Analyzing Streets for Potholes

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Project Misson

By analyzing 2D images to identify and mark road potholes on Google Maps, we can improve road safety at night and reduce the risk of accidents caused by potholes. It also improves the efficiency of road maintenance, as maintenance teams can find and repair potholes more accurately.

Key Aspects of the Project

Image analysis algorithm:
Utilizing algorithms such as OpenCV, edge detection, morphological processing, and extreme condition handling to implement a 2D image
Pothole recognition algorithm.
Data Integration and presentation: Identification and location data is integrated into Google Maps using the Google API so that users can see the exact location of potholes.

Original image

Snow removal image

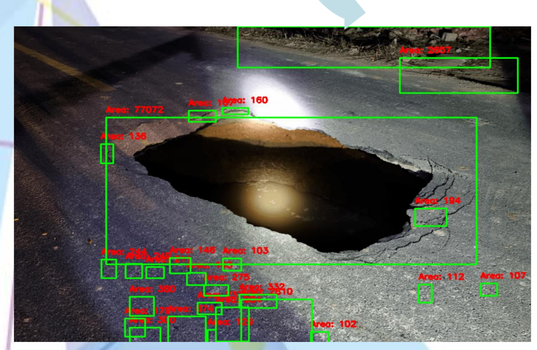
Rain removal image

Original image

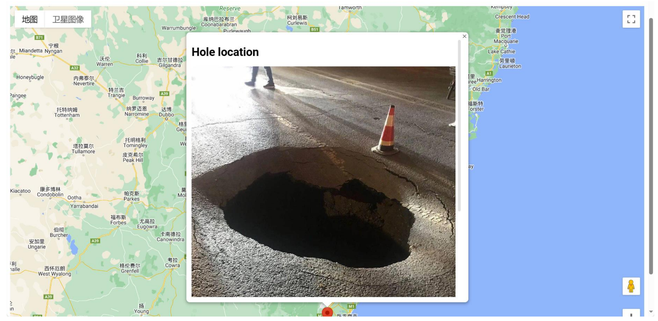
Fog removal image

Confirm the purpose of the task → OpenCV image processing → Handling of Bad Weather Environment → Combining all functions and implement machine learning

OpenCV image processing → Get potholes location by Google API → Combining all functions and implement machine learning



Pothole detection



The location of pothole