很多不確定..... 🙍

Question 1

Answer saved

Marked out of 1.00

Flag question

We want to model the color distribution of an RGB image using histograms. There are two options:

- A single 3D histogram of shape $N \times N \times N$, where a bin with index (i, j, k) represents the proportion of pixels which fall in the i th bin of R, in the jth bin of G and in the kth bin of B.
- Three separate 1D histograms, where e.g. for the first histogram a bin with index i represents the proportion of pixels which fall in the i th bin of R.

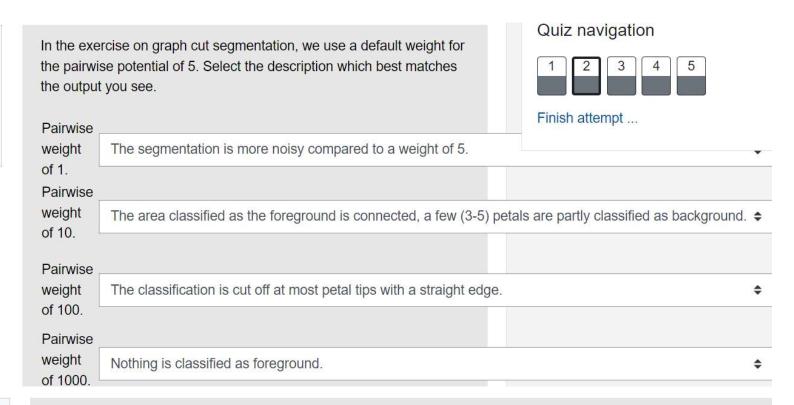
Which of the following statements is true?

- a. The 3D histogram represents more information about the image than the three separate histograms.
- D. The 3D histogram represents less information about the image than the three separate histograms.
- c. Both types of histograms represent the same amount of information.

Clear my choice

Question **2**Answer saved
Marked out of

2.00



Frage **3**Antwort gespeichert

Erreichbare Punkte: 2,00

♥ Frage markieren

We applied mean-shift clustering to a 3D Gaussian mixture in the exercise. After the naive mean_shift algorithm we implemented two optimizations mean_shift_opt and mean_shift_opt2.

Select the correct radius for each of the following questions.

\$

Slowest with mean_shift_opt2.

Radius 1 💠

Best result with mean_shift_opt2.

Radius 2 💠

Fastest with mean_shift_opt.

Radius 8

 ${\bf About~8~clusters~with~mean_shift}.$

Radius 1.25 💠

Question 4

Answer saved

Marked out of 2.00

 We apply the mean-shift clustering on image data to segment the image. What effects do the following parameter changes usually have on the number of clusters, if all other parameters stay the same?

Increase the weight of the position features.

Increase the radius of mean-shift clustering.

Use color features and position features (5D) instead of color features alone (3D).

Apply the segmentation on a larger image.

Number of clusters increases.

Number of clusters decreases.

Number of clusters increases.

Number of clusters increases.

Question 5

Answer saved

Marked out of 3.00

Flag question

We train a HOG-detector in the exercise. Select whether the following properties are true or false for this detector.

The detector is invariant to rotation, i.e. it can detect rotated cars as well.

False \$

The detector is invariant to scaling, it can detect cars of arbitrary size.

False \$

The detector detects all cars of the test dataset.

False \$

The detector is invariant to translation, it does not matter where in the image the car is.

True \$

To detect cars in an image, the SVM has to be applied multiple times.

True \$

The detector can detect multiple cars in one image.

True \$