Multi-window Report

In this document you will find the results from training our Neural Network on the same dataset but re-organized in different ways.

All of the following results are classification reports on the test set, and with a threshold of 0.1

Definitions:

Window Size: The size of the window that the model will be engulfed in

Ratio: Ratio is the amount of non-flares to flares we will have

Window: 20

Ratio: 1:1

rado: 1.1				
	precision	recall	f1-score	support
9	0.93	0.95	0.94	1136
1	0.95	0.93	0.94	1136
accuracy			0.94	2272
macro avg	0.94	0.94	0.94	2272
weighted avg	0.94	0.94	0.94	2272
Ratio 2:1				
	precision	recall	f1-score	support
Θ	0.00	0 (0	0.57	2272
	0.99	0.40	0.57	2272
1	0.45	0.99	0.62	1136
accuracy			0.60	3408
macro avg	0.72	0.70	0.60	3408
weighted avg	0.81	0.60	0.59	3408

Ratio 3:1

	precision	recall	f1-score	support
0	0.96	1.00	0.98	3408
1	1.00	0.87	0.93	1136
accuracy			0.97	4544
macro avg	0.98	0.93	0.95	4544
weighted avg	0.97	0.97	0.97	4544

Ratio 4:1

	precision	recall	f1-score	support
9	0.98	0.99	0.99	4544
1	0.97	0.93	0.95	1136
accuracy			0.98	5680
macro avg	0.98	0.96	0.97	5680
weighted avg	0.98	0.98	0.98	5680

Ratio 5:1

	precision	recall	f1-score	support
0	0.98	1.00	0.99	5680
1	0.98	0.92	0.95	1136
accuracy			0.98	6816
macro avg	0.98	0.96	0.97	6816
weighted avg	0.98	0.98	0.98	6816

Window: 30

Ratio 1:1

	precision	recall	f1-score	support
0	0.96	0.72	0.82	1136
1	0.78	0.97	0.86	1136
accuracy			0.85	2272
macro avg	0.87	0.85	0.84	2272
weighted avg	0.87	0.85	0.84	2272
Ratio 2:1				
	precision	recall	f1-score	support
0	0.97	1.00	0.98	2272

0.99

0.98

0.98

0.94

0.97

0.98

0.97

0.98

0.97

0.98

1136

3408

3408

3408

Ratio 3:1

1

accuracy

macro avg

weighted avg

	precision	recall	f1-score	support
0	0.98	0.80	0.88	3408
1	0.61	0.95	0.75	1136
accuracy			0.84	4544
macro avg	0.80	0.88	0.81	4544
weighted avg	0.89	0.84	0.85	4544

Ratio 4:1

support	f1-score	recall	precision	
4544	0.99	0.99	0.99	0
1136	0.96	0.95	0.97	1
5680	0.98			accuracy
5680	0.98	0.97	0.98	macro avg
5680	0.98	0.98	0.98	weighted avg

Ratio 5:1

	precision	recall	f1-score	support
Θ	0.99	0.97	0.98	5680
1	0.85	0.97	0.91	1136
accuracy			0.97	6816
macro avg	0.92	0.97	0.94	6816
weighted avg	0.97	0.97	0.97	6816

Window: 50

Ratio 1:1

	precision	recall	f1-score	support
9	0.94	0.95	0.94	1136
1	0.95	0.94	0.94	1136
accuracy			0.94	2272
macro avg	0.94	0.94	0.94	2272
weighted avg	0.94	0.94	0.94	2272

Ratio 2:1

	рі	recision	recall	f1-score	support
0 1		0.95 1.00	1.00 0.89	0.97 0.94	2272 1136
accuracy macro avg		0.97	0.95	0.96 0.96	3408 3408
weighted avg		0.97	0.96	0.96	3408
Ratio 3:1					
		precision	recal	l f1-score	support
	0	0.98	1.0	0.99	3408

0.99

0.98

0.98

0.95

0.97

0.98

0.97

0.98

0.98

0.98

1136

4544

4544

4544

Ratio 4:1

1

accuracy

macro avg

weighted avg

	precision	recall	f1-score	support
Θ	0.99	0.98	0.99	4544
1	0.93	0.96	0.94	1136
accuracy			0.98	5680
macro avg	0.96	0.97	0.96	5680
weighted avg	0.98	0.98	0.98	5680

Ratio 5:1

	precision	recall	f1-score	support
Θ	0.99	0.99	0.99	5680
1	0.97	0.94	0.95	1136
accuracy			0.98	6816
macro avg	0.98	0.97	0.97	6816
weighted avg	0.98	0.98	0.98	6816

Window 70:

Ratio 4:1 (THRESHHOLD 0.07)

support	f1-score	recall	precision	
4544	0.99	1.00	0.99	0
1136	0.97	0.96	0.98	1
F./ 00	0.00			
5680	0.99	0.00	0.00	accuracy
5680	0.98	0.98	0.98	macro avg
5680	0.99	0.99	0.99	weighted avg

Ratio 5:1				
	precision	recall	f1-score	support
0	1.00	0.98	0.99	5680
1	0.92	0.98	0.95	1136
accuracy			0.98	6816
macro avg	0.96	0.98	0.97	6816
weighted avg	0.98	0.98	0.98	6816

Window 80:

Ratio 1:1

	precision	recall	f1-score	support
Θ	0.97	0.32	0.48	1136
1	0.59	0.99	0.74	1136
accuracy			0.65	2272
macro avg	0.78	0.65	0.61	2272
weighted avg	0.78	0.65	0.61	2272

Ratio 2:1

precision	recall	f1-score	support
0.98	0.97	0.97	2272
0.94	0.96	0.95	1136
		0.97	3408
0.96	0.97	0.96	3408
0.97	0.97	0.97	3408
	0.98 0.94 0.96	0.98 0.97 0.94 0.96 0.96 0.97	0.98 0.97 0.97 0.94 0.96 0.95 0.97 0.96 0.97 0.96

Ratio 3:1

			-	
	precision	recall	f1-score	support
9	0.99	0.97	0.98	3408
1	0.91	0.97	0.94	1136
accuracy			0.97	4544
macro avg	0.95	0.97	0.96	4544
weighted avg	0.97	0.97	0.97	4544

Ratio 4:1

	precision	recall	f1-score	support
9	0.99	1.00	0.99	4544
1	0.98	0.95	0.96	1136
accuracy			0.99	5680
macro avg	0.98	0.97	0.98	5680
weighted avg	0.99	0.99	0.99	5680

Ratio 5:1

,				,
	precision	recall	f1-score	support
0	0.99	1.00	0.99	5680
1	0.99	0.95	0.97	1136
accuracy			0.99	6816
macro avg	0.99	0.97	0.98	6816
weighted avg	0.99	0.99	0.99	6816

Window 100:

Ratio 1:1

	precision	recall	f1-score	support
9	0.92	1.00	0.96	1136
1	1.00	0.91	0.95	1136
accuracy			0.96	2272
macro avg	0.96	0.96	0.96	2272
weighted avg	0.96	0.96	0.96	2272

Ratio 2:1

support	f1-score	recall	precision	
2272	0.98	1.00	0.96	0
1136	0.95	0.91	1.00	1
3408	0.97			accuracy
3408	0.97	0.95	0.98	macro avg
3408	0.97	0.97	0.97	weighted avg

Ratio 3:1

	precision	recall	f1-score	support
0	0.98	1.00	0.99	3408
1	0.99	0.93	0.96	1136
accuracy			0.98	4544
macro avg	0.98	0.97	0.97	4544
weighted avg	0.98	0.98	0.98	4544

Ratio 4:1

	precision	recall	f1-score	support
0	0.99	0.95	0.97	4544
1	0.83	0.94	0.88	1136
accuracy			0.95	5680
macro avg	0.91	0.95	0.92	5680
weighted avg	0.95	0.95	0.95	5680

Ratio 5:1

	precision	recall	f1-score	support
0	0.99	0.99	0.99	5680
1	0.97	0.95	0.96	1136
accuracy			0.99	6816
macro avg	0.98	0.97	0.97	6816
weighted avg	0.99	0.99	0.99	6816

Window: 120:

Ratio 1:1

	precision	recall	f1-score	support
Θ	0.95	0.78	0.86	1136
1	0.81	0.96	0.88	1136
				0000
accuracy			0.87	2272
macro avg	0.88	0.87	0.87	2272
weighted avg	0.88	0.87	0.87	2272

Ratio 2:1

	precision	recall	f1-score	support
Θ	0.98	0.96	0.97	2272
1	0.93	0.96	0.94	1136
accuracy			0.96	3408
macro avg	0.95	0.96	0.96	3408
weighted avg	0.96	0.96	0.96	3408

Ratio 3:1

	precision	recall	f1-score	support
Θ	0.99	0.99	0.99	3408
1	0.97	0.97	0.97	1136
accuracy			0.98	4544
macro avg	0.98	0.98	0.98	4544
weighted avg	0.98	0.98	0.98	4544
Ratio 4:1				
	precision	recall	f1-score	support
Θ	0.99	0.99	0.99	4544
1	0.97	0.95	0.96	1136
accuracy			0.98	5680
macro avg	0.98	0.97	0.97	5680
weighted avg	0.98	0.98	0.98	5680
Ratio 5:1				
	precision	recal	l f1-score	support
	0 0.99	0.9	9 0.99	5680
	1 0.94	0.9	4 0.94	1136
accurac	у		0.98	6816
macro av	/g 0.96	0.9	6 0.96	6816

weighted avg 0.98 0.98

0.98

6816

Window: 150

Ratio 1:1

		precision	recall	f1-score	support
	0	0.97	0.85	0.91	1136
	1	0.87	0.97	0.92	1136
accur	201			0.91	2272
		0.00	0.01		
macro	_	0.92	0.91	0.91	2272
weighted	avg	0.92	0.91	0.91	2272
Ratio 2:1				_	
		precision	recall	f1-score	support
	Θ	0.98	0.91	0.94	2272
	1	0.84	0.97	0.90	1136
accura	acy			0.93	3408
macro		0.91	0.94	0.92	3408
weighted	_	0.93	0.93	0.93	3408
,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	_				
Ratio 3:1					
-		precision	recall	f1-score	support
	Θ	0.99	0.98	0.99	3408
	1	0.95	0.97	0.96	1136
	1	0.75	0.97	0.90	1130
accura	су			0.98	4544
macro av		0.97	0.98	0.97	4544
weighted a	_	0.98	0.98	0.98	4544
	-				

Ratio 4:1

11410 4.1	precision	recall	f1-score	support
Θ	0.00	0.99	0.00	/F//
U	0.99	0.99	0.99	4544
1	0.96	0.97	0.97	1136
accuracy			0.99	5680
macro avg	0.98	0.98	0.98	5680
weighted avg	0.99	0.99	0.99	5680
Ratio 5:1				
	precision	recall	f1-score	support
	0 0.99	1.00	0.99	5680
	1 0.99	0.96	0.97	1136
accurac	у		0.99	6816
macro av	g 0.99	0.98	0.98	6816
weighted av	g 0.99	0.99	0.99	6816