22 January 1999

NAME

glcm – compute gray level cooccurrence matrix (GLCM) and GLCM features

SYNOPSIS

glcm [−**r** *rowdisp*] [−**c** *coldisp*] [[−**d** *distpool*] | [−**i**]] [−**S**]] [−**s** *shift*] [−**p**] [−**f**]
        [−**M** *maskfile* [*maskvalue*]] < iseq > oseq

DESCRIPTION

glcm computes gray level cooccurrence matrices (GLCM) and GLCM features of a byte sequence. The features, output in a single line, are energy, entropy, maximum probability, correlation, diagonal moment, kappa, difference energy, difference entropy, inertia, inverse difference moment, sum energy, sum entropy, sum variance, cluster shade, and cluster prominence. The GLCM is output as an integer frame.

OPTIONS

−**r** *rowdisp*
        sets the row displacement (default 0)

−**c** *coldisp*
        sets the column displacement (default 1)

−**d** *distpool*
        calculate isotropic GLCM by adding GLCMs from several shifts (*distpool* = 1 or 4: pool GLCMs corresponding to displacements from four neighbors, *distpool* = 2: pool GLCMs corresponding to displacements from two neighbors below and to the right as defined by −**r** and −**c**
         which both default to 1)

−**S**   do *not* force resulting added GLCM to be symmetric (forced symmetry is default)

−**i**   calculate isotropic, symmetric GLCM (short for *distpool* = 1)

−**s** *shift* cut the number of gray levels by binary shifting

−**p**   write (pipe) the GLCM matrices to stdout

−**f**   do not calculate GLCM features (also sets −p)

−**M** *maskfile* [*maskvalue*]
        perform calculations only where *maskfile* (which must be byte format) has value *maskvalue* (goes for both observations in the point pair)

BUG FIXES

−**M** and −**S** added, and bugs on multi-frames, symmetric GLCM and column shift fixed
Allan Aasbjerg Nielsen, IMM

AUTHOR

J. Michael Carstensen
IMM, Technical University of Denmark
e-mail jmc@imm.dtu.dk, internet www.imm.dtu.dk/˜jmc