# Train Track Crack Classification using Convolutional Neural Network.

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**Abstract:** *About Most of the accidents are occurring at railway track crack in railway tracks resulting in loss of precious life and loss of economy It is required to monitor the track health condition frequently using an crack classify system. This project prevents train derailment by classify cracks in railway track using image processing technology. To propose a solution for track crack recognition that uses a combination of Convolutional Neural Network and specific image pre-processing steps. It described the innovative solution that provides efficient image processing and deep learning with convolutional neural networks (CNNs) has achieved great success in the classification of railway track crack occurred or not. A variety of neuron-wise and layer-wise visualization methods were applied using a CNN, trained with a publicly available from given image dataset. So, it's observed that neural networks can capture the colors and textures of lesions specific to respective cracks in train tracks, which resembles human decision-making.*

**Keywords:** Train crack classification, deep learning, Tensorflow

## IV. CONCLUSION

It focused how image from given dataset (trained dataset) and past data set used to predict the pattern of Train track crack using CNN model. This brings some of the following insights about track crack prediction. The major benefit of the CNN classification framework is the ability to classify images automatically. In this study, we have discussed the overview of methodologies for detecting the abnormalities in track images which includes collection of train track image data set, preprocessing techniques, feature extraction techniques and classification schemes.