

CSE5999 Computer Vision Thesis Report 02

What I did this week:

- 1) Add some new test images
- 2) Try some cluster algorithms to isolate each object from the entire scene. And then use the Hough transform to each cluster to find the line.

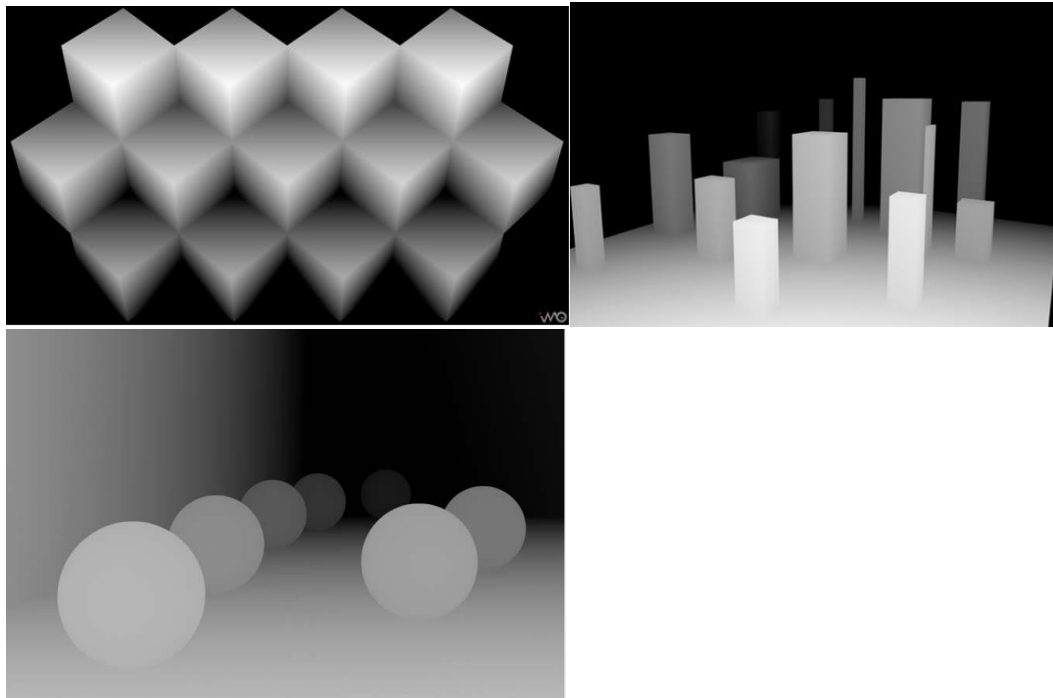
K-means algorithm and DBSCAN algorithm, but the k-means algorithm result is not good enough, and the density based algorithm is cost too much time on Matlab

- 3) Add the project to GitHub, include Matlab version. Page:
<https://github.com/zxyinz/ComputerVisionThesis>

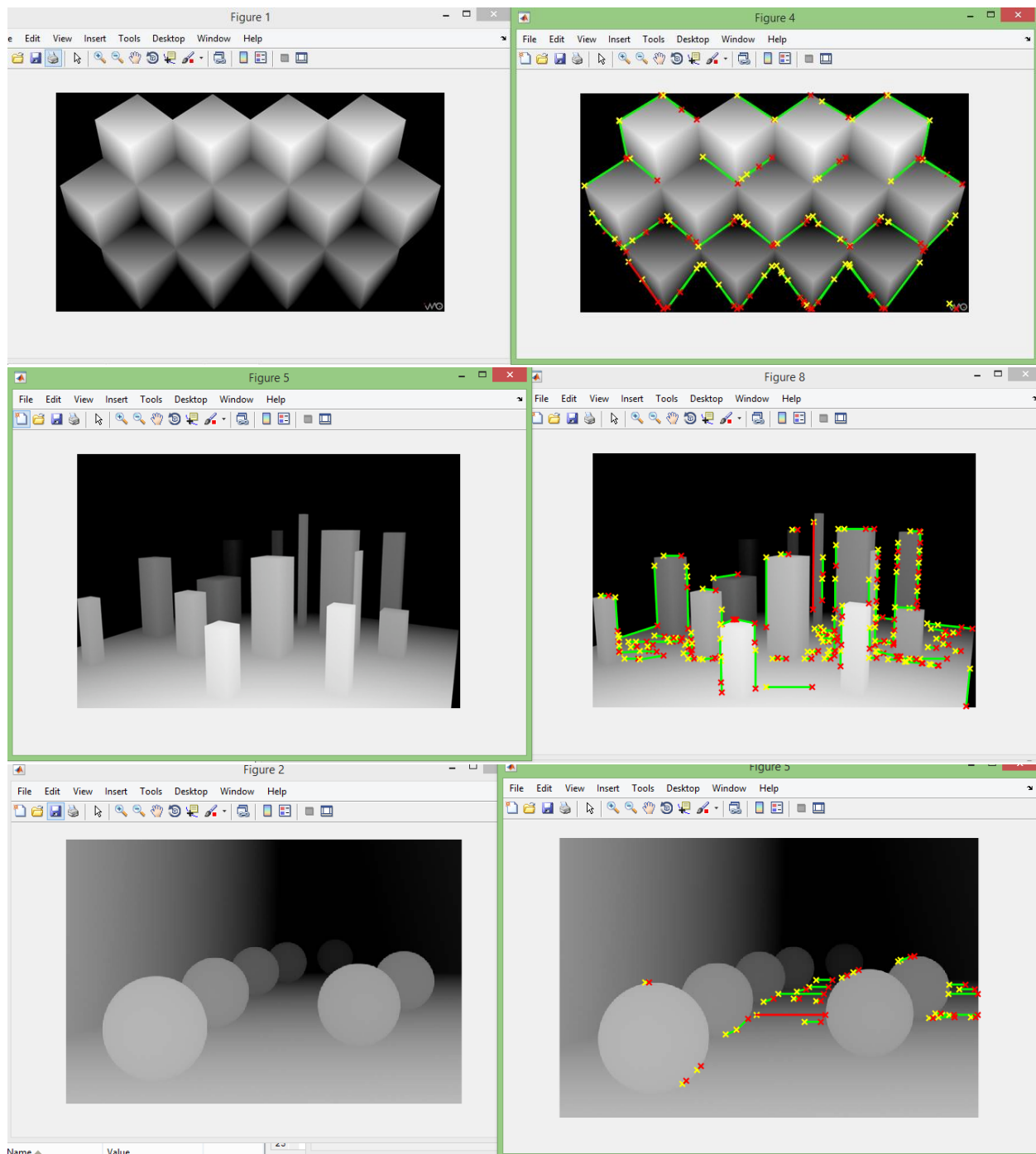
Plan for next week:

- 1) Apply the Matlab code to C++, based on OpenCV.
- 2) Add Mean-Shift algorithm to see the result.
- 3) Combine all the functional part into one final project and get the alpha version.
- 4) The progress in this week is too slow. I plan to finish all the code before 5/31. So next I will try report each 2 days.

The new dataset which I added:



The result with naïve Hough transform:



The result with k-means preprocessed Hough transform (The result even worse):

