi-purpose circuit. In this paper, we have listed about the literature survey, which gives a brief idea various technology and techniques about Train Crowd Management. The block diagram of Train Crowd Management consists of two modules. 1) Train Side Module 2) Station side Module. In the train side, the information such as empty spaces, medical emergency, theft attempt, fire, unknown object, unnecessary use of lights and fans in the compartment of train, platform direction indicator etc. such type of data will be transmitted at the station side. At the station side, all the information received from the train side will be shown to the passengers on platform in advance. This System can reduce the confusion of passengers before arriving train at platform.

**Keywords—** Zigbee, Microcontroller (AT89S51), LCD Display, Micro Switch, LED Indicator, Buzzer, IR Anti- Collision Sensor, Platform Direction Indicator, Occupancy Indicator LCD, etc

## RECOGNITION OF HUMAN EMOTIONS USING SUPPORT VECTOR MACHINES AND SPECTRAL FEATURES

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**ABSTRACT:-** In this paper we have develops an approach to speech based emotion recognition based on spectral features and SVM classifier. The proposed system is divided in to four parts- audio feature extraction, segmentation, training and verification of emotion. In the feature extraction part, first we are calculating four spectral features of audio clip which has to be tested. We are calculating features like centroid, spread, flatness and projection of input audio clip. We are training the model before testing. For training purpose we are generating audio database which consists of speech utterances belongs to ten different emotions. After feature extraction, in the stage of emotion verification we are verifying emotion by using SVM classifier.

**Keywords—** Speech Emotion Recognition, Support Vector Machines, Spectral Features, Emotional Database.