AUVSI Vision Segmentation

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Intro

The AVS (AUVSI Vision Segmentation) job was to find and analyze a crop , that was result of the MSER step.

The AVS is a Matlab DLL , that was created using Matlab .NET compiler.

please look for AUVSI2.pdf , for more details of the work done.

The AVS made of two parts , one is the code for compiling the DLL ,and the other part is the part which used to learn data for segmentation and creates some external .mat files that are used in runtime

Files List

part1

itay.prj - used to compile the project

TestAnalyzeCrop - used to test AnalyzeCrop in Matlab

1. ReadInitFiles
2. AnalyzeCrop
    a. CorrelateBW
    b. DeleteLetterFromImage
    c. ExtractLetter
        i. FeaturesLSN
    d. ExtractLetterInSWT
        i. CombineEdge
        ii. ExtractLetter
        iii. RemoveSmallEdgeDistance
        iv. SwtLight
    e. GetSignUsingLetter
        i. KmeanFast
    f. HocFeatures
        i. Hoc
        ii. KmeanFast
    g. HogFeatures
        i. HoG
    h. MeanShiftABC
        i. MeanShiftCluster
    i. RGB2NameB

part2

training functions

1. TrainTestFeatures - used to create the hist2Struct.mat
2. TrainTestLN2 - used to create the lnStruct.mat
3. WorkPickColors - used to create extraData.mat
4. UpdateNameColors - used to create newColorNames.mat

create database functions

1. GenNone
    a. CombineEdge
    b. KmeanFastSegABC
    c. KmeanSegABC
    d. MeanShiftABC
    e. ReadInitFiles
    f. SaveLabels
    g. SwtLight
2. genData3
    a. genTform
    b. getMinShapeRadius
    c. incircle
3. genShapeSignatureData3
    a. ExtractBwSignature
    b. getMinShapeRadius
    c. incircle