Package: bayesImageS (via r-universe)

September 3, 2024

Type Package

Title Bayesian Methods for Image Segmentation using a Potts Model

Version 0.6-1

Date 2021-04-10

Description Various algorithms for segmentation of 2D and 3D images, such as computed tomography and satellite remote sensing. This package implements Bayesian image analysis using the hidden Potts model with external field prior of Moores et al. (2015) <doi:10.1016/j.csda.2014.12.001>. Latent labels are sampled using chequerboard updating or Swendsen-Wang. Algorithms for the smoothing parameter include pseudolikelihood, path sampling, the exchange algorithm, approximate Bayesian computation (ABC-MCMC and ABC-SMC), and the parametric functional approximate Bayesian (PFAB) algorithm. Refer to <doi:10.1007/978-3-030-42553-1_6> for an overview and also to <doi:10.1007/s11222-014-9525-6> and <doi:10.1214/18-BA1130> for further details of specific algorithms.

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URL https://bitbucket.org/Azeari/bayesimages, https://mooresm.github.io/bayesImageS/

BugReports https://bitbucket.org/Azeari/bayesimages/issues

LazyData true

Depends R (>= 3.5.0)

Imports Rcpp (>= 0.10.6)

LinkingTo Rcpp, RcppArmadillo

Suggests mcmcse, coda, PottsUtils, rstan, knitr, rmarkdown, lattice

VignetteBuilder knitr

RoxygenNote 7.1.1

Repository https://mooresm.r-universe.dev

RemoteUrl https://bitbucket.org/azeari/bayesimages

RemoteRef HEAD
RemoteSha 8208b8a201288e5174eb9bfcf06f7793bf6162b6