

MP4 Image Classification

Image Classification

Circle Name	Clear Images	Blurry	Cutt	Noisy	Noisy with multiple circle	Total
2.5_62.5_99.6 HBW	0	0	0	15	5	20
2.5_187.5_198.6HBW (0.0146 mm per pixel)	0	4	0	36		40
5_750_200.4HBW (0.0136 mm per pixel)	7	1	0	32		40
10_3000_220 BHN (0.0136 mm per pixel)	11	0	4	31		46

In details

2.5_62.5_99.6HBW

1. Most of the images of this category contain noise in image
2. Some of these images have multiple holes

2.5_187.5_198.6HBW (0.0146 mm per pixel)

1. In this category, most of the images are clear but corners some noise that may affect the results
2. Some blurry images

5_750_200.4HBW (0.0136 mm per pixel)

1. In this category, some of the images are noisy at one of the corners
2. Most of the images are clear but contain noisy

10_3000_220BHN (0.0136 mm per pixel)

1. Have some noise in image
2. Some are clear images

Errors by square method
($e < 2$, $2 < e < 3$, $e > 3$)

Circle Name	Clear Images	Blurry	Cut	Noisy	Noisy with multiple circle	Total
2.5_62.5_99.6 HBW	0	0	0	4,5,6	0,1,4	20
2.5_187.5_198.6HBW	0	2,0,2	0	21,11,4	0	40
5_750_200.4H BW	1,3,3	0,0,1	0	20,6,6	0	40
10_3000_220 BHN	10,1,0	0	0,0,4	27,3,1	0	46

Errors by circle method
($e < 2$, $2 < e < 3$, $e > 3$)

Circle Name	Clear Images	Blurry	Cut	Noisy	Noisy with multiple circle	Total
2.5_62.5_99.6 HBW	0	0	0	0,0,15	0,0,5	20
2.5_187.5_198.6HBW	0	0,3,1	0	0,8,28	0	40
5_750_200.4H BW	1,3,3	0,0,1	0	20,6,6	0	40
10_3000_220 BHN	10,1,0	0	0,1,4	27,2,1	0	46

Result analysis
By Square method

Circle Name		Accepted	Not Accepted		Total	
Type	error<2	2<e<3	e>3			
2.5_62.5_9 9.6HBW	0	0	20		20	
2.5_187.5_ 198.6HBW	23	11	6		40	
5_750_200 .4HBW	21	9	10		40	
10_3000_2 20BHN	45	0	1		46	

By Circle method

Circle Name		Accepted	Not Accepted		Total	
Type	error<2	2<e<3	e>3			
2.5_62.5_9 9.6HBW	0	0	20		20	
2.5_187.5_ 198.6HBW	0	11	29		40	
5_750_200 .4HBW	31	0	9		40	
10_3000_2 20BHN	37	3	6		46	