

# **MACHINE LEARNING ALGORITHMS APPLICATION TO ROAD DEFECTS CLASSIFICATION**

This research paper introduced a new approach for automated identification and analysis of road defects based on machine research algorithms. The road defects were analyzed based on shape and texture feature analysis—the presented paper implemented on MATLAB with the Random Forest algorithm and boosting algorithm.

The boosting algorithm was used to develop the classification models, and both sets had data showing the accuracy of the proposed system. These algorithms were required to identify road damages by following the Random Forest algorithm accurately. It was also recommended using the graph cutting method and Marcov algorithm that enhances image segmentation efficiency.

The authors used the boosting algorithm, Marcov algorithm, graph cutting method, and Random Forest algorithm, but it was sensitive to noise during implementation and difficult to adjust. For our project, it seems problematic and needs more advancement.

## **REFERENCES**

- [1] Thu Huong, Nguyen & The Long, Nguyen & Sidorov, Denis & Dreglea, Aliona. (2018). Machine learning algorithms application to road defects classification. Intelligent Decision Technologies. 12. 1-8. 10.3233/IDT-170323.