Seismic Inversion Image Segmentation using K-Means Clustering

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Seismic images can sometimes be difficult to interpret. Various segmentation algorithms exist which are assisting the Geophysicists to successfully understand the seismic images. This talk is about the k-means machine-learning algorithm to segment the seismic images. Image segmentation is a low-level task in computer vision. It changes the images into something which is easier to analyze. We chose the K-means clustering method to segment the images because of its simplicity and computational efficiency. The seismic inversion images have impedance attribute represented by colors and each zone of the image has a different pixel value. We segmented the image based on the pixel's intensity values. This kind of segmentation helps to recognize patterns in seismic images and it makes seismic images easier to read.