

How to use the package

Jeppe Ekstrand Halkjær Madsen

The package is for bivariate survival data

You can estimate several useful quantities related to bivariate survival data with this package. Concretely a lot of methods for bivariate survival data require an estimate of the bivariate survival function. Three such estimators are available in the function `biSurv`:

1. Dabrowska: An estimator with the property that its marginals are the Kaplan-Meier estimator. Unfortunately it distributes negative point mass to certain areas - a problem that doesn't go away with increasing sample size.
2. NPMLE: The non-parametric maximum likelihood estimator. MLE is usually a good idea, but in this case it doesn't converge to the truth with continuous data due to how probability mass from singly censored observations is distributed.
3. Pruitt: Uses a bandwidth to distribute the point mass for singly censored observations nicely. Otherwise similar to NPMLE. Should converge and be “truly” non-parametric if the bandwidth parameter is chosen in such a way that it tends to zero as the sample size increases.