Package ‘sbart’
May 1, 2018

**Type** Package
**Title** Sequential BART for Imputation of Missing Covariates
**Version** 0.1.1
**Author** Michael Daniels
**Maintainer** Aarti Singh <mdstat2016@gmail.com>

**Description**
Implements the sequential BART (Bayesian Additive Regression Trees) approach to impute the missing covariates. The algorithm applies a Bayesian nonparametric approach on factored sets of sequential conditionals of the joint distribution of the covariates and the missingness and applying the Bayesian additive regression trees to model each of these univariate conditionals. Each conditional distribution is then sampled using MCMC algorithm. The published journal can be found at <https://doi.org/10.1093/biostatistics/kxw009> Package provides a function, seqBART(), which computes and returns the imputed values.

**License** MIT + file LICENSE
**LazyData** TRUE
**RoxygenNote** 6.0.1
**Depends** R (>= 2.10)
**Imports** LaplacesDemon, msm, Rcpp
**LinkingTo** Rcpp
**Suggests** testthat
**NeedsCompilation** yes
**Repository** CRAN
**Date/Publication** 2018-05-01 14:00:18 UTC

R topics documented:

seqBART ................................................................. 2

Index 3
seqBART

*Sequential Bayesian Additive Regression Trees Model*

**Description**

A flexible Bayesian nonparametric model that is used as imputation tool for missing covariates.

**Usage**

```r
seqBART(xx, yy, datatype, type = 1, numskip = 199, burn = 1000, m = 200,
         sigdf = 3, sigquant = 0.9, kfac = 2)
```

**Arguments**

- `xx`: Dataset of covariate matrix with missing values (NAs).
- `yy`: Response (fully observed).
- `datatype`: A vector indicating the type of covariates (0=continuous, 1=binary).
- `type`: 0=no response, 1=continuous response (linear regression used for imputation) and 2=binary response (logistic regression used for imputation)
- `numskip`: Number of iterations skipped
- `burn`: Number of iterations for burn-in
- `m`: m value
- `sigdf`: sig df value
- `sigquant`: Sign quant values
- `kfac`: kd fac value

**Value**

Imputed Dataset Values
Index

seqBART, 2