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Colab Notebook Link -
https://colab.research.google.com/drive/1_-VHXsV-Oo8PA5AyGKCM2OucyVYL5ws_

Parameters	Pothole 1	Pothole 2	Pothole 3
Input Image			
Pothole Depth	2 cm	1 cm	1 cm
Picture Size Field of View L cm x W cm	266 cm x 126 cm	266 cm x 126 cm	380 cm x 180 cm
Frame/Image Resolution	1280 x 960	1280 x 960	1280 x 960
Pixel Size	0.027 (0.207 x 0.131)	0.027 (0.207 x 0.131)	0.055 (0.296 x 0.187)
Camera Specifications	Redmi Note 6 Pro. Dual camera consisting of a 12 megapixel primary camera and a 5 megapixel depth sensor.		
Hardware & Software Specifications	Google Colab Notebook used for program execution with - • GPU: 1xTesla K80 , having 2496 CUDA cores, compute 3.7, 12GB(11.439GB Usable) GDDR5 VRAM. • CPU: 1xsingle core hyper threaded i.e(1 core, 2 threads) Xeon Processors @2.3Ghz (No Turbo Boost) , 45MB Cache.		
Image Capture Height	3 feet	3 feet	4 feet
Image Capture Angle	0 degrees	0 degrees	0 degrees

Pixel Count for Length	728	733	706
Length L cm	150.696	151.731	208.976
Comparison with Actual Values	146	140	180
Accuracy (error) in L	3.21%	8.38%	16.09%
Pixel Count for Width	700	501	668
Width W cm	91.7	65.631	124.916
Comparison with Actual Values	80	50	90
Accuracy (error) in W	14.62%	19.32%	38.79%
Pixel Count for Area	313813.0	192595.5	227939.5
Area (no of black pixels) x (pixel size) cm x cm	8472.951	5200.07	12536.67
Area (L) x (W) or (Pi) x (r) x (r) cm x cm	9219.345	5470.336	14943.644
Accuracy (error) in Area	8.09%	4.94%	16.10%
Orientation Angle	149.29	10.01	168.15
Preprocessing Techniques	• RGB to Grayscale • Median Filtering • Binarization • Dilation		

Segmentation technique	Contour Based Segmentation
Shape extraction technique	Bounding Rectangles of OpenCV for fitting Rectangles and Ellipses on the Potholes
Conclusion	Thus using the above preprocessing techniques, the various shape and geometrical dimensions of the potholes were extracted. They were compared against the actual measured values and used for computing the accuracy/error percentage