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Wild Animal Protection from Train Accident using AI and IoT

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Abstract: *The proliferation of transportation modes has led to the construction of numerous road networks, railways, and even waterways worldwide. This phenomenon has resulted in the placement of railway tracks in forest areas, potentially compromising the physical and mental health of wild animals. In India, states such as Assam, where elephants are more prevalent, have suffered greatly due to accidents on train tracks. Accidents claim the lives of hundreds of elephants, cause serious injuries to thousands, and leave them ill for the rest of their lives. This is primarily due to the inability of animals to judge the linear motion of a train, as well as the presence of dense forest trails with extreme turns that obscure the view of the moving train from a long distance. This question has remained unanswered for a long time, as the railway and forest departments have been powerless to prevent these animals from dying due to human intervention in their natural habitats. To save wild animals from train accidents in dense jungles, the proposed system designs an artificial intelligence model using deep learning to identify the wild animals from a long distance and alert the train driver. The designed model utilizes a faster RCNN to detect the wild animals that come in front of the train on tracks from long distances and then guide the IOT model to slow down the train by alarming the loco pilot in a simulated environment.*

Keywords: Accidents claim, forest departments, artificial intelligence model, deep learning, Faster RCNN and IOT model

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