

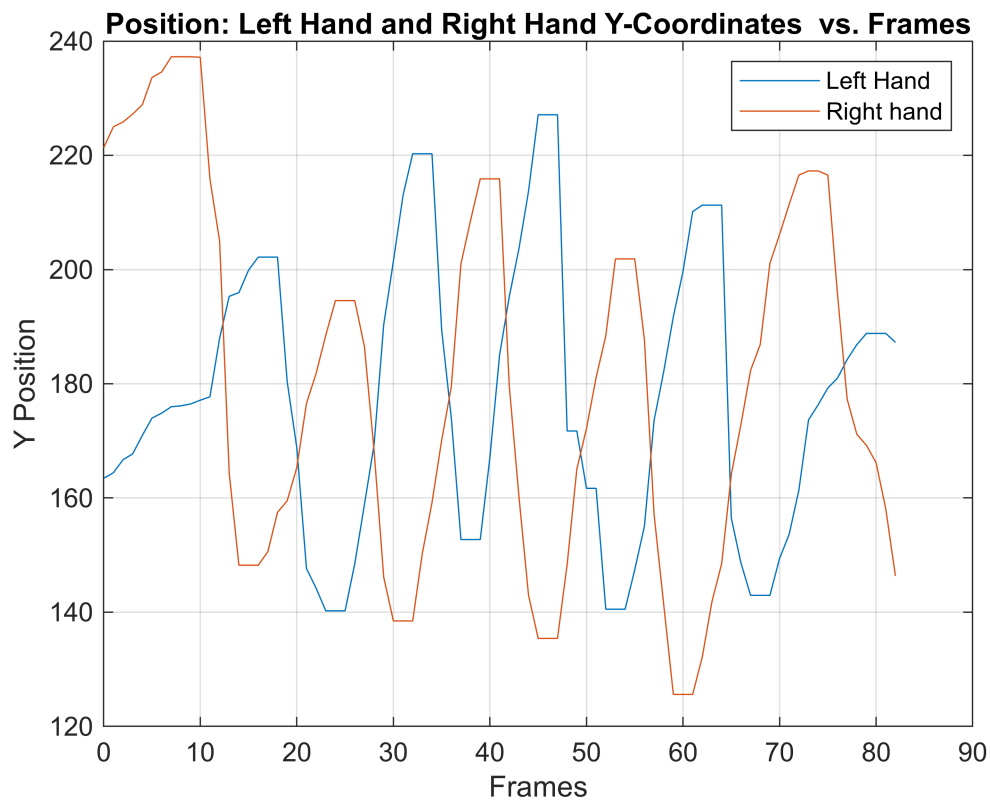
```
%multiple files run below:
```

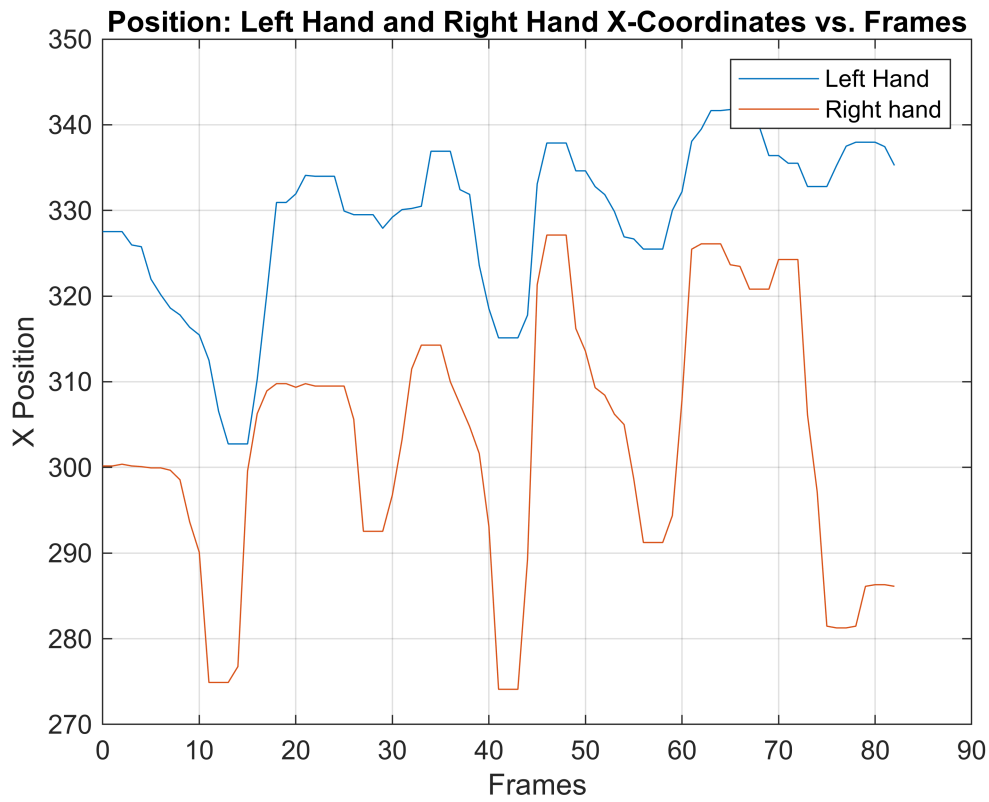
```
%folder = uigetdir();  
%filenames = File_finder_v2 (folder);
```

```
%for i = 3:length(filenames)  
    % Path = (filenames {i});  
    % disp(Path)  
    % data_analyzer_v5(Path);  
%end
```

```
%For one file, run below:
```

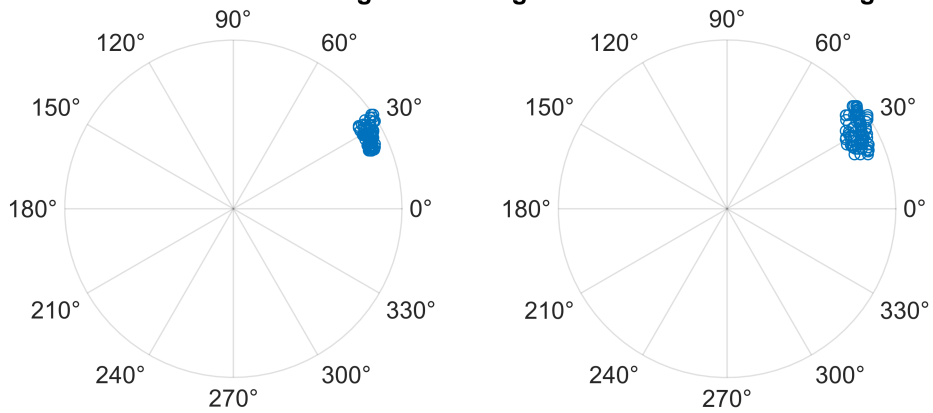
```
data_analyzer_v8('C:/Users/mikek/Desktop/  
July13.23_5_HeidiOwen_Raw_1.MP4DLC_resnet50_String_model_2Jul3shuffle1_101500_filter  
ed.csv')
```

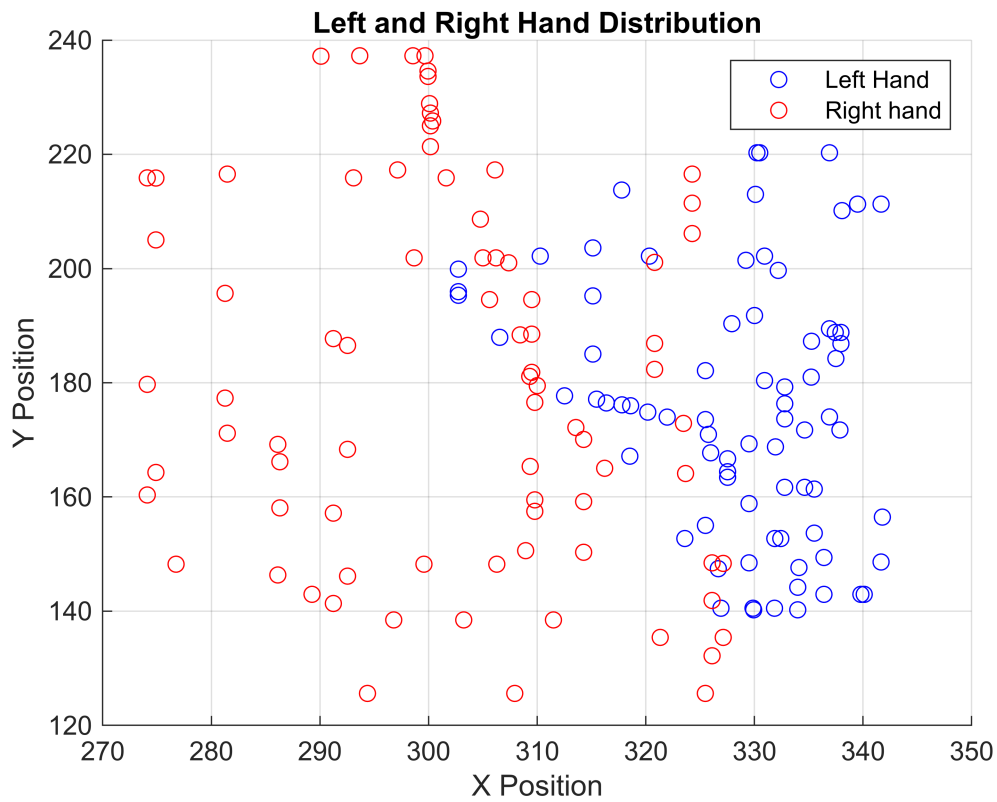
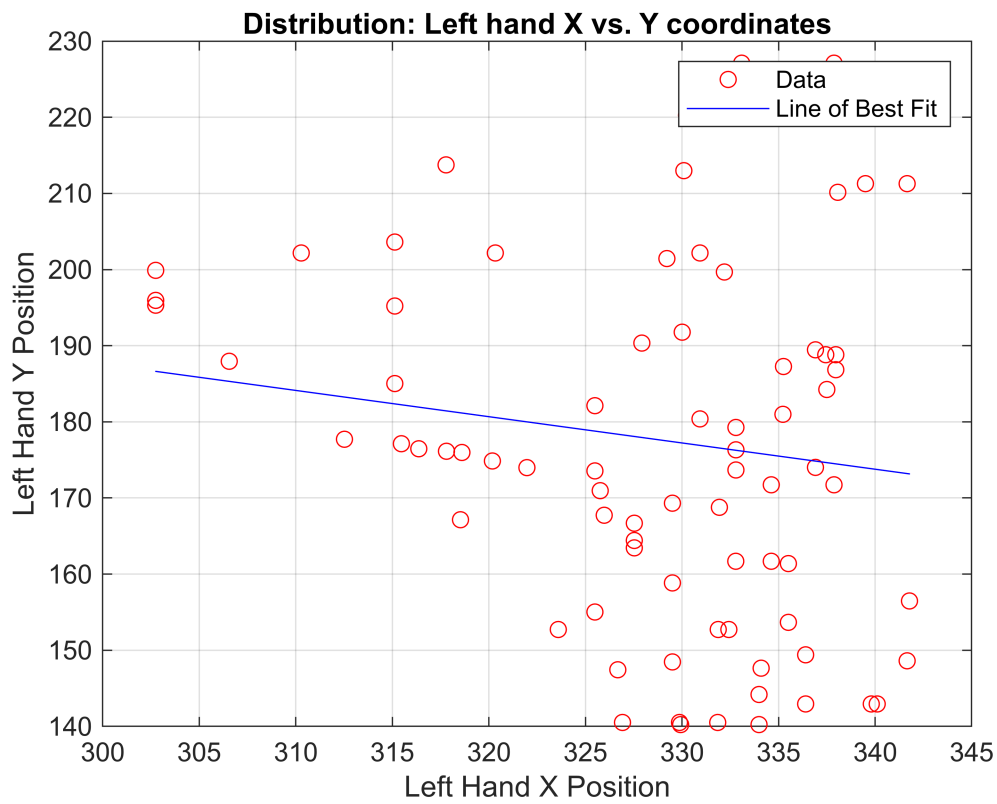


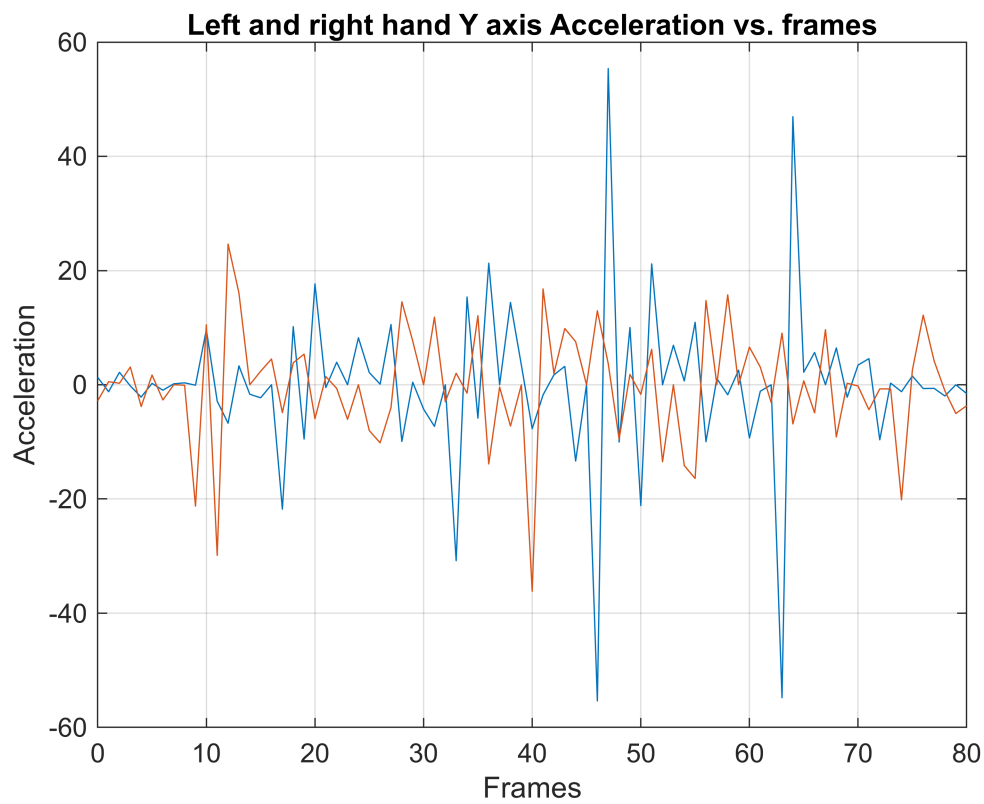
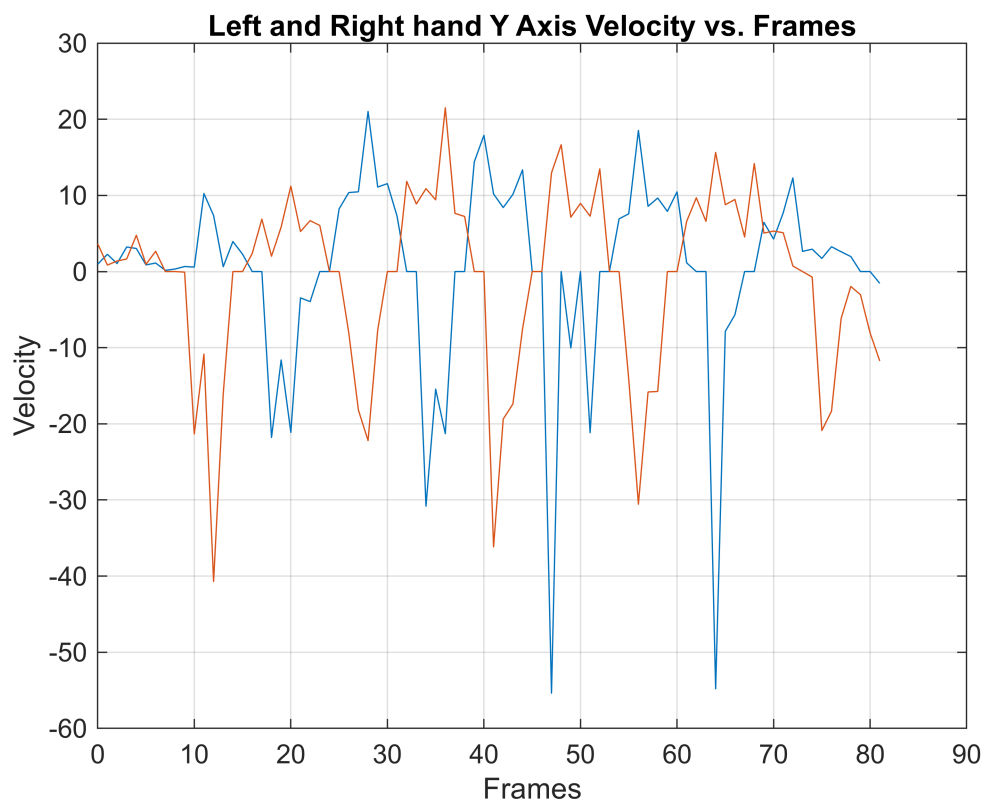


Left Hand - Main Direction: 0.493571 radians, Spread: 0.998219  
 Right Hand - Main Direction: 0.535058 radians, Spread: 0.996367

**Left Hand Directions and Magnitudes    Right Hand Directions and Magnitudes**





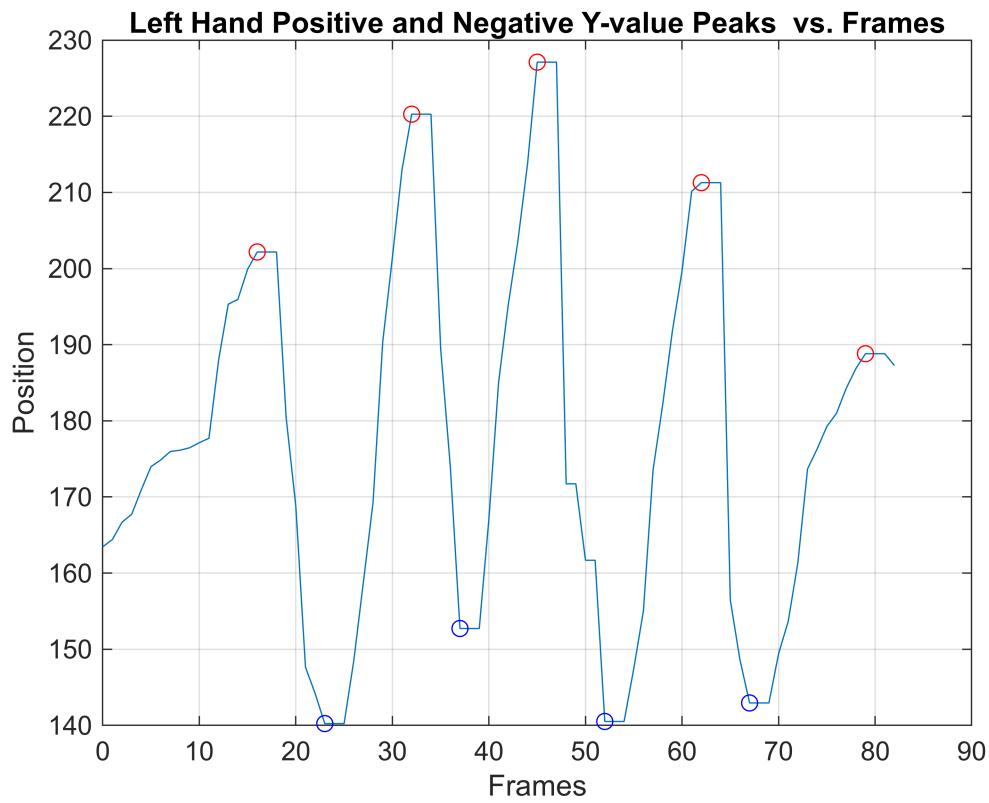


Correlation between Left hand Y position and right hand Y position

1.0000	-0.6077
-0.6077	1.0000

Correlation between Left hand X position and right hand X position

1.0000    0.6192  
0.6192    1.0000



All positive and negative peak Frame (x) location (number of cycles):

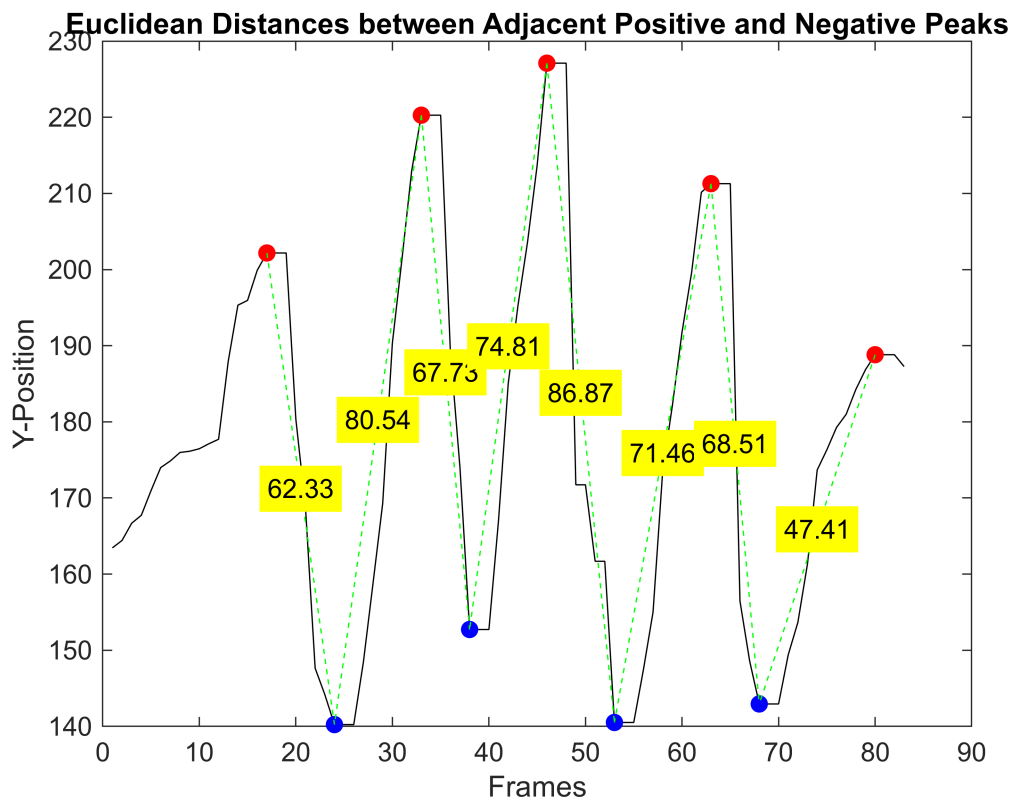
16  
23  
32  
37  
45  
52  
62  
67  
79

Distances between all positive and negative Peaks (cycle length:

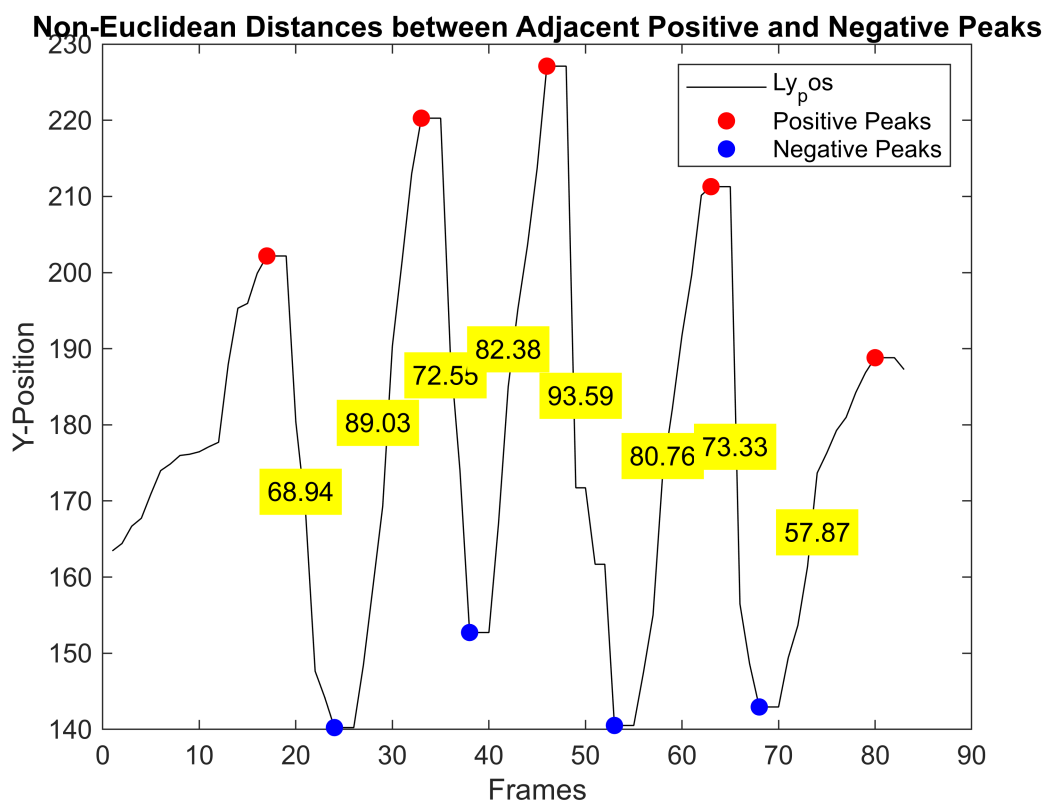
7  
9  
5  
8  
7  
10  
5  
12

Average distance between all positive and negative peaks (average cycle length:)

7.8750



Euclidean Distances:  
62.3300 80.5374 67.7313 74.8077 86.8690 71.4645 68.5142 47.4104



Ratios of Euclidean to Non-Euclidean Distances:  
0.9042  
0.9046

0.9336  
0.9081  
0.9282  
0.8849  
0.9343  
0.8193

Average Ratio of euclidean:non-euclidean: 0.90215

List of peak speeds:

Peak Speed 1: 8.85  
Peak Speed 2: 8.89  
Peak Speed 3: 13.51  
Peak Speed 4: 9.30  
Peak Speed 5: 12.37  
Peak Speed 6: 7.08  
Peak Speed 7: 13.67  
Peak Speed 8: 3.82

Correlation between Euclidean distances and peak speeds: 0.54941

ans = 83x13

0	327.5293	163.4489	0.9430	300.1697	221.3400	0.8751	237.6796	...
1.0000	327.5293	164.4205	0.9630	300.1697	224.9950	0.7930	237.7880	
2.0000	327.5293	166.6860	0.9685	300.3762	225.8424	0.8322	237.7880	
3.0000	325.9701	167.7320	0.9727	300.1697	227.2236	0.8844	237.7880	
4.0000	325.7634	170.9598	0.9772	300.0901	228.8751	0.8712	237.6767	
5.0000	321.9679	173.9873	0.9585	299.9472	233.6399	0.8629	237.6767	
6.0000	320.1800	174.8594	0.9299	299.9472	234.5927	0.9045	237.6767	
7.0000	318.6017	175.9752	0.9273	299.6710	237.2588	0.9135	237.6767	
8.0000	317.8011	176.1366	0.9161	298.5572	237.2588	0.9179	237.6767	
9.0000	316.3683	176.4633	0.9322	293.6636	237.2588	0.9562	237.6951	
:								
:								