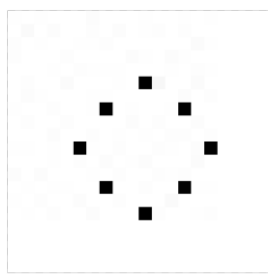
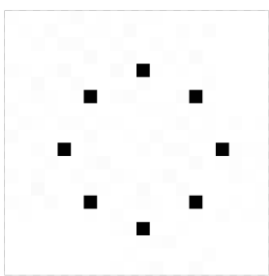
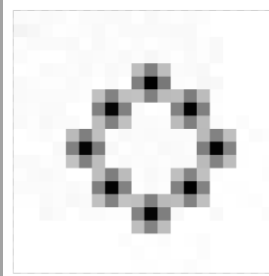
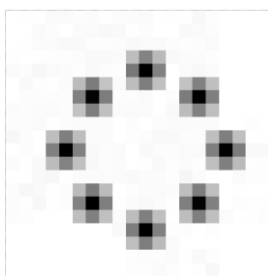


Horn-Schunk Algorithm simple visual results

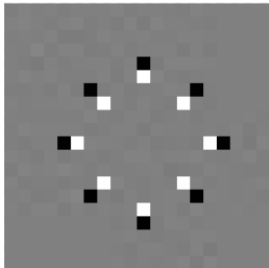
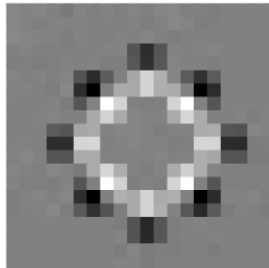
Below are visual results of using Horn-Schunk algorithm to compute optical flow between two frames containing simple optical motion of black pixels arranged in a circular pattern moving radially outward from frame_1 to frame_2.

1. Two consecutive frames .i.e., $I(x,y,t)$ and $I(x,y,t+1)$

Before preprocessing		After preprocessing	
frame_1	frame_2	frame_1	frame_2
			

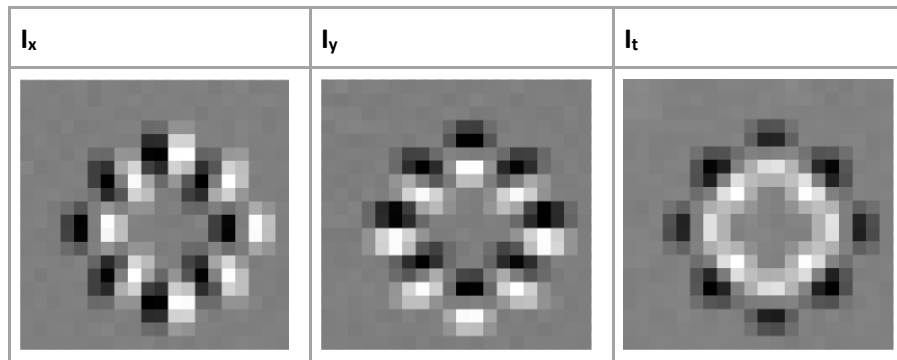
aside:

Prior and post-preprocessing differences between the frames ($frame_2 - frame_1$).

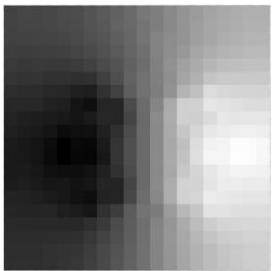
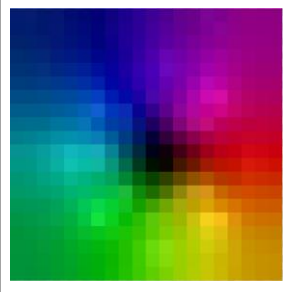
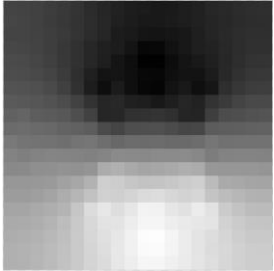
Before preprocessing	After preprocessing
	

2. Computing Optical Flow

- Computing optical flow involves working with Image gradients (I_x , I_y , I_t)



- Using **Horn-Schunk** Algorithm, computed flow components u and v looks like the following

Separate Component form		Color encoded form
u		
v		

note: the color code is computed according to the following scheme

