AUTOMATIC CRACK DETECTION USING MASK R-CNN

This paper presented that R-CNN masks can identify cracks on concrete surfaces and get correlating masks to help isolate other properties useful for analysis. The paper's authors developed a ground-truth mask dataset on images from a regular crack dataset to train Mask R-CNN for crack detection. This paper adapted Mask R-CNN to simplify crack detection on concrete surfaces to the current state-of-the-art detection model.

Multi-class analysis for other components and defects of infrastructure will minimize defects and provide efficient inspection means of civil structures. The results were an accuracy value of 93.94% and a recall of 77.5%.

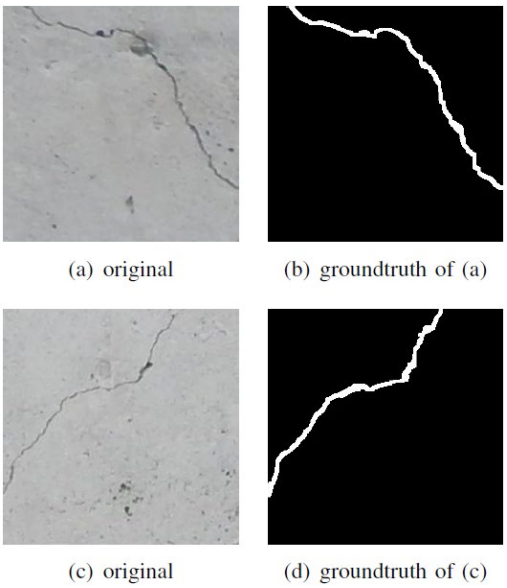

Figure 1. Sample images from the annotated crack dataset

This method is only for crack detection, but our proposed method is to find different road damage types. So, things need to be changed in order to do so.

REFERENCES

[1] L. Attard, C. J. Debono, G. Valentino, M. Di Castro, A. Masi and L. Scibile, "Automatic Crack Detection using Mask R-CNN," 2019 11th International Symposium on Image and Signal Processing and Analysis (ISPA), Dubrovnik, Croatia, 2019, pp. 152-157, doi: 10.1109/ISPA.2019.8868619.