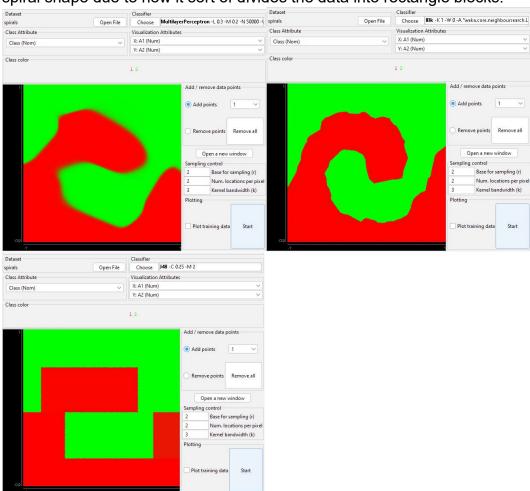Ex 1:

Default	36/32 = 52%
8 hiddenlayers	61/7 = 89.7 %
10 hiddenlayers	64/4 = 94 %
20 hiddenlayers 5000 iter	66/2 = 97 %
10 hiddenlayers 50000 iter	68/0 = 100 %
8 hiddenlayers 50000 iter	68/0 = 100 %
7 hiddenlayers 50000 iter	67/1 = 98 %

Ex 2:

1. 100% default 1NN
2. 88% default J48
3. The MLP classifier can represent the spiral shape. The 1NN classifier can represent any continuous shape due to how it connects the points to each other. However, the decision tree is incapable of representing a continuous spiral shape due to how it sort of divides the data into rectangle blocks.

Ex 4:

The algorithm mostly ignores rotation, color changes (to an extent), and location in the image (cropping), but adding blur kills it. SIFT seems to mostly rely on sharp edges.

Ex 5:

1.

17 S						
16	27 VP					
15 S,NP	26	37 VP,NP				
14	25 VP	36	47 PP			
13 S	24	35 VP	46	57 NP		
12 S	23 VP	34	45 PP	56	67 PP	
11 N,NP	22 V,VP	33 N,NP	44 P	55 N,NP	66 P	77 N,NP
Google	bought	DeepMin	for	$500M	in	January

2. ?