Computer Vision and Image Analysis **WS 14/15**

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Solution of assignment 5

(Submission: 27. Nov)

Task 5.1: *the SIFT paper* [ ] **out of 10 Points**

(i) k is computed by $k = 2^{\frac{1}{s}}$ to get s intervals for each octave of the scale space. So $k = \sqrt{2}$ The precise scales are $\sigma,\ 1.41 * \sigma,\ \sigma,\ 2.83 * \sigma$ and $4 * \sigma$

(ii)

(iii) It is a approximation of the Hessian and derivative of D (scale-space function) by using differences of neighboring sample points.

(iv)

(v) In the figure, they use a 2x2x8 = 32 feature vector and in their experiments, a 4x4x8 = 128 feature vector.

Task 5.2: *blob detection using Difference of Gaussians in scale space* [ ] **out of 20 Points**

→ See code :)