Dataset with only images with Blue Light

Extracted vector with partial sums of histogram bins from LBP image and some characteristics from Gray Level Coorence Matrix - contrast, homogeneity, energy, correlation

vector - partial LBP histogram sum1, partial LBP histogram sum2, partial LBP histogram sum3, partial LBP histogram sum4, contrast, homogeneity, energy, correlation

	Trained	**Tested**
Live	19	10
Fake	19	10
Sum		

ANN:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	18	20	20 17
Classified wrong	2	0	0 3
Accuracy [%]	90	100	100 85
FAR [%]	5	0	0 15
FRR [%]	5	0	0 0

SVM:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	15	18	18
Classified wrong	5	2	2
Accuracy [%]	75	90	90
FAR [%]	20	10	10
FRR [%]	5	0	0

CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	19	19	16
Classified wrong	1	1	4
Accuracy [%]	95	95	80
FAR [%]	0	5	20
FRR [%]	5	0	0

My CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	19	19	20
Classified wrong	1	1	0
Accuracy [%]	95	95	100
FAR [%]	0	5	0
FRR [%]	5	0	0

Dataset with only images with Green Light

Extracted vector with partial sums of histogram bins from LBP image and some characteristics from Gray Level Coorence Matrix - contrast, homogeneity, energy, correlation

vector - partial LBP histogram sum1, partial LBP histogram sum2, partial LBP histogram sum3, partial LBP histogram sum4, contrast, homogeneity, energy, correlation

	Trained	**Tested**
Live	16	8
Fake	16	8
Sum		

ANN:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	14	14 13	13
Classified wrong	2	2 3	3
Accuracy [%]	87.5	87.5 81.25	81.25
FAR [%]	6.25	12.5 18.75	12.5
FRR [%]	6.25	0	6.25

SVM:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	9	11	14
Classified wrong	7	5	2
Accuracy [%]	56.25	68.75	87.5
FAR [%]	43.75	31.25	12.5
FRR [%]	0	0	0

CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	13	15	10
Classified wrong	3	1	6
Accuracy [%]	81.25	93.75	62.5
FAR [%]	12.5	6.25	18.75
FRR [%]	6.25	0	18.75

My CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	13	11	13
Classified wrong	3	5	3
Accuracy [%]	81.25	68.75	81.25
FAR [%]	12.5	25	18.75
FRR [%]	6.25	6.25	0

Dataset with only images with Red Light

Extracted vector with partial sums of histogram bins from LBP image and some characteristics from Gray Level Coorence Matrix - contrast, homogeneity, energy, correlation

vector - partial LBP histogram sum1, partial LBP histogram sum2, partial LBP histogram sum3, partial LBP histogram sum4, contrast, homogeneity, energy, correlation

	Trained	**Tested**
Live	17	8
Fake	17	8
Sum		

ANN:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	16	15 16	15
Classified wrong	0	1 0	1
Accuracy [%]	100	93.75 100	93.75
FAR [%]	0	6.25 0	6.25
FRR [%]	0	0 0	0

SVM:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	9	16	15
Classified wrong	7	0	1
Accuracy [%]	56.25	100	93.75
FAR [%]	43.75	0	6.25
FRR [%]	0	0	0

CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	14	16	15
Classified wrong	2	0	1
Accuracy [%]	87.5	100	93.75
FAR [%]	6.25	0	6.25
FRR [%]	6.25	0	0

My CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	14	15	13
Classified wrong	2	1	3
Accuracy [%]	87.5	93.75	81.25
FAR [%]	12.5	0	18.75
FRR [%]	0	6.25	0

Dataset with mix of images with all lights

Extracted vector with partial sums of histogram bins from LBP image and some characteristics from Gray Level Coorence Matrix - contrast, homogeneity, energy, correlation

vector - partial LBP histogram sum1, partial LBP histogram sum2, partial LBP histogram sum3, partial LBP histogram sum4, contrast, homogeneity, energy, correlation

	Trained	**Tested**
Live	42	21
Fake	42	21
Sum		

ANN:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	41	40	40
Classified wrong	1	2	2
Accuracy [%]	97.6	95.2	95.2
FAR [%]	2.4	4.8	4.8
FRR [%]	0	0	0

SVM:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	36	36	32
Classified wrong	6	6	10
Accuracy [%]	85.7	85.7	76.2
FAR [%]	14.3	7.1	7.1
FRR [%]	0	7.1	16.7

CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	40	32	37
Classified wrong	2	10	5
Accuracy [%]	95.23809523809524	76.19047619047619	88.0952380952381
FAR [%]	2.380952380952381	16.666666666666668	4.761904761904762
FRR [%]	2.380952380952381	7.142857142857143	7.142857142857143

My CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	38	38	39
Classified wrong	4	4	3
Accuracy [%]	90.47619047619048	90.47619047619048	92.85714285714286
FAR [%]	9.523809523809524	2.380952380952381	0
FRR [%]	0	7.142857142857143	7.142857142857143

Dataset with only images with Blue Light

Extracted vector with some characteristics from Gray Level Coorence Matrix - contrast, homogeneity, energy, correlation for image enhanced with Sobel on x-axis, Sobel on y-axis and Laplacian

vector - contrast for image enhanced with laplacian, homogeneity for image enhanced with laplacian, energy for image enhanced with laplacian, correlation for image enhanced with laplacian, contrast for image enhanced with sobel on x-axis, homogeneity for image enhanced with sobel on x-axis, energy for image enhanced with sobel on x-axis, correlation for image enhanced with sobel on x-axis, contrast for image enhanced with sobel on y-axis, homogeneity for image enhanced with sobel on y-axis, energy for image enhanced with sobel on y-axis, correlation for image enhanced with sobel on y-axis

	Trained	**Tested**

Live	19	10
Fake	19	10
Sum		

ANN:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	19	19	18
Classified wrong	1	1	2
Accuracy [%]	95	95 (ucici graf vzhledove nic moc)	90 (ucici graf vzhledove nic moc)
FAR [%]	5	5	10
FRR [%]	0	0	0

SVM:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	16	14	14
Classified wrong	4	6	6
Accuracy [%]	80	70	70
FAR [%]	20	30	30
FRR [%]	0	0	0

CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	18	17	16
Classified wrong	2	3	4
Accuracy [%]	90	85	80

FAR [%]	5	10	20
FRR [%]	5	5	0

My CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	16	18	18
Classified wrong	4	2	2
Accuracy [%]	80	90	90
FAR [%]	20	10	10
FRR [%]	0	0	0

Dataset with only images with Green Light

Extracted vector with some characteristics from Gray Level Coorence Matrix - contrast, homogeneity, energy, correlation for image enhanced with Sobel on x-axis, Sobel on y-axis and Laplacian

vector - contrast for image enhanced with laplacian, homogeneity for image enhanced with laplacian, energy for image enhanced with laplacian, correlation for image enhanced with laplacian, contrast for image enhanced with sobel on x-axis, homogeneity for image enhanced with sobel on x-axis, energy for image enhanced with sobel on x-axis, correlation for image enhanced with sobel on x-axis, contrast for image enhanced with sobel on y-axis, homogeneity for image enhanced with sobel on y-axis, energy for image enhanced with sobel on y-axis, correlation for image enhanced with sobel on y-axis

	Trained	**Tested**
Live	16	8
Fake	16	8
Sum		

ANN:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation

Classified right	13 14	14 13	13 10
Classified wrong	3 2	2 3	3 6
Accuracy [%]	81.25 87.5	87.5 81.25 ((ucici graf vzhledove nic moc)	81.25 62. 5 (ucici graf vzhledove nic moc)
FAR [%]	12.5 6.25	12.5 18.75	18.75 37.5
FRR [%]	6.25	0	0

SVM:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	13	13	13
Classified wrong	3	3	3
Accuracy [%]	81.25	81.25	81.25
FAR [%]	12.5	18.75	18.75
FRR [%]	6.25	0	0

CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	15	12	14
Classified wrong	1	4	2
Accuracy [%]	93.75	75	87.5
FAR [%]	6.25	12.5	12.5
FRR [%]	0	12.5	0

My CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation

Classified right	15	12	14
Classified wrong	1	4	2
Accuracy [%]	93.75	75	87.5
FAR [%]	6.25	18.75	12.5
FRR [%]	0	6.25	0

Dataset with only images with Red Light

Extracted vector with some characteristics from Gray Level Coorence Matrix - contrast, homogeneity, energy, correlation for image enhanced with Sobel on x-axis, Sobel on y-axis and Laplacian

vector - contrast for image enhanced with laplacian, homogeneity for image enhanced with laplacian, energy for image enhanced with laplacian, correlation for image enhanced with laplacian, contrast for image enhanced with sobel on x-axis, homogeneity for image enhanced with sobel on x-axis, energy for image enhanced with sobel on x-axis, correlation for image enhanced with sobel on x-axis, contrast for image enhanced with sobel on y-axis, homogeneity for image enhanced with sobel on y-axis, energy for image enhanced with sobel on y-axis, correlation for image enhanced with sobel on y-axis

	Trained	**Tested**
Live	17	8
Fake	17	8
Sum		

ANN:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	16	16	15
Classified wrong	0	0	1
Accuracy [%]	100	100	93.75
FAR [%]	0	0	6.25
FRR [%]	0	0	0

SVM:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	11	13	13
Classified wrong	5	3	3
Accuracy [%]	68.75	81.25	81.25
FAR [%]	31.25	18.75	18.75
FRR [%]	0	0	0

CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	14	16	15
Classified wrong	2	0	1
Accuracy [%]	87.5	100	93.75
FAR [%]	12.5	0	6.25
FRR [%]	0	0	0

My CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	14	15	14
Classified wrong	2	1	2
Accuracy [%]	87.5	93.75	87.5
FAR [%]	12.5	6.25	12.5
FRR [%]	0	0	0

Dataset with images with All Lights

Extracted vector with some characteristics from Gray Level Coorence Matrix - contrast, homogeneity, energy, correlation for image enhanced with Sobel on x-axis, Sobel on y-axis and Laplacian

vector - contrast for image enhanced with laplacian, homogeneity for image enhanced with laplacian, energy for image enhanced with laplacian, correlation for image enhanced with laplacian, contrast for image enhanced with sobel on x-axis, homogeneity for image enhanced with sobel on x-axis, energy for image enhanced with sobel on x-axis, correlation for image enhanced with sobel on x-axis, contrast for image enhanced with sobel on y-axis, homogeneity for image enhanced with sobel on y-axis, energy for image enhanced with sobel on y-axis, correlation for image enhanced with sobel on y-axis

	Trained	**Tested**
Live	42	21
Fake	42	21
Sum		

ANN:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	40	34 32	36 28
Classified wrong	2	8 10	6 14
Accuracy [%]	95.2	80.1 76.2 ((ucici graf vzhledove nic moc)	85.7 66.67 (ucici graf vzhledove nic moc)
FAR [%]	4.8	4.8 23.8	14.3 33.3
FRR [%]	0	14.3	0

SVM:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	37	37	37

Classified wrong	5	5	5
Accuracy [%]	88.1	88.1	88.1
FAR [%]	11.9	11.9	11.9
FRR [%]	0	0	0

CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	42	34	36
Classified wrong	0	8	6
Accuracy [%]	100	80.95238095238095	85.71428571428571
FAR [%]	0	7.142857142857143	9.523809523809524
FRR [%]	0	11.904761904761905	4.761904761904762

My CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	40	35	37
Classified wrong	2	7	5
Accuracy [%]	95.23809523809524	83.33333333333333	88.0952380952381
FAR [%]	4.761904761904762	7.142857142857143	4.761904761904762
FRR [%]	0	9.523809523809524	7.142857142857143

Dataset with only images with Blue Light

Process image with wavelet transformation (bior1.3) and get horizontal, vertical and diagonal detail of image and get some characteristics from Gray Level Coorence Matrix - contrast, homogeneity, energy, correlation for these three results

vector - contrast for horizontal detail, homogeneity for horizontal detail, energy for horizontal detail, correlation for horizontal detail, contrast for vertical detail, homogeneity for vertical detail, energy for vertical detail, correlation for vertical detail, contrast for diagonal detail, homogeneity for diagonal detail, energy for diagonal detail, correlation for diagonal detail

	Trained	**Tested**
Live	19	10
Fake	19	10
Sum		

ANN:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	16	15	11 10
Classified wrong	4	5	9 10
Accuracy [%]	80	75	55 50
FAR [%]	15	15	25 25
FRR [%]	5	10	20 25

SVM:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	15	15	14
Classified wrong	5	5	6
Accuracy [%]	75	75	70
FAR [%]	20	20	30
FRR [%]	5	5	0

CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	17	17	16
Classified wrong	3	3	4
Accuracy [%]	85	85	80
FAR [%]	5	10	5
FRR [%]	10	5	15

My CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	15	16	19
Classified wrong	5	4	1
Accuracy [%]	75	80	95
FAR [%]	15	20	5
FRR [%]	10	0	0

Dataset with only images with Green Light

Process image with wavelet transformation (bior1.3) and get horizontal, vertical and diagonal detail of image and get some characteristics from Gray Level Coorence Matrix - contrast, homogeneity, energy, correlation for these three results

vector - contrast for horizontal detail, homogeneity for horizontal detail, energy for horizontal detail, correlation for horizontal detail, contrast for vertical detail, homogeneity for vertical detail, energy for vertical detail, correlation for vertical detail, contrast for diagonal detail, homogeneity for diagonal detail, energy for diagonal detail, correlation for diagonal detail

	Trained	**Tested**
Live	16	8

Fake	16	8
Sum		

ANN:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	10 11	11 12	13
Classified wrong	6 5	5 4	3
Accuracy [%]	62.5 68.75	68.75 75	81.25
FAR [%]	18.75 12.5	6.25 0	12.5
FRR [%]	18.75 18.75	25 25	6.25

SVM:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	10	11	15
Classified wrong	6	5	1
Accuracy [%]	62.5	68.75	93.75
FAR [%]	31.25	6.25	6.25
FRR [%]	6.25	25	0

CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	10	10	14
Classified wrong	6	6	2

Accuracy [%]	62.5	62.5	87.5
FAR [%]	6.25	6.25	6.25
FRR [%]	31.25	31.25	6.25

My CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	11	10	13
Classified wrong	5	6	3
Accuracy [%]	68.75	62.5	81.25
FAR [%]	18.75	6.25	12.5
FRR [%]	12.5	31.25	6.25

Dataset with only images with Red Light

Process image with wavelet transformation (bior1.3) and get horizontal, vertical and diagonal detail of image and get some characteristics from Gray Level Coorence Matrix - contrast, homogeneity, energy, correlation for these three results

vector - contrast for horizontal detail, homogeneity for horizontal detail, energy for horizontal detail, correlation for horizontal detail, contrast for vertical detail, homogeneity for vertical detail, energy for vertical detail, correlation for vertical detail, contrast for diagonal detail, homogeneity for diagonal detail, energy for diagonal detail, correlation for diagonal detail

	Trained	**Tested**
Live	17	8
Fake	17	8
Sum		

ANN:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	12 11	15	14
Classified wrong	4 5	1	2
Accuracy [%]	75 68.75	93.75	87.5
FAR [%]	18.75 18.75	6.25	12.5
FRR [%]	6.25 12.5	0	0

SVM:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	11	12	11
Classified wrong	5	4	5
Accuracy [%]	68.75	75	68.75
FAR [%]	31.25	25	31.25
FRR [%]	0	0	0

CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	9	15	12
Classified wrong	7	1	4
Accuracy [%]	56.25	93.75	75
FAR [%]	18.75	6.25	18.75
FRR [%]	25	0	6.25

My CLF:

	Otsu segmentation	Adaptive Gaussian	Adaptive Mean

		Segmentation	Segmentation
Classified right	11	14	14
Classified wrong	5	2	2
Accuracy [%]	68.75	87.5	87.5
FAR [%]	25	12.5	6.25
FRR [%]	6.25	0	6.25

Dataset with only images with All Lights

Process image with wavelet transformation (bior1.3) and get horizontal, vertical and diagonal detail of image and get some characteristics from Gray Level Coorence Matrix - contrast, homogeneity, energy, correlation for these three results

vector - contrast for horizontal detail, homogeneity for horizontal detail, energy for horizontal detail, correlation for horizontal detail, contrast for vertical detail, homogeneity for vertical detail, energy for vertical detail, correlation for vertical detail, contrast for diagonal detail, homogeneity for diagonal detail, energy for diagonal detail, correlation for diagonal detail

	Trained	**Tested**
Live	42	21
Fake	42	21
Sum		

ANN:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	36	38 39	33 34
Classified wrong	6	4 3	9 8
Accuracy [%]	85.7	90.5 92.9	78.6 81
FAR [%]	7.1	9.5 7.1	19 14.3

FRR [%]	7.1	0	2.4 4.8

SVM:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	34	33	32
Classified wrong	8	9	10
Accuracy [%]	81	78.6	76.2
FAR [%]	19	19	19
FRR [%]	0	2.4	4.8

CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	30	30	30
Classified wrong	12	12	12
Accuracy [%]	71.42857142857143	71.42857142857143	71.42857142857143
FAR [%]	14.285714285714286	19.047619047619047	16.666666666666668
FRR [%]	14.285714285714286	9.523809523809524	11.904761904761905

My CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	36	30	33
Classified wrong	6	12	9

Accuracy [%]	85.71428571428571	71.42857142857143	78.57142857142857
FAR [%]	9.523809523809524	26.19047619047619	19.047619047619047
FRR [%]	4.761904761904762	2.380952380952381	2.380952380952381

Dataset with only images with Blue Light

Process image with wavelet transformation (db2) and get horizontal, vertical and diagonal detail of image and get some characteristics from Gray Level Coorence Matrix - contrast, homogeneity, energy, correlation for these three results

vector - contrast for horizontal detail, homogeneity for horizontal detail, energy for horizontal detail, correlation for horizontal detail, contrast for vertical detail, homogeneity for vertical detail, energy for vertical detail, correlation for vertical detail, contrast for diagonal detail, homogeneity for diagonal detail, energy for diagonal detail, correlation for diagonal detail

	Trained	**Tested**
Live	19	10
Fake	19	10
Sum		

ANN:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	10	10	12
Classified wrong	10	10	8
Accuracy [%]	50	50	60
FAR [%]	20	35	25
FRR [%]	30	15	15

SVM:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	16	12	12
Classified wrong	4	8	8
Accuracy [%]	80	60	60
FAR [%]	20	35	40
FRR [%]	0	5	0

CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	10	11	13
Classified wrong	10	9	7
Accuracy [%]	50	55	65
FAR [%]	20	15	35
FRR [%]	30	30	0

My CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	13	9	13
Classified wrong	7	11	7
Accuracy [%]	65	45	65
FAR [%]	30	30	35
FRR [%]	5	25	0

Dataset with only images with Green Light

Process image with wavelet transformation (db2) and get horizontal, vertical and diagonal detail of image and get some characteristics from Gray Level Coorence Matrix - contrast, homogeneity, energy, correlation for these three results

vector - contrast for horizontal detail, homogeneity for horizontal detail, energy for horizontal detail, correlation for horizontal detail, contrast for vertical detail, homogeneity for vertical detail, energy for vertical detail, correlation for vertical detail, contrast for diagonal detail, homogeneity for diagonal detail, energy for diagonal detail, correlation for diagonal detail

	Trained	**Tested**
Live	16	8
Fake	16	8
Sum		

ANN:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	11	13	12
Classified wrong	5	3	4
Accuracy [%]	68.75	81.25	75
FAR [%]	25	12.5	12.5
FRR [%]	6.25	6.25	12.5

SVM:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	11	12	12
Classified wrong	5	4	4

Accuracy [%]	68.75	75	75
FAR [%]	31.25	25	18.75
FRR [%]	0	0	6.25

CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	8	10	11
Classified wrong	8	6	5
Accuracy [%]	50	62.5	68.75
FAR [%]	25	25	18.75
FRR [%]	25	12.5	12.5

My CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	11	9	13
Classified wrong	5	7	3
Accuracy [%]	68.75	56.25	81.25
FAR [%]	25	37.5	12.5
FRR [%]	6.25	6.25	6.25

Dataset with only images with Red Light

Process image with wavelet transformation (db2) and get horizontal, vertical and diagonal detail of image and get some characteristics from Gray Level Coorence Matrix - contrast, homogeneity, energy, correlation for these three results

vector - contrast for horizontal detail, homogeneity for horizontal detail, energy for horizontal detail, correlation for horizontal detail, contrast for vertical detail, homogeneity for vertical detail, energy for vertical detail, correlation for vertical detail, contrast for diagonal detail, homogeneity for diagonal detail, energy for diagonal detail, correlation for diagonal detail

	Trained	**Tested**
Live	17	8
Fake	17	8
Sum		

ANN:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	13	13	15
Classified wrong	3	3	1
Accuracy [%]	81.25	81.25	93.75
FAR [%]	12.5	18.75	6.25
FRR [%]	6.25	0	0

SVM:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	11	11	13
Classified wrong	5	5	3
Accuracy [%]	68.75	68.75	81.25
FAR [%]	31.25	31.25	18.75
FRR [%]	0	0	0

CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	14	12	10
Classified wrong	2	4	6
Accuracy [%]	87.5	75	62.5
FAR [%]	0	18.75	12.5
FRR [%]	12.5	6.25	25

My CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	14	11	8
Classified wrong	2	5	8
Accuracy [%]	87.5	68.75	50
FAR [%]	0	25	12.5
FRR [%]	12.5	6.25	37.5

Dataset with only images with All Lights

Process image with wavelet transformation (db2) and get horizontal, vertical and diagonal detail of image and get some characteristics from Gray Level Coorence Matrix - contrast, homogeneity, energy, correlation for these three results

vector - contrast for horizontal detail, homogeneity for horizontal detail, energy for horizontal detail, correlation for horizontal detail, contrast for vertical detail, homogeneity for vertical detail, energy for vertical detail, correlation for vertical detail, contrast for diagonal detail, homogeneity for diagonal detail, energy for diagonal detail, correlation for diagonal detail

	Trained	**Tested**
Live	42	21
Fake	42	21
Sum		

ANN:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	35	32	36
Classified wrong	7	10	6
Accuracy [%]	83.33333333333333	76.19047619047619	85.71428571428571
FAR [%]	14.285714285714286	16.666666666666668	7.142857142857143
FRR [%]	2.380952380952381	7.142857142857143	7.142857142857143

SVM:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	38	29	32
Classified wrong	4	13	10
Accuracy [%]	90.47619047619048	69.04761904761905	76.19047619047619
FAR [%]	9.523809523809524	30.952380952380953	19.047619047619047
FRR [%]	0	0	4.761904761904762

CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	33	22	28
Classified wrong	9	20	14
Accuracy [%]	78.57142857142857	52.38095238095238	66.66666666666667

FAR [%]	14.285714285714286	26.19047619047619	16.666666666666668
FRR [%]	7.142857142857143	21.428571428571427	16.666666666666668

My CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	34	24	24
Classified wrong	8	18	18
Accuracy [%]	80.95238095238095	57.142857142857146	57.142857142857146
FAR [%]	19.047619047619047	38.095238095238095	38.095238095238095
FRR [%]	0	4.761904761904762	4.761904761904762

Dataset with only images with Blue Light

Process image with wavelet transformation (rbio3.1) and get horizontal, vertical and diagonal detail of image and get some characteristics from Gray Level Coorence Matrix - contrast, homogeneity, energy, correlation for these three results

vector - contrast for horizontal detail, homogeneity for horizontal detail, energy for horizontal detail, correlation for horizontal detail, contrast for vertical detail, homogeneity for vertical detail, energy for vertical detail, correlation for vertical detail, contrast for diagonal detail, homogeneity for diagonal detail, energy for diagonal detail, correlation for diagonal detail

	Trained	**Tested**
Live	19	10
Fake	19	10
Sum		

ANN:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	15	16	19
Classified wrong	5	4	1
Accuracy [%]	75	80	95
FAR [%]	15	5	5
FRR [%]	10	15	0

SVM:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	16	15	17
Classified wrong	4	5	3
Accuracy [%]	80	75	85
FAR [%]	20	15	10
FRR [%]	0	10	5

CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	14	11	13
Classified wrong	6	9	7
Accuracy [%]	70	55	65
FAR [%]	15	30	20
FRR [%]	15	15	15

My CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	12	10	12
Classified wrong	8	10	8
Accuracy [%]	60	50	60
FAR [%]	25	40	10
FRR [%]	15	10	30

Dataset with only images with Green Light

Process image with wavelet transformation (rbio3.1) and get horizontal, vertical and diagonal detail of image and get some characteristics from Gray Level Coorence Matrix - contrast, homogeneity, energy, correlation for these three results

vector - contrast for horizontal detail, homogeneity for horizontal detail, energy for horizontal detail, correlation for horizontal detail, contrast for vertical detail, homogeneity for vertical detail, energy for vertical detail, correlation for vertical detail, contrast for diagonal detail, homogeneity for diagonal detail, energy for diagonal detail, correlation for diagonal detail

	Trained	**Tested**
Live	16	8
Fake	16	8
Sum		

ANN:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	12	10	12
Classified wrong	4	6	4

Accuracy [%]	75	62.5	75
FAR [%]	12.5	37.5	18.75
FRR [%]	12.5	0	6.25

SVM:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	12	9	11
Classified wrong	4	7	5
Accuracy [%]	75	56.25	68.75
FAR [%]	25	31.25	25
FRR [%]	0	12.5	6.25

CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	13	11	14
Classified wrong	3	5	2
Accuracy [%]	81.25	68.75	87.5
FAR [%]	12.5	31.25	6.25
FRR [%]	6.25	0	6.25

My CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	13	11	12
Classified wrong	3	5	4
Accuracy [%]	81.25	68.75	75

FAR [%]	12.5	31.25	18.75
FRR [%]	6.25	0	6.25

Dataset with only images with Red Light

Process image with wavelet transformation (rbio3.1) and get horizontal, vertical and diagonal detail of image and get some characteristics from Gray Level Coorence Matrix - contrast, homogeneity, energy, correlation for these three results

vector - contrast for horizontal detail, homogeneity for horizontal detail, energy for horizontal detail, correlation for horizontal detail, contrast for vertical detail, homogeneity for vertical detail, energy for vertical detail, correlation for vertical detail, contrast for diagonal detail, homogeneity for diagonal detail, energy for diagonal detail, correlation for diagonal detail

	Trained	**Tested**
Live	17	8
Fake	17	8
Sum		

ANN:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	13	16	15
Classified wrong	3	0	1
Accuracy [%]	81.25	100	93.75
FAR [%]	6.25	0	6.25
FRR [%]	12.5	0	0

SVM:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	11	12	14
Classified wrong	5	4	2
Accuracy [%]	68.75	75	87.5
FAR [%]	31.25	25	12.5
FRR [%]	0	0	0

CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	13	13	14
Classified wrong	3	3	2
Accuracy [%]	81.25	81.25	87.5
FAR [%]	12.5	18.75	12.5
FRR [%]	6.25	0	0

My CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	13	16	14
Classified wrong	3	0	2
Accuracy [%]	81.25	100	87.5
FAR [%]	18.75	0	12.5
FRR [%]	0	0	0

Dataset with only images with All Lights

Process image with wavelet transformation (rbio3.1) and get horizontal, vertical and diagonal detail of image and get some characteristics from Gray Level Coorence Matrix - contrast, homogeneity, energy, correlation for these three results

vector - contrast for horizontal detail, homogeneity for horizontal detail, energy for horizontal detail, correlation for horizontal detail, contrast for vertical detail, homogeneity for vertical detail, energy for vertical detail, correlation for vertical detail, contrast for diagonal detail, homogeneity for diagonal detail, energy for diagonal detail, correlation for diagonal detail

	Trained	**Tested**
Live	42	21
Fake	42	21
Sum		

ANN:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	33	33	37
Classified wrong	9	9	5
Accuracy [%]	78.57142857142857	78.57142857142857	88.0952380952381
FAR [%]	9.523809523809524	9.523809523809524	7.142857142857143
FRR [%]	11.904761904761905	11.904761904761905	4.761904761904762

SVM:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	33	33	36
Classified wrong	9	9	6

Accuracy [%]	78.57142857142857	78.57142857142857	85.71428571428571
FAR [%]	21.428571428571427	21.428571428571427	14.285714285714286
FRR [%]	0	0	0

CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	31	29	33
Classified wrong	11	13	9
Accuracy [%]	73.80952380952381	69.04761904761905	78.57142857142857
FAR [%]	16.666666666666668	16.666666666666668	7.142857142857143
FRR [%]	9.523809523809524	14.285714285714286	14.285714285714286

My CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	37	34	33
Classified wrong	5	8	9
Accuracy [%]	88.0952380952381	80.95238095238095	78.57142857142857
FAR [%]	7.142857142857143	11.904761904761905	21.428571428571427
FRR [%]	4.761904761904762	7.142857142857143	0

Dataset with only images with Blue Light

Process image with wavelet transformation (bior2.4) and get horizontal, vertical and diagonal detail of image and get some characteristics from Gray Level Coorence Matrix - contrast, homogeneity, energy, correlation for these three results

vector - contrast for horizontal detail, homogeneity for horizontal detail, energy for horizontal detail, correlation for horizontal detail, contrast for vertical detail, homogeneity for vertical detail, energy for vertical detail, correlation for vertical detail, contrast for diagonal detail, homogeneity for diagonal detail, energy for diagonal detail, correlation for diagonal detail

	Trained	**Tested**
Live	19	10
Fake	19	10
Sum		

ANN:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	17	13	18
Classified wrong	3	7	2
Accuracy [%]	85	65	90
FAR [%]	15	30	10
FRR [%]	0	5	0

SVM:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	12	12	16
Classified wrong	8	8	4

Accuracy [%]	60	60	80
FAR [%]	40	30	20
FRR [%]	0	10	0

CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	15	14	12
Classified wrong	5	6	8
Accuracy [%]	75	70	60
FAR [%]	15	15	25
FRR [%]	10	15	15

My CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	13	12	12
Classified wrong	7	8	8
Accuracy [%]	65	60	60
FAR [%]	35	0	15
FRR [%]	0	40	25

Dataset with only images with Green Light

Process image with wavelet transformation (bior2.4) and get horizontal, vertical and diagonal detail of image and get some characteristics from Gray Level Coorence Matrix - contrast, homogeneity, energy, correlation for these three results

vector - contrast for horizontal detail, homogeneity for horizontal detail, energy for horizontal detail, correlation for horizontal detail, contrast for vertical detail, homogeneity for vertical detail, energy for vertical detail, correlation for vertical detail, contrast for diagonal detail, homogeneity for diagonal detail, energy for diagonal detail, correlation for diagonal detail

	Trained	**Tested**
Live	16	8
Fake	16	8
Sum		

ANN:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	14	13	12
Classified wrong	2	3	4
Accuracy [%]	87.5	81.25	75
FAR [%]	6.25	6.25	6.25
FRR [%]	6.25	12.5	18.75

SVM:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	11	11	12
Classified wrong	5	5	4
Accuracy [%]	68.75	68.75	75
FAR [%]	31.25	18.75	25
FRR [%]	0	12.5	0

CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	10	12	11
Classified wrong	6	4	5
Accuracy [%]	62.5	75	68.75
FAR [%]	18.75	12.5	6.25
FRR [%]	18.75	12.5	25

My CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	10	8	13
Classified wrong	6	8	3
Accuracy [%]	62.5	50	81.25
FAR [%]	12.5	43.75	12.5
FRR [%]	25	6.25	6.25

Dataset with only images with Red Light

Process image with wavelet transformation (bior2.4) and get horizontal, vertical and diagonal detail of image and get some characteristics from Gray Level Coorence Matrix - contrast, homogeneity, energy, correlation for these three results

vector - contrast for horizontal detail, homogeneity for horizontal detail, energy for horizontal detail, correlation for horizontal detail, contrast for vertical detail, homogeneity for vertical detail, energy for vertical detail, correlation for vertical detail, contrast for diagonal detail, homogeneity for diagonal detail, energy for diagonal detail, correlation for diagonal detail

	Trained	**Tested**
Live	17	8
Fake	17	8
Sum		

ANN:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	14	16	14
Classified wrong	2	0	2
Accuracy [%]	87.5	100	87.5
FAR [%]	12.5	0	6.25
FRR [%]	0	0	6.25

SVM:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	12	10	14
Classified wrong	4	6	2
Accuracy [%]	75	62.5	87.5
FAR [%]	25	37.5	6.25
FRR [%]	0	0	6.25

CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	15	13	14
Classified wrong	1	3	2
Accuracy [%]	93.75	81.25	87.5
FAR [%]	6.25	18.75	6.25

FRR [%]	0	0	6.25

My CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	14	12	14
Classified wrong	2	4	2
Accuracy [%]	87.5	75	87.5
FAR [%]	6.25	25	6.25
FRR [%]	6.25	0	6.25

Dataset with only images with All Lights

Process image with wavelet transformation (bior2.4) and get horizontal, vertical and diagonal detail of image and get some characteristics from Gray Level Coorence Matrix - contrast, homogeneity, energy, correlation for these three results

vector - contrast for horizontal detail, homogeneity for horizontal detail, energy for horizontal detail, correlation for horizontal detail, contrast for vertical detail, homogeneity for vertical detail, energy for vertical detail, correlation for vertical detail, contrast for diagonal detail, homogeneity for diagonal detail, energy for diagonal detail, correlation for diagonal detail

	Trained	**Tested**
Live	42	21
Fake	42	21
Sum		

ANN:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation

Classified right	39	35	33
Classified wrong	3	7	9
Accuracy [%]	92.85714285714286	83.33333333333333	78.57142857142857
FAR [%]	2.380952380952381	9.523809523809524	11.904761904761905
FRR [%]	4.761904761904762	7.142857142857143	9.523809523809524

SVM:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	34	31	31
Classified wrong	8	11	11
Accuracy [%]	80.95238095238095	73.80952380952381	73.80952380952381
FAR [%]	19.047619047619047	26.19047619047619	19.047619047619047
FRR [%]	0	0	7.142857142857143

CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	36	33	35
Classified wrong	6	9	7
Accuracy [%]	85.71428571428571	78.57142857142857	83.33333333333333
FAR [%]	9.523809523809524	9.523809523809524	9.523809523809524
FRR [%]	4.761904761904762	11.904761904761905	7.142857142857143

My CLF:

	Otsu segmentation	Adaptive Gaussian	Adaptive Mean

		Segmentation	Segmentation
Classified right	31	30	34
Classified wrong	11	12	8
Accuracy [%]	73.80952380952381	71.42857142857143	80.95238095238095
FAR [%]	26.19047619047619	9.523809523809524	14.285714285714286
FRR [%]	0	19.047619047619047	4.761904761904762

Dataset with only images with Blue Light

Process image with wavelet transformation (bior1.5) and get horizontal, vertical and diagonal detail of image and get some characteristics from Gray Level Coorence Matrix - contrast, homogeneity, energy, correlation for these three results

vector - contrast for horizontal detail, homogeneity for horizontal detail, energy for horizontal detail, correlation for horizontal detail, contrast for vertical detail, homogeneity for vertical detail, energy for vertical detail, correlation for vertical detail, contrast for diagonal detail, homogeneity for diagonal detail, energy for diagonal detail, correlation for diagonal detail

	Trained	**Tested**
Live	19	10
Fake	19	10
Sum		

ANN:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	16	13	13
Classified wrong	4	7	7
Accuracy [%]	80	65	65

FAR [%]	15	20	25
FRR [%]	5	15	10

SVM:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	15	15	14
Classified wrong	5	5	6
Accuracy [%]	75	75	70
FAR [%]	20	25	30
FRR [%]	5	0	0

CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	16	15	14
Classified wrong	4	5	6
Accuracy [%]	80	75	70
FAR [%]	10	15	5
FRR [%]	10	10	25

My CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	15	14	19
Classified wrong	5	6	1
Accuracy [%]	75	70	95
FAR [%]	15	20	5

FRR [%]	10	10	0

Dataset with only images with Green Light

Process image with wavelet transformation (bior1.5) and get horizontal, vertical and diagonal detail of image and get some characteristics from Gray Level Coorence Matrix - contrast, homogeneity, energy, correlation for these three results

vector - contrast for horizontal detail, homogeneity for horizontal detail, energy for horizontal detail, correlation for horizontal detail, contrast for vertical detail, homogeneity for vertical detail, energy for vertical detail, correlation for vertical detail, contrast for diagonal detail, homogeneity for diagonal detail, energy for diagonal detail, correlation for diagonal detail

	Trained	**Tested**
Live	16	8
Fake	16	8
Sum		

ANN:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	12	12	11
Classified wrong	4	4	5
Accuracy [%]	75	75	68.75
FAR [%]	12.5	6.25	18.75
FRR [%]	12.5	18.75	12.5

SVM:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation

Classified right	11	12	13
Classified wrong	5	4	3
Accuracy [%]	68.75	75	81.25
FAR [%]	31.25	6.25	6.25
FRR [%]	0	18.75	12.5

CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	11	14	14
Classified wrong	5	2	2
Accuracy [%]	68.75	87.5	87.5
FAR [%]	12.5	0	6.25
FRR [%]	18.75	12.5	6.25

My CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	9	11	12
Classified wrong	7	5	4
Accuracy [%]	56.25	68.75	75
FAR [%]	31.25	31.25	18.75
FRR [%]	12.5	0	6.25

Dataset with only images with Red Light

Process image with wavelet transformation (bior1.5) and get horizontal, vertical and diagonal detail of image and get some characteristics from Gray Level Coorence Matrix - contrast, homogeneity, energy, correlation for these three results

vector - contrast for horizontal detail, homogeneity for horizontal detail, energy for horizontal detail, correlation for horizontal detail, contrast for vertical detail, homogeneity for vertical detail, energy for vertical detail, correlation for vertical detail, contrast for diagonal detail, homogeneity for diagonal detail, energy for diagonal detail, correlation for diagonal detail

	Trained	**Tested**
Live	17	8
Fake	17	8
Sum		

ANN:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	11	15	14
Classified wrong	5	1	2
Accuracy [%]	68.75	93.75	87.5
FAR [%]	18.75	6.25	12.5
FRR [%]	12.5	0	0

SVM:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	11	11	11
Classified wrong	5	5	5
Accuracy [%]	68.75	68.75	68.75
FAR [%]	31.25	31.25	31.25
FRR [%]	0	0	0

CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	9	14	12
Classified wrong	7	2	4
Accuracy [%]	56.25	87.5	75
FAR [%]	31.25	12.5	25
FRR [%]	12.5	0	0

My CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	11	14	12
Classified wrong	5	2	4
Accuracy [%]	68.75	87.5	75
FAR [%]	25	12.5	25
FRR [%]	6.25	0	0

Dataset with only images with All Lights

Process image with wavelet transformation (bior1.5) and get horizontal, vertical and diagonal detail of image and get some characteristics from Gray Level Coorence Matrix - contrast, homogeneity, energy, correlation for these three results

vector - contrast for horizontal detail, homogeneity for horizontal detail, energy for horizontal detail, correlation for horizontal detail, contrast for vertical detail, homogeneity for vertical detail, energy for vertical detail, correlation for vertical detail, contrast for diagonal detail, homogeneity for diagonal detail, energy for diagonal detail, correlation for diagonal detail

	Trained	**Tested**
Live	42	21

Fake	42	21
Sum		

ANN:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	35	35	34
Classified wrong	7	7	8
Accuracy [%]	83.33333333333333	83.33333333333333	80.95238095238095
FAR [%]	9.523809523809524	9.523809523809524	11.904761904761905
FRR [%]	7.142857142857143	7.142857142857143	7.142857142857143

SVM:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	34	33	30
Classified wrong	8	9	12
Accuracy [%]	80.95238095238095	78.57142857142857	71.42857142857143
FAR [%]	19.047619047619047	16.666666666666668	19.047619047619047
FRR [%]	0	4.761904761904762	9.523809523809524

CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	37	34	30

Classified wrong	5	8	12
Accuracy [%]	88.0952380952381	80.95238095238095	71.42857142857143
FAR [%]	9.523809523809524	14.285714285714286	19.047619047619047
FRR [%]	2.380952380952381	4.761904761904762	9.523809523809524

My CLF:

	Otsu segmentation	Adaptive Gaussian Segmentation	Adaptive Mean Segmentation
Classified right	36	32	32
Classified wrong	6	10	10
Accuracy [%]	85.71428571428571	76.19047619047619	76.19047619047619
FAR [%]	9.523809523809524	21.428571428571427	21.428571428571427
FRR [%]	4.761904761904762	2.380952380952381	2.380952380952381