

30 % Date: 2007/04/09

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32

0.03 1 33 addpath('../common');

34

35 if 0

36 error('inImage must be ???');

37 end

0.02 1 38 if ~IsScalar(sigma1) || sigma1 < 0 || ...

39 ~IsScalar(delta1) || delta1 < 0 || ...

40 ~IsScalar(sigma2) || sigma2 < 0 || ...

41 ~IsScalar(delta2) || delta2 < 0

42 error('Sigma1, Sigma2, Delta1 and Delta2 must be

43 end

1 44 if ~IsScalar(s2) || s2 < 0 || ~IsScalar(alpha) || alp

45 ~IsScalar(beta) || beta < 0 || ~IsScalar(tau)

46 error('s2, alpha, beta and tau must be a positive

47 end

1 48 if ~IsPositiveInteger(numIter)

49 error('numIter must be positive integer');

50 end

1 51 if graphs < 0 || graphs > 1 || round(graphs) ~= graph

52 error('Graphs must be either 0 or 1');

53 end

54

55 % Section 1

1 56 inImage = double(inImage);

< 0.01

1 57 I=inImage;

58 %figure('Name', 'InputImage');imshow(inImage,[]);

59

60 % Section 2

1 61 derivKernel = createDerivKernel(sigma1, delta1);

0.02 1 62 Kx = createGaussKerne(sigma2,delta2);

63

1 64 if (graphs == 1)

65 figure('Name','Kernels');

66 subplot(1,2,1);plot(Kx);

67 title(['Gauss Kernel (Size: ' num2str(size(Kx,2))

68 subplot(1,2,2);plot(derivKernel);

69 title(['Derivating Kernel (Size: ' num2str(size(d

70 end;

71

1 72 if (size(Kx,2)>size(I,2))

73 warning('Derivating kernel is bigger than image')

74 end

75

1 76 for k = 1:numIter

77 % Section 3

0.05 2 78 I\_x=imfilter(I,derivKernel, 'conv', 'replicate');

0.02 2 79 I\_y=imfilter(I,derivKernel, 'conv', 'replicate');

80

2 81 if (graphs == 1)

82 figure(32);

83 title('Derivates');

84 subplot(1,2,1);imshow(I\_x, []);

85 subplot(1,2,2);imshow(I\_y, []);

86 end;