**INTERESTING PACKAGES IN R – MF 840 - 4/15/2021**

*Package Installer* shows all what is available on CRAN, download what seems interesting.

Then *Package Manager* shows information on installed packages. Refresh your list if you downloaded packages.

This list is not exhaustive as packages are often added and improved upon by authors. Each package has a quick description and the name of especially interesting functions.

**BayesGARCH**

Bayesian GARCH estimation

**bayesm** Peter Rossi

useful for multivariate logits and probits

*condmon* computes conditional mean/variance in a MVN.

*numEff* computes numerical efficiency and variance of the sample mean

Number of functions to compute ordinates of densities, including normalization constant

*plot.bayesm.mat Basic Diagnostic plots of a matrix of MCMC draws*

*rbiNormGibbs illustrates bivariate normal Gibbs sampler*

*rmultireg Posterior of a Multivariate Regression*

*rsurGibbs Gibbs Sampler for the SUR*

*rtrun* draws from a truncated normal

*runireg* Bayesian univariate regression

*runiregGibbs*

*rwishhart*

*summary.bayesm.mat*

**bayesreg** Dan Schmitt

*bayesreg* regression (linear or logit) with normal,exponential,Student-t noise

**bayess** Christian Robert

*BayesReg* Bayesian regression with g prior outputs odds ratio

*ModChoBayesReg* Model Choice multiple regression g-prior

*truncnorm*

**Bayesvarsel**

Odds ratios for model choice in linear regression, choice of priors

**LearnBayes** Jim Albert

*Dmnorm* Multivariate pdf ordinate

*Dmt*Multivariate Student-t ordinate

*Laplace* Computes mode,var.,normalization constant of a log-kernel

*rmnorm, rmt*

**caTools**

*runxxx* Running window computations (mean, quantiles, sd)

**coda**

Classic MCMC diagnostic tests, (Gelman, Raftery, Geweke)

*effectiveSize*

**fBasics**

*jbTest* jarque-Bera tests

*kron* Kronecker product

moments of many non standard distributions

row statistics for matrices

**fGarch**

**rugarch**

Garch !

**finTS**

*apca* Asymptotic PCs

*AutocorTest* Box-Ljung test

*Arima* ARIMA !

*plot.Acf* ACF plots without the silly zero-lag value

**MASS**

*fitdistr* MLE fits of a number of univariate distributions

**mcgibbsit** Lewis and Raftery

*mcgibbsit* How many draws needed to obtain desired precision on quantile estimate

**MCMCpack**

Draws of inverse Gammas, inverse Wishart,

*MCMCregress* MCMC for regression with independent normal-gamma priors

**mcmcplots**

*corplot* color correlation matrix for large matrices

*mcmcplot* Super !

*denplot* multiple density plots

**mcmcse**

MCMC standard errors and plots for sequences of MCMC draws

mcse.q quantiles standard errors

**mnormt**

**mvtnorm**

MV Normals and ts

**Moments**

Skewness, kurtosis, JB tests

**sandwich** HAC covariance matrices

**sn** Skew-normal and Skew-t

**stats** Can’t go without it

**stochvol** some SV Bayesian estimation, not checked, not mine.

**truncnorm** Truncated Normal distribution

**zoo** More time series and rolling commands