

Before running any code, please download the code in [Chan-Vese Active Contours.zip](https://sites.google.com/site/rexstrieofimageprocessing/chan-vese-active-contours/matlabcodesforactivecontours) from

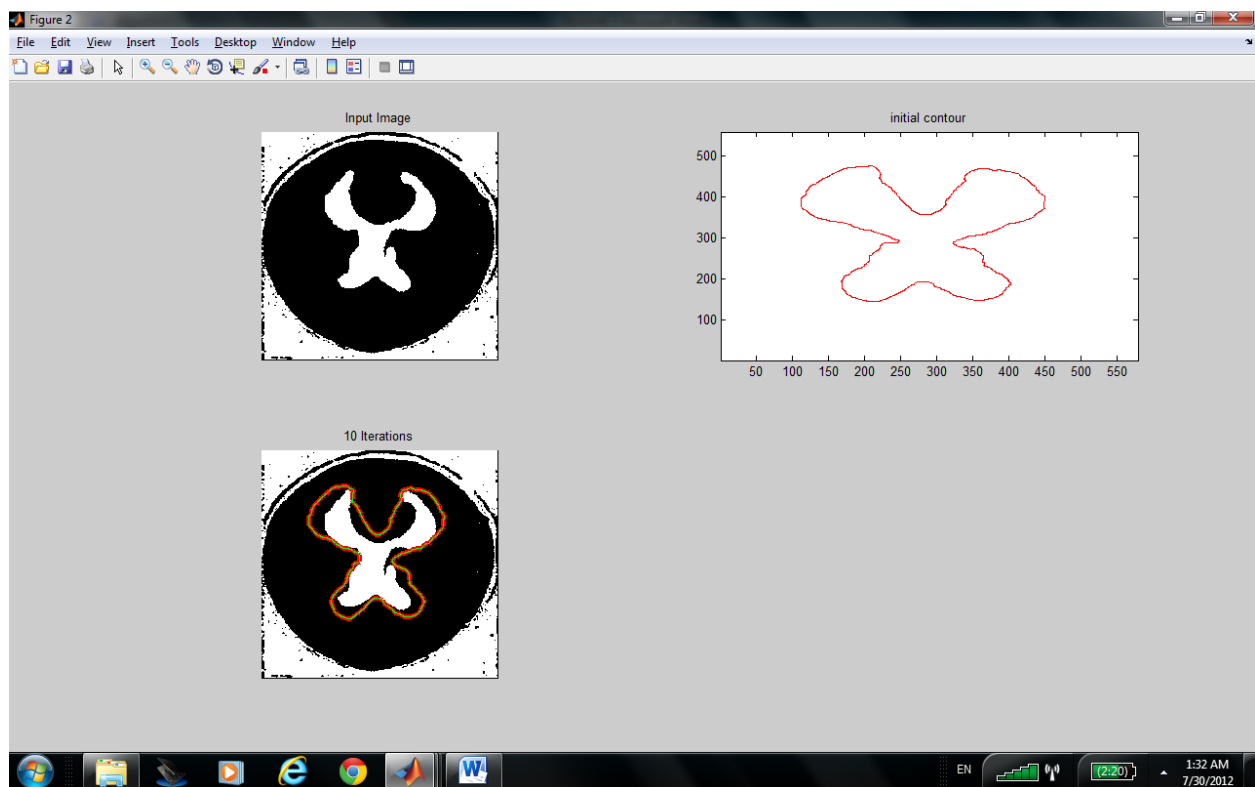
<https://sites.google.com/site/rexstrieofimageprocessing/chan-vese-active-contours/matlabcodesforactivecontours>

and put it in this directory. Also, place brain images in this directory as well.

To obtain the boundary vertices from images, run script.m with appropriate iteration number. In the script.m, there are four functions.

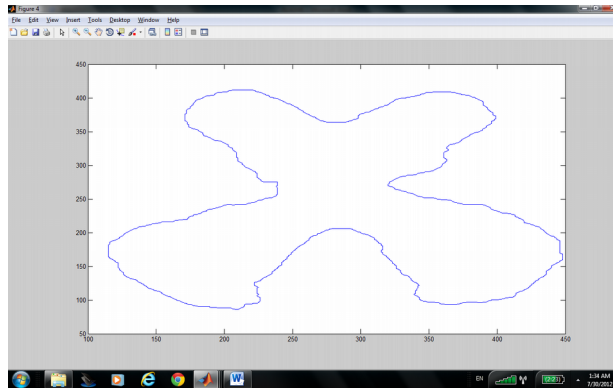
For example, when we want to obtain the boundary vertices after 10<sup>th</sup> iteration of the level set method, set up the iteration number to 10 and run test\_lsm.m.

Then, you will see the image:

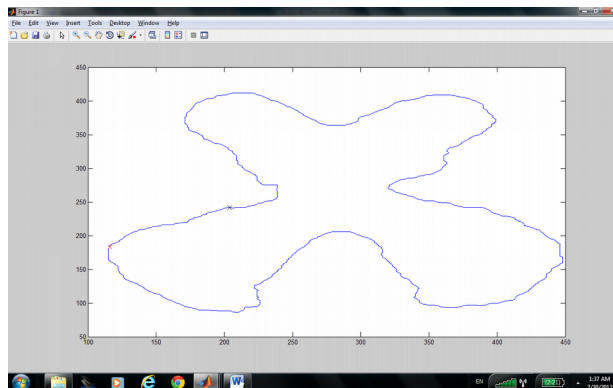


This image shows the input image(target image), initial contour (obtained from the pre-treatment image), and the evolution results.

The obtained boundary contour is shown :

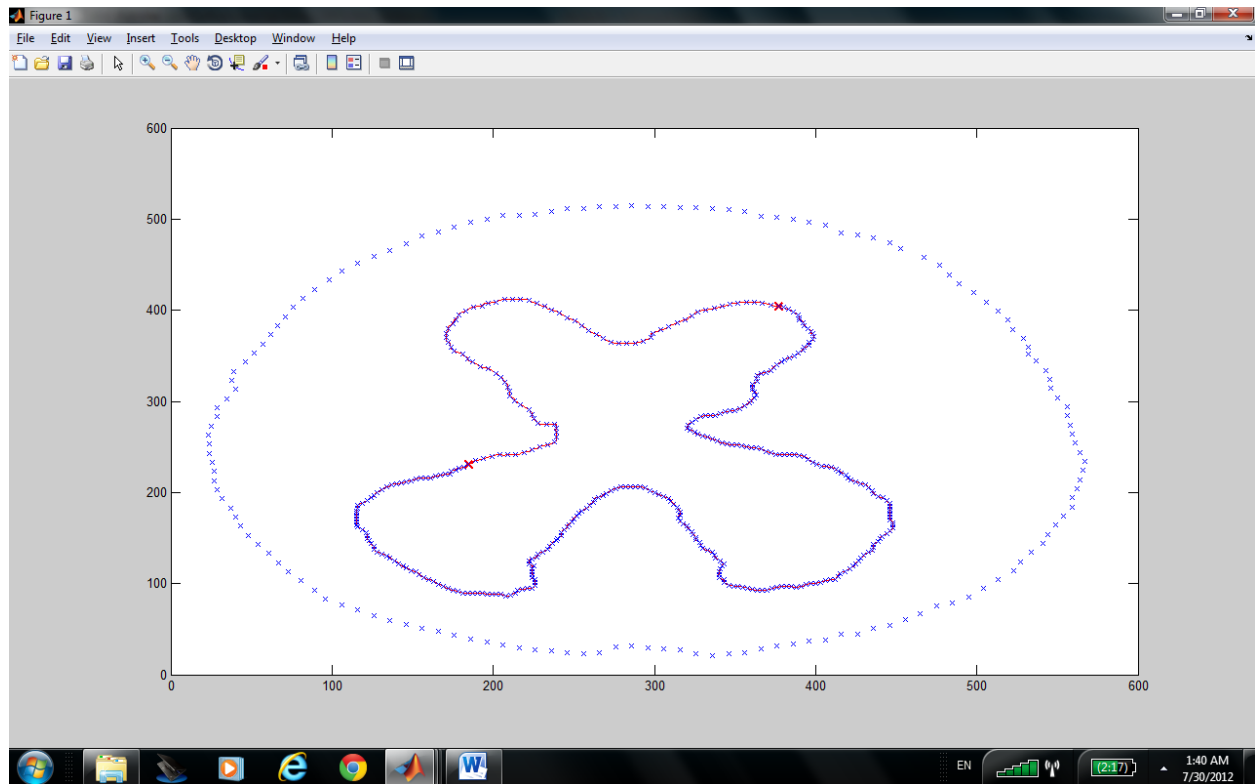


And then, with the boundary contour, we have to generate the mesh file. To do that, run `post_process_contour.m`.



The black mark represents the starting point and the red mark represents the 100<sup>th</sup> point.

After running the above function, finally, we have to run `initial_contour.m` to get the `.poly` file.



The poly file is named “init\_to\_inter\_lsm\_10\_boundary.poly” and stored. By using this file as a target mesh boundary, mesh warping process with FEMWARP will be processed.

For more information about this project, see the following website:

[https://people.eecs.ku.edu/~shontz/nsf\\_career\\_project.html](https://people.eecs.ku.edu/~shontz/nsf_career_project.html)