Guide to LASSO Pattern

Contents

Folder Content Information

📁 Defect_200more	30/12/2023 3:59 pm	File folder
📁 Defect_300	30/12/2023 3:57 pm	File folder
📁 Defect_cluster	30/12/2023 3:59 pm	File folder
📁 Defect_white	30/12/2023 3:59 pm	File folder
📁 not_in_use	30/12/2023 5:24 pm	File folder

1. Defect_300:
    a. 300 random generated images
    b. Includes variation and different number of horizontal, vertical, diagonal or combination pattern.
    c. Includes white percentage and cluster pattern
    d. Might contain images that could be placed in Defect_cluster.
    e. IMG_ID1 to IMG_ID300
2. Defect_200more:
    a. 200 random generated images
    b. Use to replace the 'cannot make it' images in Defect_300 folder
    c. IMG_ID301 to IMG_ID500
3. Defect_cluster:
    a. 200 random generated images
    b. Includes white percentage and cluster pattern only
    c. IMG_ID501 to IMG_ID700
4. Defect_white:
    a. 200 random generated images
    b. Include white percentage pattern only
    c. IMG_ID701 to IMG_ID900

Types of patterns

White percentage

White percentage: random white pixel

Range: 3-5%, generated at random

Lasso Info

this is the same table you will see in CSV_info

White Percentage	No. of Cluster	Cluster Size	Vertical Coords Start	Vertical Coords End	Horizontal Coords Start	Horizontal Coords End	Diagonal Coords Start	Diagonal Coords End	Combination Coords Start	Combination Coords End
0.05										

Cluster

No. of Cluster: number of clusters

Cluster size: how big the cluster is
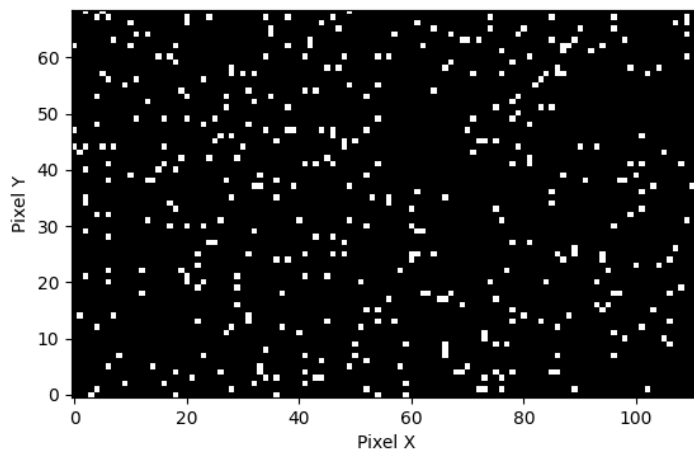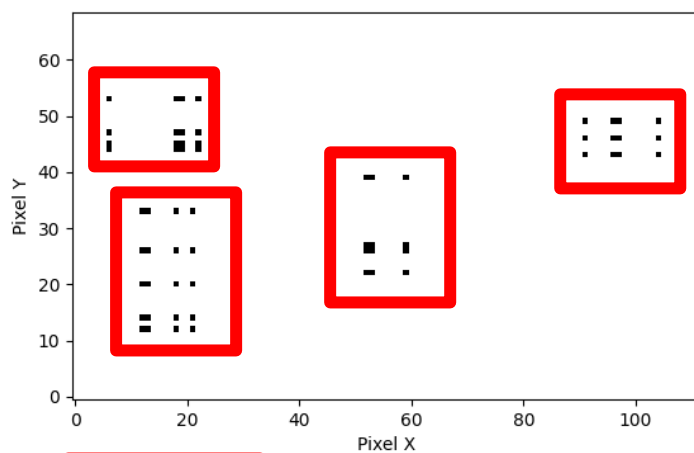
No of Cluster Range: 3-7, generated at random
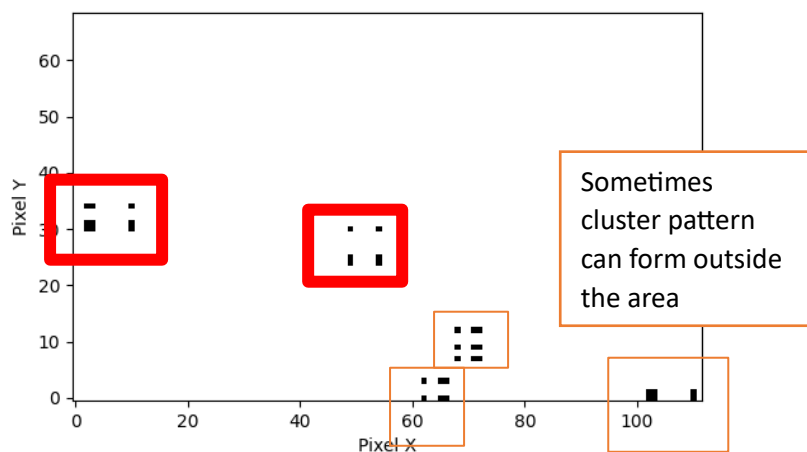
Cluster Size Range: 3-7, generated at random

Lasso Info

this is the same table you will see in CSV_info

White Percentage	No. of Cluster	Cluster Size	Vertical Coords Start	Vertical Coords End	Horizontal Coords Start	Horizontal Coords End	Diagonal Coords Start	Diagonal Coords End	Combination Coords Start	Combination Coords End
	4	5								

White Percentage	No. of Cluster	Cluster Size	Vertical Coords Start	Vertical Coords End	Horizontal Coords Start	Horizontal Coords End	Diagonal Coords Start	Diagonal Coords End	Combination Coords Start	Combination Coords End
	5	3								

Sometimes cluster pattern can form outside the area
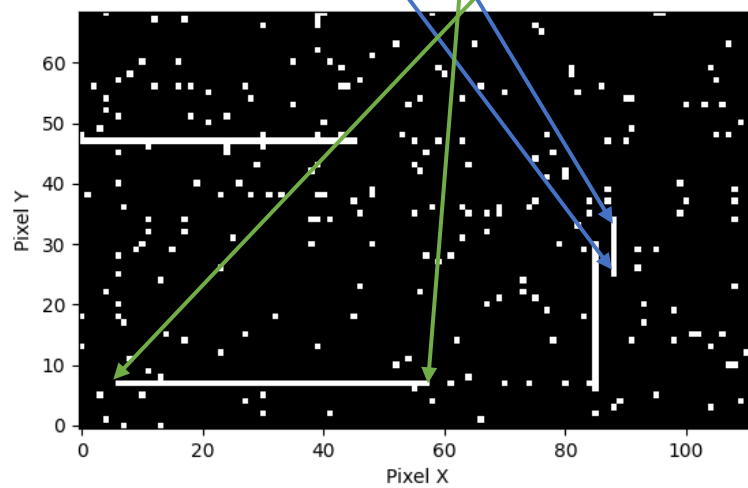
Horizontal and Vertical

Coordinates: (x, y)

See the start and end coordinates of the pattern by row

Possible no. of pattern for both horizontal and vertical: 0-3, generated at random

Lasso Info

this is the same table you will see in CSV_info

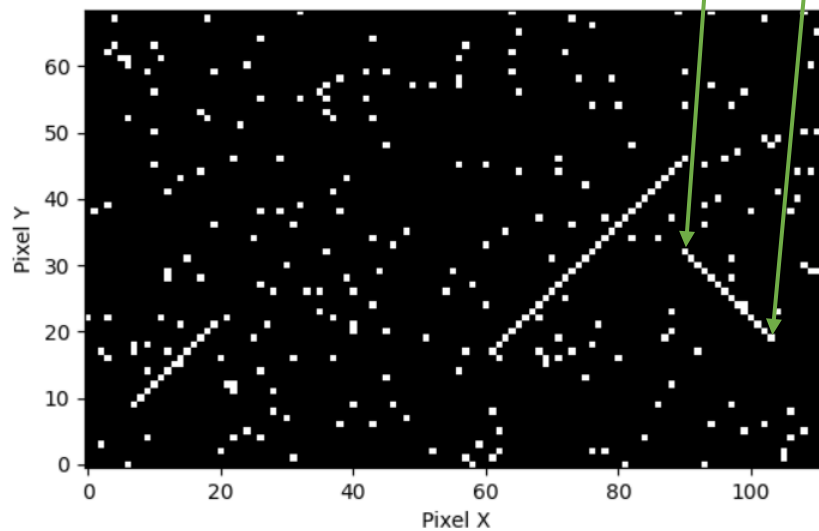| White Percentage	No. of Cluster	Cluster Size	Vertical Coords Start	Vertical Coords End	Horizontal Coords Start	Horizontal Coords End	Diagonal Coords Start	Diagonal Coords End	Combination Coords Start	Combination Coords End
0.03			(88, 25)	(88, 34)	(0, 47)	(45, 47)				
			(85, 30)	(85, 6)	(57, 7)	(6, 7)				

Diagonal

Coordinates: (x, y)

See the start and end coordinates of the pattern by row

Possible no. of pattern: 0-3, generated at random

Lasso Info

this is the same table you will see in CSV_info

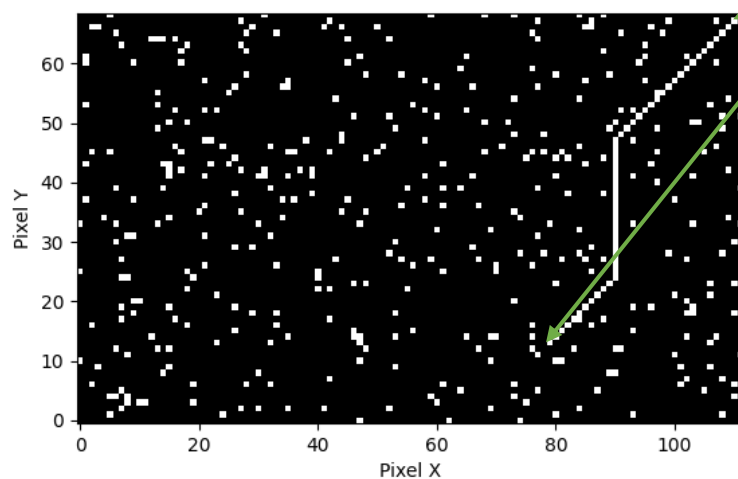| White Percentage	No. of Cluster	Cluster Size	Vertical Coords Start	Vertical Coords End	Horizontal Coords Start	Horizontal Coords End	Diagonal Coords Start	Diagonal Coords End	Combination Coords Start	Combination Coords End
0.03							(61, 17)	(90, 46)		
							(19, 21)	(7, 9)		
							(90, 32)	(103, 19)		

Combination

Combination: have a combination of patterns(horizontal, vertical, diagonal). Think about it as drawing a not so straight line without lifting the pencil. So long as there are 2 different types of patterns(horizontal, vertical, diagonal)/changes direction at least once in a single line, it is considered a combination.
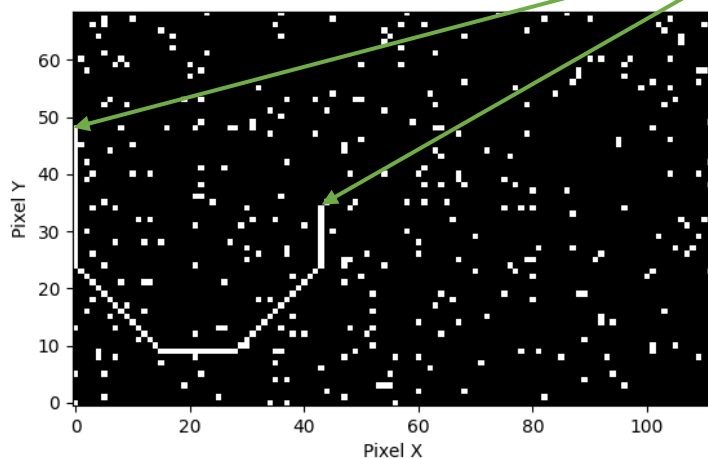
Number of times it can change direction: 2-5 times, generated at random

Possible no. of pattern: 0 or 1, generated at random

White Percentage	No. of Cluster	Cluster Size	Vertical Coords Start	Vertical Coords End	Horizontal Coords Start	Horizontal Coords End	Diagonal Coords Start	Diagonal Coords End	Combination Coords Start	Combination Coords End
0.05									(79, 13)	(110, 67)

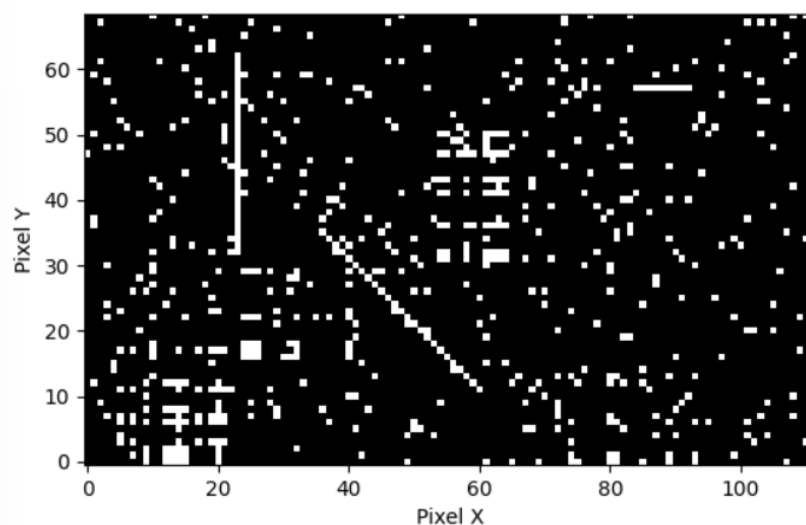| White Percentage	No. of Cluster	Cluster Size	Vertical Coords Start	Vertical Coords End	Horizontal Coords Start	Horizontal Coords End	Diagonal Coords Start	Diagonal Coords End	Combination Coords Start	Combination Coords End
0.04									(43, 34)	(0, 48)

Data generated at random

For every data generation, there is only a maximum of 3 patterns, excluding the *white percentage* and *cluster* pattern.

Lasso Info

this is the same table you will see in CSV_info

White Percentage	No. of Cluster	Cluster Size	Vertical Coords Start	Vertical Coords End	Horizontal Coords Start	Horizontal Coords End	Diagonal Coords Start	Diagonal Coords End	Combination Coords Start	Combination Coords End
0.05	6	7	(23, 62)	(23, 32)	(92, 57)	(84, 57)	(36, 35)	(60, 11)		

For example, from the above image you can see that there are 3 different types of pattern and their corresponding start and end coordinates.