

## TP 2 - SIFTs and Moravec points

### 1. Tests on SIFTs

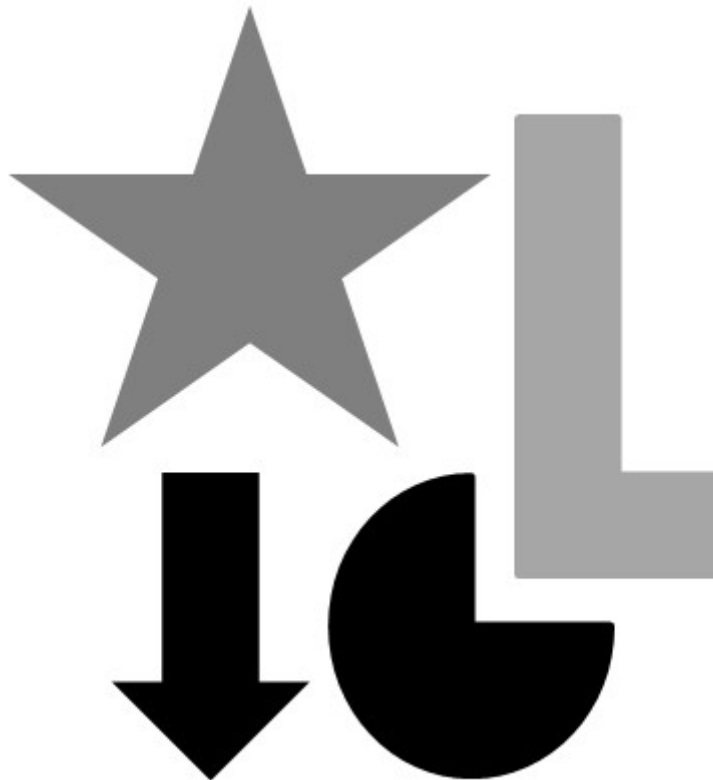
Download, install and test the matlab version of the code available at this link:

<http://www.cs.ubc.ca/~lowe/keypoints/>

([local copy](#))

Select images from the web highlighting the properties and limitations of this tool. Give at least 2 illustrations of results.

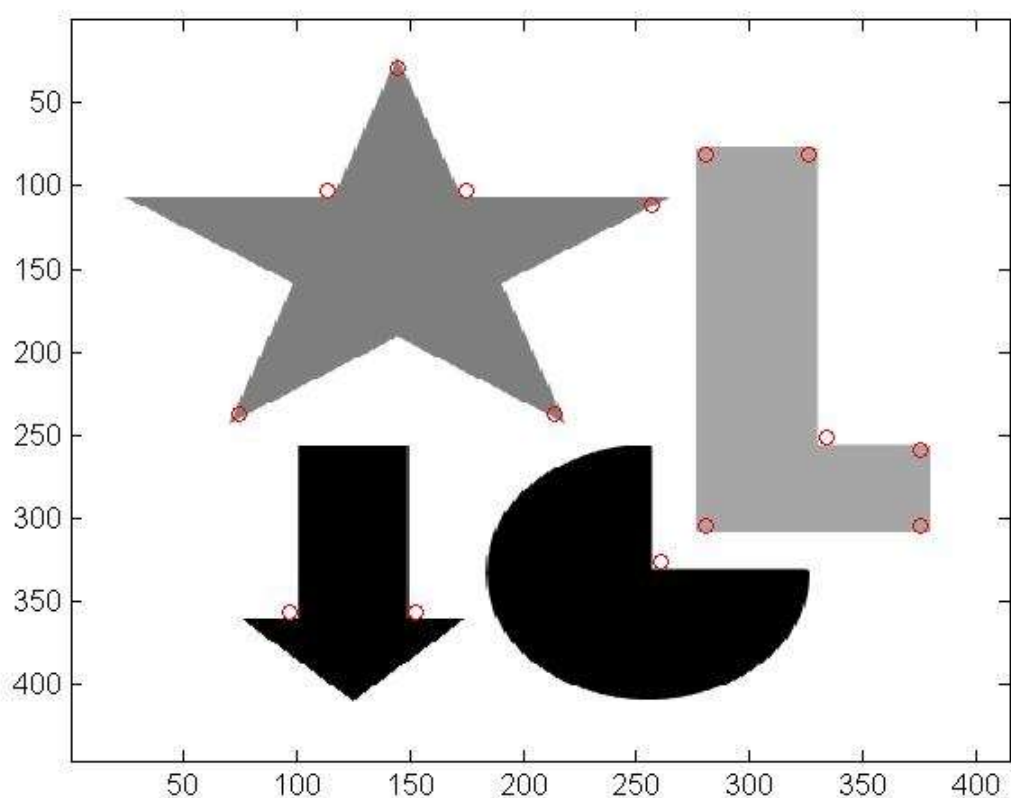
### 2. Moravec's points



Apply the Moravec method to the above image. The saliency function  $S_M$  will be evaluated at each point after translation of an 11x11 window of pixels into (a,b) such that a and b take their values in the set  $\{-5,-3,-1,1,3,5\}$ . **Give an image identifying the position of the detected points of interest and their number.**

**Study the influence of the size of the window defining the neighborhood of a pixel on the number of extracted points of interest.**

Example of a possible result:

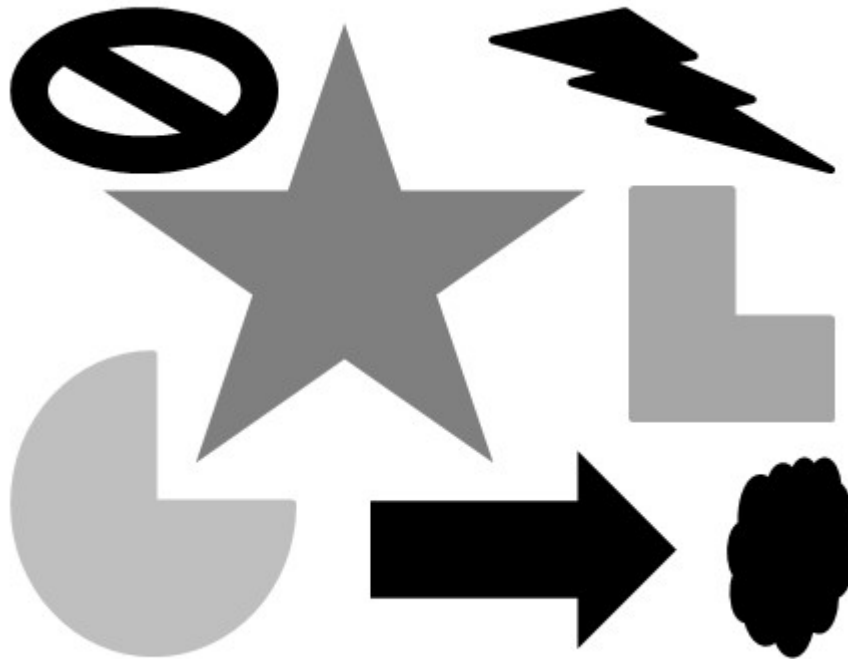


Give the points of interest obtained on the images selected in 1 of this document.

### 3. LBP

Implement an algorithm to extract the LBP descriptor computed on 24 neighbors for each point of interest. Store the result in an table. **What values do you obtain for the points in the image given in 2?**

## 4. Matching



We compare the descriptors obtained for the first image in this document with those obtained on the image above. We will use a Hamming distance for that. **After determining a suitable decision threshold, how many matches do you obtain between these two images ?**

**Propose a display of the result where the 2 images are presented simultaneously on the screen and where the matches are shown as a line connecting the 2 points concerned.**