Computer Vision Exercise

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1 Shape from X

For this assignment I have used the following threshold values:

- silhouetteThreshold = 130

- bbox = [-2 -2 -2; 4 4 3]

- volumeX = 80; volumeY = 80; volumeZ = 120;

- volumeThreshold = 15;

The Figure 1.1 shows the example of extracted object. Furthermore the Figures 1.2 are the screenshoots of the 3-D reconstruction of David statue.

The basic algorithm can be improved by inverting the process. I.e. by projecting the silhouette pixels into rays in 3D world and then counting how many rays pass through each voxel. That way we dont have to iterate all voxels, but only those that project the silhouette on the image.
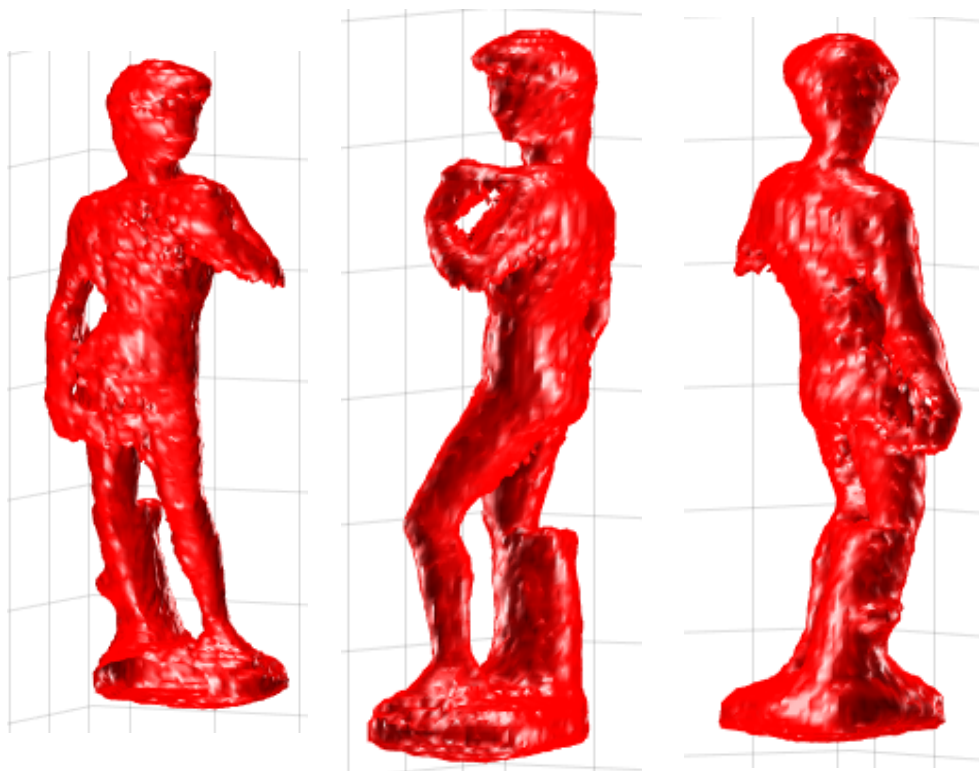
Figure 1.1: Extraction of the object.

Figure 1.2: 3D Reconstruction of David statue.