

Assignment 3 - Voxel-based Tracking

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1 CODING

1.1 OFFLINE

In order to generate the color models, we set the video to a frame that has each subject well separated, and a camera that has a good view. We use kMeans to generate the initial centers, and then generate a histogram using the hue and saturation. This gives us the advantage that we have to deal with less values. The value is also less important for the distinction between subjects.

1.2 ONLINE

For the tracking of persons, we wrote the function `calculateSubjectCenters`. This function takes the color model, generated in the offline part, and uses it to calculate new centers. It gets the non-occluded voxels for each camera, and compares the pixel values to the models. These centers are all that is required for the tracking of the subjects.