Incanter Cheat Sheet

Functions and Macros Overview

Documentation (http://incanter.org/docs/api)

`doc find-doc source` (clojure.contrib.repl-utils)

Charts and Plots (incanter.charts)

XY Plots

Create:	`xy-plot scatter-plot`
Add data:	`add-lines add-points add-function`
Appearance:	`clear-background set-alpha set-background set-title set-x-label set-y-label`
Annotate:	`add-points add-polygon, add-text`
View:	`view`
Save PNG:	`save`

Category Charts

Create:	`bar-chart line-chart`
Add data:	`add-category`
Appearance:	`clear-background set-alpha set-background set-title set-x-label set-y-label`
View:	`view`
Save PNG:	`save`

Histograms

Create:	`histogram`
Add data:	`add-histogram add-lines add-function`
Appearance:	`clear-background set-alpha set-background set-title set-x-label set-y-label`
View:	`view`
Save PNG:	`save`

Box Plots

Create:	`box-plot`
Add data:	`add-box-plot`
Appearance:	`clear-background set-alpha set-background set-title set-x-label set-y-label`
View:	`view`
Save PNG:	`save`

Misc. Plots

Create:	`qq-plot trace-plot bland-altman-plot`
Appearance:	`clear-background set-alpha set-background set-title set-x-label set-y-label`
View:	`view`
Save PNG:	`save`

Math (incanter.core)

Operations:	`plus minus mult div exp log log10 log2 pow sqr sq sum prod abs`
Trigonometry:	`cos sign tan acos asin atan`
Special fns:	`beta gamma regularized-beta incomplete-beta`
Misc. fns:	`choose factorial sum-of-squares solve-quadratic`

Matrices and Vectors (incanter.core)

Create:	`matrix diag identity-matrix symmetric-matrix bind-columns bind-rows to-matrix`
Properties:	`dim ncol nrow rank condition matrix?`
Selection:	`sel diag group-by`
Element-wise ops:	`plus minus mult div exp log log10 log2 pow sin cos tan asin acos atan abs`
Matrix ops:	`mmult kronecker solve trace det`
Transformation:	`trans vectorize half-vectorize to-list to-vect`
Decomposition:	`decomp-cholesky decomp-eigenvalue decomp-lu decomp-qr decomp-svd`
View:	`view`
Save to file:	`save`

Data Sets (incanter.core)

Create:	`dataset read-dataset` (incanter.io) `get-dataset` (incanter.datasets)
Properties:	`dim ncol nrow dataset?`
Selection:	`sel group-by`
Transformation:	`to-matrix`
View:	`view`
Save to file:	`save`

Probability (incanter.stats)

PDF:	`pdf-beta pdf-binomial pdf-chisq pdf-exp pdf-f pdf-gamma pdf-neg-binomial pdf-normal pdf-poisson pdf-t pdf-uniform`
CDF:	`cdf-beta cdf-binomial cdf-chisq cdf-empirical cdf-exp cdf-f cdf-gamma cdf-neg-binomial cdf-normal cdf-poisson cdf-t cdf-uniform`
Quantile:	`quantile quantile-normal quantile-t`
Sampling:	`sample sample-beta sample-binomial sample-chisq sample-dirichlet sample-exp sample-gamma sample-inv-wishart sample-mvn sample-neg-binomial sample-normal sample-poisson sample-t sample-uniform sample-wishart`

Statistics (incanter.stats)

Summary:	`mean variance sd skewness kurtosis median cumulative-mean tabulate detabulate`
Association:	`covariance correlation`
Tests:	`chisq-test t-test permutations bootstrap`
Regression:	`linear-model`

I/O (incanter.io)

Read Data:	`read-dataset`
Write Data:	`save`

Bayesian Inference (incanter.bayes)

Sampling:	`sample-model-params`
	`sample-multinomial-params`
	`sample-proportions`
Plots:	`trace-plot histogram`

Optimization (incanter.optimize)

`non-linear-model gradient hessian derivative integrate`

Censored Data (incanter.censored)

`censored-mean-lower censored-mean-two-sided censored-mean-upper censored-variance-lower censored-variance-two-sided censored-variance-upper truncated-variance`

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David Edgar Liebke (liebke googlemail com)