Rennes Data Challenge 2024 - Bibliothèques utiles

- sujet Enedis

CRAN

Packages	Utilisation	Documentation
Matrix	Calculs matriciels	https://cran.r-project.org/web/packages/Matrix/index.html
Plyr	Manipuler des données	https://cran.r-project.org/web/packages/plyr/index.html
DataExplorer	Exploration et traitement de données	https://cran.r-project.org/web/packages/DataExplorer/index.html
Machine-learning in R	Machine learning	https://www.datacamp.com/tutorial/machine-learning-in-r
Ggplot2	Visualisation	https://ggplot2.tidyverse.org/
Nnet	Deep Learning	https://cran.r-project.org/web/packages/ggplot2/index.html

Packages	Utilisation	Documentation
Numpy	Calculs scientifiques et matriciels	https://numpy.org/doc/stable/
Pandas	Charger et manipuler des données	https://pandas.pydata.org/docs/
Matplotlib	Visualisation	https://matplotlib.org/stable/users/index.html
Scikit Learn	Machine learning	https://scikit-learn.org/stable/user_guide.html
Tensorflow	Machine learning et Deep learning	https://www.tensorflow.org/?hl=fr
Pytorch	Machine learning et Deep learning	https://pytorch.org/

- sujet Federal Finance Gestion / CREM

CRAN

Packages	Utilité
xlsx, readxl, stargazer	Read-write excel, format model output
xts, zoo, tseries, tseriesChaos	Manipulate and Modeling of time series
lubridate, glue, car, Hmisc, forcats, DMwR2, ramify, stringr, reshape2	Data manipulation and check
ggplot2, dygraphs	Advanced Plotting
forecast, dynamac, vars, tsDyn, urca, dLagM, forecastHybrid	Time series modeling and forecasting
FactoMineR, pracma, flexmix, mclust	Factorial Analysis + Clusterwise Linear Regression + Gaussian Mixture Modeling for Model-Based Clustering
pROC,	AUC, ROC, multi AUC
glmnet, randomForest, randtoolbox, ipred, MASS, ada, xgboost, gbm, e1071, caret, ranger, MacroRF	Penalized Regression(Lasso, Ridge, Elastic-Net) + Ensemble methods (Bagging, Boosting, Random Forest, etc)
garchx, tvgarch, rugarch,	Econometric Garch, dynamic Garch
MSTest, MSGARCH, MSwM	Markov Switching Test and Regression
arules, arulesCBA, arulesViz	Association Rules
torch, doParallel, foreach, gridextra, nnet	Neural Network + Parallel estimation
PerformanceAnalytics, quantmod, TTR	Financial Perf and Risk Analysis

Packages	Utilité
openpyxl, numpy, pandas	*Data Manipulation*
math	*Basic Math Functions*
matplotlib, plotly, ggplot	*Plotting*
scipy	*Scientific Computing*
statsmodels	*Statistics & Econometrics*
MacroRF	*Macroeconomic Random Forest & Financial Backtesting*
scikit-learn	*All ML methods*
TensorFlow, pytorch	*Neural Network*
talib/TA-Lib	*Financial Chartist*