

# Pothole Detection

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**Abstract:** Due to the rise in automobiles, climate change, and population density, there are now an alarmingly large number of potholes in the world. Understanding the physical features of potholes and their surroundings, such as the surfaces they appear on, the size and depth of common potholes, and the kinds of wear and tear that might result in pothole formation, is usually necessary for their identification. It would also require familiarity with technologies like deep learning and machine learning techniques that are frequently used for pothole identification. As a result, an automated system that can identify potholes can aid in accident prevention and lower the expense of road repair. In this model, we have employed the cutting-edge object identification algorithm YOLOv4 Tiny, which can find things quickly and accurately. In order to pre-process the photos and videos and to create bounding boxes around the identified potholes, we also utilized OpenCV, a well-known computer vision toolkit. Potholes may be located by the system using a video stream or a single picture. Government officials may utilize the technology to keep an eye on the state of the roads and take the required steps to fix any potholes resulting in improved road safety and reduced maintenance costs



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