**Depth Image Region Segmentation**

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**Computer Science**

Segmentation algorithms separate an image into unique regions determined by characteristics of the pixels within those regions. Image segmentation has applications in Artificial Intelligence, including computer vision, 3D modeling, and robotics. We use a graph-based segmentation algorithm to separate a depth image, which has distance information encoded into each pixel rather than conventional RGB values. Whereas color images are commonly segmented into regions of similar color or luminosity, we segment the depth image into cohesive surfaces. We evaluate several metrics of depth pixel similarity, including gradient difference and Laplacian edge detection.

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