

BST 140.776

Homework 3

November 24, 2003

Write a function, `partReg`, that takes three real valued vector arguments, y , x and z and returns a plot of the residuals from the two regression equations:

$$y = \beta z + \text{Error}$$

and

$$x = \beta z + \text{Error}.$$

Such a plot is called a *partial regression plot*. It is often described as a plot of y against x having removed z . (Obviously we are simplifying things by making z a univariate vector. Partial regression plots are also used when z is multivariate.)

Your homework is to write an R package for your function. You must include:

1. Appropriate program comments within the R function
2. Error checking in your function
3. A sample data set with documentation
4. A help file for `partReg` with an example based the sample data set
5. A short package vignette written as an `.Rnw` file

Name your package `partReg` and also name the function `partReg`; make the version 0.0. Use R CMD `build` to build the package and email the `.tar.gz` file; do not hand in a paper copy.