

The package includes instructions and all the codes for cracks detection webpages.


➤ The first webpage (**Train app: train crack detection model**) looks like this:

Split Data into Train and Test Sets


Splitting the dataset into train set (80%) and test set (20%)...
Done!

Train Data

Cracks: 16000
00001.jpg




Non-Cracks: 16000
00001.jpg




Test Data

Cracks: 4000
00002.jpg



Non-Cracks: 4000
00004.jpg



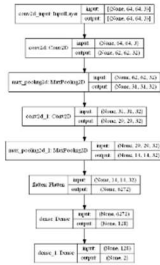
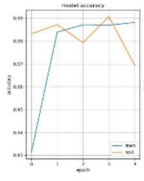
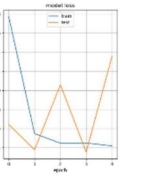
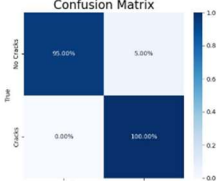
Train and Evaluate the Model



Input the number of training epoch:
5

the button has been clicked 1 times, the model is training...
Model training completed!

Input the Number of Test Samples
20

Evaluation Results

	filename	Image	True Label	Predicted Label	Correct	Non-Cracks	Cracks
0	02617.jpg		Non Cracks	Non Cracks	Yes	100	0
1	19113.jpg		Non Cracks	Non Cracks	Yes	100	0

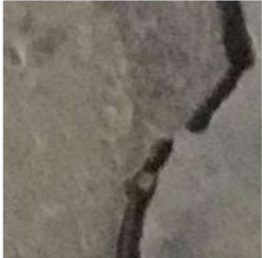
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➤ The second page (**Test app: Use the crack detection model in practice**) look like this:

Upload Images

Drag and Drop or [Select Files](#)

00059.jpg



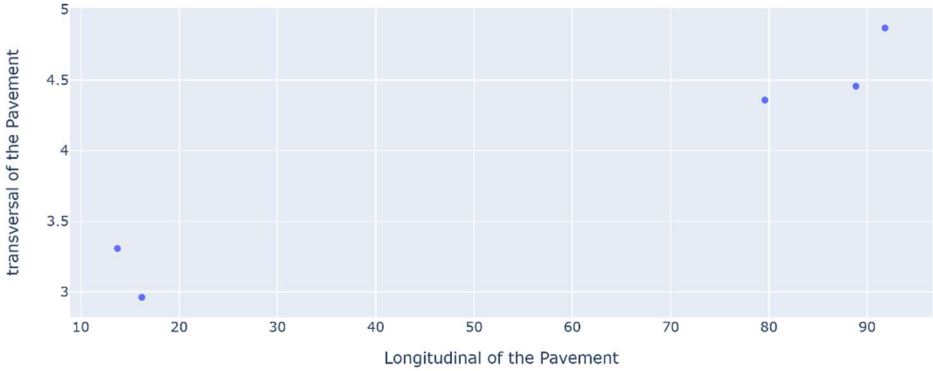







Upload Position Data

Drag and Drop or [Select Files](#)

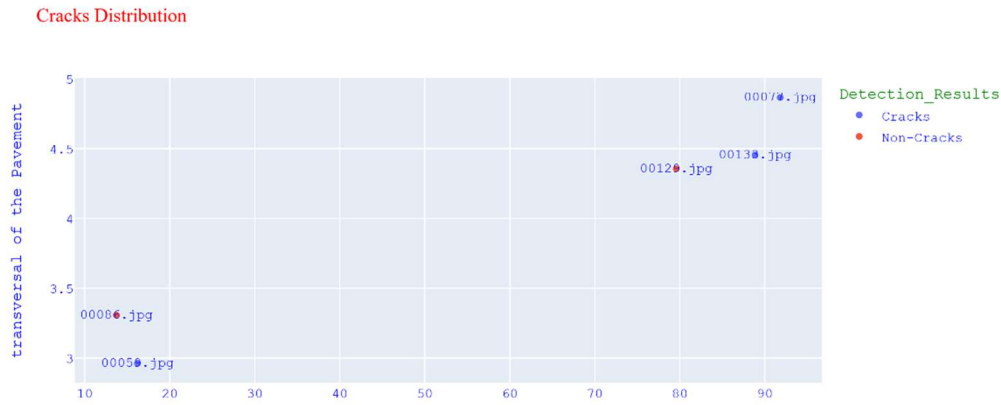
filename	x	y
filter data...		
00059.jpg	16.203861582159064	2.961656961813233
00077.jpg	91.80277658229762	4.867281668089316
00086.jpg	13.716682891643938	3.307275667675698
00129.jpg	79.58271856827072	4.357017906257095
00133.jpg	88.84132673855726	4.455191955019727

Test Sample Distribution in the Pavement (x-y coordinates)



CRACKS DETECTION					
Index	filename	Image	Detection_Results	Non-Crack Probability (%)	Crack Probability (%)
filter data.					
0	00059.jpg		Cracks	0	100
1	00077.jpg		Cracks	0	100
2	00086.jpg		Non-Cracks	100	0
3	00129.jpg		Non-Cracks	100	0
4	00133.jpg		Cracks	0	100

CHECK CRACK DISTRIBUTION



➤ Deployment Steps:

- Check the **1 Install Python and PyCharm Instructions.pdf** first for setup preparation.
- Check **2 Crack Detection Train App User Instruction.pdf** (under Train app folder) next for training the crack detection model. [\[See Train App Demo.mp4\]](#)
- Check **3 Crack Detection Test App User Instruction.pdf** (under Test app folder) last for testing the crack detection model in practice. [\[See Test App Demo.mp4\]](#)