Road Potholes Detection using Deep Learning

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Abstract: *Potholes are a danger on the road, endangering both automobiles and pedestrians. It is one of the leading causes of road accidents and the loss of human life and property in most developing countries. As a result, data on current road conditions must be collected and updated on a regular basis so that drivers can be notified of alternate routes and the concerned government department can take quick action to remove potholes for the benefit of commuters. Based on the following parameters, calculate the road damage percentage: The pothole's depth. The quantity of potholes on the route. Assign road priority based on which road should be fixed first, and terrify the government with a proper report. The user initially logs in to our portal, where he or she can upload a photograph of a road and its location. As soon as we have the data, we generate a database table with each named road and any photographs that users provide. After that, the ML model predicts the damage %. We'll take the average of the damage percentages of all connected photographs to compute the damage percentage of each identified road. The average percentage of damage for that road will be the result. Using object detection algorithms on photos captured from a smartphone camera is a simple and efficient technique to locate potholes on roads.*

Keywords: Feature Extraction, Segmentation, CNN, Deep Learning

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