**Automatic Pavement Crack Detection Based on Structured Prediction with the Convolutional Neural Network**

In this paper, proposed a method for pavement crack detection based on structured prediction with CNN. This method is trained and tested on CFD with RGB images and AigleRN with gray-level images and creates the network with CNN's help. Since CNN can extract useful features from raw data, this paper added a structured prediction based on the CNN method to learn a small patch's crack structure within an image to find the full crack on pixel level without preprocessing.

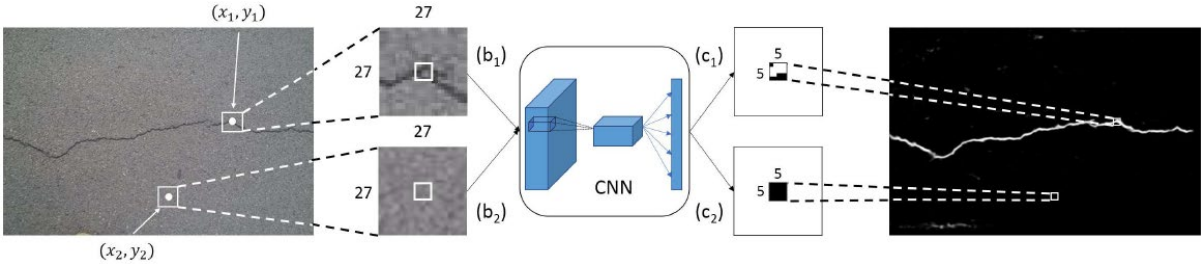


Figure 1. Examples of structured prediction based on CNN

This paper method can find only the cracks specifically and determine whether the crack has present or not. However, the proposed method is to find the different road damage types to find the crack's shape, so analyze this work, improvement needed for goal.

**References:**


**[1]** Fan, Z., Wu, Y., Lu, J., & Li, W. (2018). Automatic pavement crack detection based on structured prediction with the convolutional neural network. arXiv preprint arXiv:1802.02208.