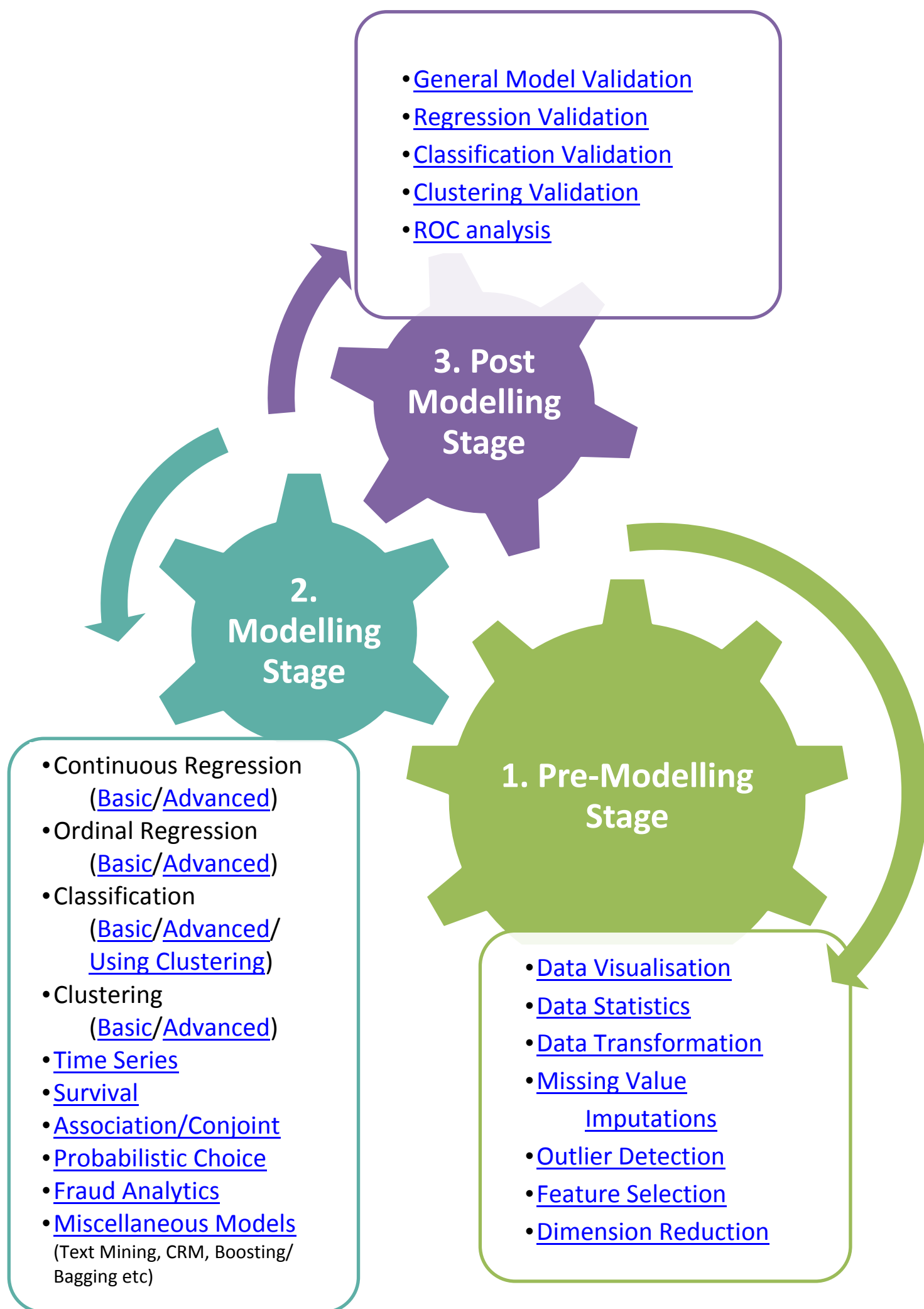


COMPREHENSIVE VIEW ON CRAN PACKAGES

CRAN Packages for R programming has been distributed according to the Data Analysis Procedure as mentioned.

[Please Click on the following Data Analysis Steps for better Navigation]



For Any Queries or Clarifications or Suggestions or Modifications...PLEASE FEEL FREE to contact me by my Email (krishna7189@gmail.com)

Type of Data	Kinds of Visualisation Plots	List of CRAN Packages
Mixed/Multivariate	Scatter Plots	<ul style="list-style-type: none">• Beeswarm• Plot2groups• ScatterPlot3D• VioPoints (1Dimensional)
	Box Plots	<ul style="list-style-type: none">• BeanPlot• BoxPlotDBL
	Hierarchical Plots/ DendoGrams	<ul style="list-style-type: none">• Classgraph• DenPro• GGDendro
	Venn – Euler Plots	<ul style="list-style-type: none">• ColourfulVennPlot• VennDiagram• VennEuler
	Histograms / Frequency Plots	<ul style="list-style-type: none">• FDTH• FreqMap• HistData• Histogram
	Bi Plots	<ul style="list-style-type: none">• GGEBiplotGUI
	Raster Maps	<ul style="list-style-type: none">• AdeHabitatMA
	ALL Plots	<ul style="list-style-type: none">• APLPack• Diagram• GPlots• GGPlot2• GGally• GgTern• GGVIS• GgThemes• Giraph• MapPlots• XKCD
	Correlation Plots	<ul style="list-style-type: none">• AutoMap• CorrelPlot• Corrgram• Corrplot
	Violin Plots	<ul style="list-style-type: none">• ViolinMPlot• VioPlot
Mixed/Multivariate	Circular Visualisation	<ul style="list-style-type: none">• Circize• SpherePLot
	Heat Maps	<ul style="list-style-type: none">• HeatMap3• HeatMapPlus
	3D Plots	<ul style="list-style-type: none">• Plot3D• Plot3DRGL• TabPlot3D
	Special Plots	<ul style="list-style-type: none">• CityPlot• ColorRamps (Colour Tables)• Conics• Epade• Lattice (Lattice Plots)• GGHorizon (Horizon Graphs)• GMisc• JOP (Optimisation Plot)• QGraph• Rainbow• Squash (Colour based)• Symbol (Symbol plots)• TablePlot• TreeMap (Tree Maps)• Zoom (Spatial Plots)
	Text Data Plots	<ul style="list-style-type: none">• TxtPlot
Categorical Data	All Plots	<ul style="list-style-type: none">• EffectStars• HeatMap,fit (For binary Output)• LongCatEDA• GGParallel (Parallel Coordinate Plots)• VCD• VCDExtra
Time Series Data	All Plots	<ul style="list-style-type: none">• LongCatEDA
High Dimensional	All Plots	<ul style="list-style-type: none">• GraphHD• TabPlot

DATA STATISTICS AND EXPLORATION

ANOVA	HYPOTHESIS TESTING
<ul style="list-style-type: none">AfexEasyAnovaAdditivityTest (Two Way)CompareGroupsLaercio (Group Means Compare)Banova (Bayesian)GADGibbsACOVGranova (Graphical)GranovaGG (Graphical)SSANV	<ul style="list-style-type: none">SGOF
	MISCELLANEOUS TESTS
	<ul style="list-style-type: none">Best (Bayesian)DBStats (Distance Based)TruncDist (Random Numbers)WeightedPortTest (Weighted PortManteau)
	ASYMPTOTIC TEST
	<ul style="list-style-type: none">AsymptestAsyPow
	PARALLEL ANALYSIS
	<ul style="list-style-type: none">PCPCA (Numeric – Ordinal Data)Random.Polychor.PA
STUDENT T TEST	PROFILE ANALYSIS
<ul style="list-style-type: none">AdMitSampleSize (For Categorical Data)SNTMVTnormVisualisationYools	<ul style="list-style-type: none">ProfileR
F STATISTIC	SEQUENTIAL ANALYSIS
<ul style="list-style-type: none">GeneF	<ul style="list-style-type: none">SequentialSPOT
CHI SQUARE TEST	VISUAL ANALYSIS
<ul style="list-style-type: none">FunChiSq	<ul style="list-style-type: none">SCVA
VARIANCE/CORRELATION/COVARIANCE	
<ul style="list-style-type: none">AspectBiwtCmaesCOCORCorpCorCorrelateCovRobust (Nearest Neighbour Algorithm)FancovaPSpearmanP-VarRobCor (Robust Method)SPCOVVarianceGamm (Gamma Distribution)	
ENTROPY	
<ul style="list-style-type: none">EntropyEntroPartEntropyEstimation	
TUKEY TEST	
<ul style="list-style-type: none">TukeyC	
NORMALITY	
<ul style="list-style-type: none">MVNMVNormTest (Shapiro Wilk Test)MVSFMVShapiroTestNormTestNorTEstRoyStonSampleSizeMeansSQN (Quantile)TMVTnorm (Truncated Multivariate)TruncNorm (Truncated Multivariate)DBEmpLikeNormMNormTMVTNorm	
Q-Q PLOTS	
<ul style="list-style-type: none">StMoSimQQMan	
POWER ANALYSIS	
<ul style="list-style-type: none">EsPresso	
SKEWNESS/KURTOSIS	
<ul style="list-style-type: none">MomentsSkewHyperbolicSN	

DATA TRANSFORMATION

Type of Data	Kind of Transformation	CRAN Package
MIXED/MULTIVARIATE	Box and Cox	<ul style="list-style-type: none">AID
	Binning of Continuous Variables	<ul style="list-style-type: none">BinrArrayBin
	Dummy Variables	<ul style="list-style-type: none">Dummies
	Normality	<ul style="list-style-type: none">JTrans
	AO Transformations	<ul style="list-style-type: none">AOTransforms
	Combination of Arrays	<ul style="list-style-type: none">Abind
	Hyperbolic and Gaussian Distribution	<ul style="list-style-type: none">GeneralisedHyperbolic
	Fourier Transforms	<ul style="list-style-type: none">KZFT
	Data Pre Modelling Misc. Analysis	<ul style="list-style-type: none">ABCP2 (Bayesian)CarolineDescrDSDplyrEditRulesHMISCNormPlyr (Split/Merge Data)RMISCUtility
	Smoothing (Non Parametric)	<ul style="list-style-type: none">NP (Kernel)SMSME
	For Data Balancing	<ul style="list-style-type: none">EbalUnbalanced
	For Heavily Skewed Data	<ul style="list-style-type: none">LambertW
	For Regression Analysis	<ul style="list-style-type: none">ACEPACK
	For Classification Analysis	<ul style="list-style-type: none">Discretization
	Triangulation of Irregular Data	<ul style="list-style-type: none">TriPack

MISSING VALUE IMPUTATION

Type/Kind of Data	CRAN PACKAGE
Mixed/Multivariate	<ul style="list-style-type: none">Amelia
	<ul style="list-style-type: none">BoBoon (Bayesian Bootstrap)
	<ul style="list-style-type: none">FastImputation
	<ul style="list-style-type: none">HotDeckImputation
	<ul style="list-style-type: none">IWeigReg
	<ul style="list-style-type: none">MissMDA (Using PCA)
	<ul style="list-style-type: none">MissForest (Using Random Forest)
	<ul style="list-style-type: none">MissMech (At Random)
	<ul style="list-style-type: none">MiTools (Multiple Imputations)
	<ul style="list-style-type: none">Mix (Multiple Imputations)
	<ul style="list-style-type: none">VIM
	<ul style="list-style-type: none">VIMGUI (Visualisation and Imputation)
Time Series Datasets	<ul style="list-style-type: none">MTSDI

OUTLIER DETECTION

Type/Kind of Data	CRAN PACKAGE
Univariate	<ul style="list-style-type: none">ExtremeValues
Mixed/Multivariate	<ul style="list-style-type: none">EVIR (Extreme Values)ExtRemes (Extreme Values)Heavy (Heavy Tailed Data)MvOutlierOutliers
High Dimensional Multivariate	<ul style="list-style-type: none">OutlierDM
	<ul style="list-style-type: none">RRCOVHD (Robust)
Time Series Datasets	<ul style="list-style-type: none">TSO outliers

FEATURE SELECTION OR VARIABLE SELECTION

Type/Kind of Data	CRAN PACKAGE
Mixed/Multivariate	<ul style="list-style-type: none">AUCRF (Random Forests)RRFVarSelRFVSuRF
	<ul style="list-style-type: none">BayesVarSel (Bayesian)VarBVS
	<ul style="list-style-type: none">FOBA (Greedy)
	<ul style="list-style-type: none">FeaLEct
	<ul style="list-style-type: none">Features
	<ul style="list-style-type: none">ISVA (Surrogate)
	<ul style="list-style-type: none">MrMre (Ensemble)
	<ul style="list-style-type: none">ClustVarSelQVarSel (For Clustering and Classification)VSCC
	<ul style="list-style-type: none">Relimp (For Regression)
	<ul style="list-style-type: none">ScreenClean
	<ul style="list-style-type: none">SpikessLab
	<ul style="list-style-type: none">SubSelect
High Dimensional Multivariate	<ul style="list-style-type: none">Tilting (For Regression)
	<ul style="list-style-type: none">WSRF

DIMENSION REDUCTION

Type/Kind of Data	Type of Dimension Reduction	CRAN Package
Mixed/Multivariate	Correspondence Analysis	<ul style="list-style-type: none">• CA• CoCorresp• CaVariants• SimultANR
Mixed/Multivariate	Canonical Correlation Analysis	<ul style="list-style-type: none">• Candic• CCA• CCP• CCAGFA (Bayesian)• CCAPP• CorClass• FPCA• HSICCCA• YACCA• FRCC
Mixed/Multivariate	Component Analysis	<ul style="list-style-type: none">• SCA
Mixed/Multivariate	Factor Analysis	<ul style="list-style-type: none">• FactoMineR• GPARotation• IFA• Obliclus• RobustFA
Mixed/Multivariate	Principal Component Analysis	<ul style="list-style-type: none">• BigPCA• Clustrd• ClustVarLV• CMF• CPCA• DR• EDR• EDRGraphicalTools• Eigenmodel• EigenInv• EigenPrComp• ElasticNet• FusedPCA• EDR• GPCA• GPCSIV• GraphPCA• JackStraw• NsPrComp• PCA3D• PCAL1• PCAMixData• PCAPP• PlotPC• SuperPCA
High Dimensional Data	Dimension Reduction	<ul style="list-style-type: none">• HDDPlot• RRCovHD (Robust)
Time Series Data	Factor Analysis	<ul style="list-style-type: none">• TSFA

REGRESSION BASIC

Type of Data	Method of Regression	CRAN Package
Mixed/Multivariate	Linear Regression	<ul style="list-style-type: none">• AL3• AL4• ARM• AutoPLS• BestGLM• BGLM• BStats• Car• Caret• DLM• FlexEM (EM Algorithm)• KMM (KMM Algorithm)• GLM2• GLMC• GLMNet• GLSME• GModels• Grouped• LargeRegression (Gradient Descent)• MCMCGLMM• MRCE• OpTr• PhyloLM• RandomGLM• RMS• RPart and RPart.Plot• SGL• SPLS
Mixed/Multivariate	Non Linear Regression	<ul style="list-style-type: none">• EasyNLS• GLLM (Log Linear)• GNN• NNet• QuantReg
Mixed/Multivariate	Neural Network	<ul style="list-style-type: none">• Amore• GRNN• LinearizedSVR• KRM (Kernel)• RMiner• RSNNs• TeachNet
Mixed/Multivariate	Bayesian	<ul style="list-style-type: none">• Bart• BayesBridge• BGLR• BLR• BrNN• FactorQR
Mixed/Multivariate	Nearest Neighbour	<ul style="list-style-type: none">• KKNn• RKNn
Mixed/Multivariate	Random Forest	<ul style="list-style-type: none">• RandomForest• RandomForestSRC
Mixed/Multivariate	Principal Covariates	<ul style="list-style-type: none">• PCovR• PLS• PLSBeta• PLSRGLM• SPCR
Mixed/Multivariate	Correlation Based	<ul style="list-style-type: none">• CoreReg
Mixed/Multivariate	Tree Based	<ul style="list-style-type: none">• C50• Cubist• GPLTR• Tree
Mixed/Multivariate	Generalised Additive Models	<ul style="list-style-type: none">• GAMM4• SpikeslabGAM
Mixed/Multivariate	Fuzzy Logic	<ul style="list-style-type: none">• FugeR
Mixed/Multivariate	Semi Parametric Regression	<ul style="list-style-type: none">• SPARC
Mixed/Multivariate	Non Parametric Regression	<ul style="list-style-type: none">• GROc
Categorical Variables	Regression	<ul style="list-style-type: none">• Cat• DRM• ExtraCat• GVCm.Cat

Dummy Variables	Regression	<ul style="list-style-type: none"> LSDV
High Dimensional	Regression	<ul style="list-style-type: none"> HDLM SpeedGLM
Skewed Data	Regression	<ul style="list-style-type: none"> AOD AOD3

REGRESSION ADVANCED

Type of Data	Method of Regression	CRAN Package
Mixed/Multivariate	Linear Regression	<ul style="list-style-type: none"> BigSplines CoreLearn DistRom GEE GEEFit GEEPAck GMM GPLM GWRR Hett LMM LocFit ScalReg SCGLR SCOUT SemPLS SparseNet SubSemble (Ensemble) VarComp ZeligMultiLevel
Mixed/Multivariate	Non Linear Regression	<ul style="list-style-type: none"> Cobra Compounding ConcReg NLADG WideNet (Polynomial)
Mixed/Multivariate	Quantile Regression	<ul style="list-style-type: none"> ALDQR
Mixed/Multivariate	Neural Network	<ul style="list-style-type: none"> LocPol (Kernel Polynomial)
Mixed/Multivariate	Bayesian	<ul style="list-style-type: none"> ABC ABN BartMachine BayesianBetaReg BISoReg BLME BNPMR
Mixed/Multivariate	Genetic Algorithm	<ul style="list-style-type: none"> GA
Mixed/Multivariate	Beta Regression	<ul style="list-style-type: none"> BetaReg
Mixed/Multivariate	Adaptive regression	<ul style="list-style-type: none"> Earth
Mixed/Multivariate	Random Forest	<ul style="list-style-type: none"> BigRF RandomUniformForest (Ensemble)
Mixed/Multivariate	Gaussian	<ul style="list-style-type: none"> GCMR GPFDA GPFit RegRess TruncReg
Mixed/Multivariate	Hierarchical	<ul style="list-style-type: none"> DHGLM HGLM RGBP
Mixed/Multivariate	Rule Based	<ul style="list-style-type: none"> Cubist
Mixed/Multivariate	Gamma	<ul style="list-style-type: none"> GAMLR GammaReg
Mixed/Multivariate	Fuzzy Logic	<ul style="list-style-type: none"> FRBS
Mixed/Multivariate	Semi/Non Parametric Regression	<ul style="list-style-type: none"> FTNonPar RegPro SemiPar SemiParSampleSel SSfit SSYM TruncSP
Fractional Dependant	Regression	<ul style="list-style-type: none"> FRM SimplexReg

Mixed/Multivariate	Generalised Additive Models	<ul style="list-style-type: none"> SAM SCAR SPAMM VGAM ZeligGAM
BiVariate Data	Regression	<ul style="list-style-type: none"> CopulRegression
High Dimensional	Regression	<ul style="list-style-type: none"> Abundant CARE GlassoMix Poisson.GLM.Mix QuantRegForest (Ensemble) RegRSM RemMAP VIF
Extreme Values	Regression	<ul style="list-style-type: none"> ACER EBA
Skewed Data	Non Linear Regression	<ul style="list-style-type: none"> NLSMSN

ORDINAL REGRESSION BASIC

Type of Data	Method of Regression	CRAN Package
Mixed/Multivariate	Linear Regression	<ul style="list-style-type: none"> MultiOrd Ordinal RMS RPart and RPart.Plot
	Neural Network	<ul style="list-style-type: none"> Amore RMiner
	Markov Model	<ul style="list-style-type: none"> ClickCLust
	Non Parametric	<ul style="list-style-type: none"> MixCat
	Odds Logistic	<ul style="list-style-type: none"> Repolr

ORDINAL REGRESSION ADVANCED

Type of Data	Method of Regression	CRAN Package
Mixed/Multivariate	Linear Regression	<ul style="list-style-type: none"> ACSS CoreLearn
	Bayesian	<ul style="list-style-type: none"> ABN
	Hierarchical	<ul style="list-style-type: none"> RGBP
	Robust	<ul style="list-style-type: none"> Rorutadis

CLASSIFICATION BASIC

Type of Data	Method of Classification	CRAN Package
Mixed/Multivariate	Multiple Classification-Regression Based	<ul style="list-style-type: none"> • Bild • BootFS • Caret • Class • Klar • MGLM • PvClass • RMS • Rpart and Rpart.Plot • SGL • SPLS
Mixed/Multivariate	Binary Classification- Regression Based	<ul style="list-style-type: none"> • BrGLM
Mixed/Multivariate	Logistic Regression	<ul style="list-style-type: none"> • ClogitL1 • CVPLogistic • LordIF • HLR • LogistF • NPLR • PhyloLM • PmLr • RegLogit
Mixed/Multivariate	Discriminant Analysis	<ul style="list-style-type: none"> • Dawai • Discriminer • HAD • MDA • PenalizedLDA • SDA
Mixed/Multivariate	Neural Network	<ul style="list-style-type: none"> • Amore • NNet • PNN • RMiner • RSNNS
Mixed/Multivariate	Bayesian	<ul style="list-style-type: none"> • AnDe • Bart • BayesLogit • BRNN • CaretNet
Mixed/Multivariate	KNN Algorithm	<ul style="list-style-type: none"> • FNN • KKNn • KNNGarden • RKNN
Mixed/Multivariate	Random Forest	<ul style="list-style-type: none"> • ObliqueRF (Binary Classification) • RandomForest • RandomForestSRC
Mixed/Multivariate	Trees	<ul style="list-style-type: none"> • Oblique.Trees • Tree
Mixed/Multivariate	Fuzzy Logic	<ul style="list-style-type: none"> • FLR
Mixed/Multivariate	Generalised Additive Models	<ul style="list-style-type: none"> • GAMClass
Mixed/Multivariate	Non Parametric	<ul style="list-style-type: none"> • MixCat • SKDA
Mixed/Multivariate	ROC Based	<ul style="list-style-type: none"> • ROCC
Categorical Variables	Regression Based	<ul style="list-style-type: none"> • ExtraCat
High Dimensional	Regression Based	<ul style="list-style-type: none"> • Classify • RDA
Over Dispersed	Regression Based	<ul style="list-style-type: none"> • AOD

Type of Data	Method of Classification	CRAN Package
Mixed/Multivariate	Multiple Classification-Regression Based	<ul style="list-style-type: none"> ProtoClass RFerns SSFit TunePareto UpClass
Mixed/Multivariate	Binary Classification- Regression Based	<ul style="list-style-type: none"> BGEVA BigTSP BinDA BinHF BinomLogit BLM Bride
Mixed/Multivariate	Logistic Regression	<ul style="list-style-type: none"> CsLogistic EHOF ELRM GloGIS StepPLR TwoStepLogit
Mixed/Multivariate	Discriminant Analysis	<ul style="list-style-type: none"> RRLDA SparseLDA VDA WMDB
Mixed/Multivariate	Neural Network	<ul style="list-style-type: none"> ProbSVM WSVM
Mixed/Multivariate	Bayesian	<ul style="list-style-type: none"> ABC BartMachine BCBCSF PredMixCor
Mixed/Multivariate	Random Forest	<ul style="list-style-type: none"> BigRF RandomUniformForest (Ensemble)
Mixed/Multivariate	Fuzzy Rules	<ul style="list-style-type: none"> FRBS
Mixed/Multivariate	Correlation	<ul style="list-style-type: none"> CCM Scout
Mixed/Multivariate	Generalised Additive Models	<ul style="list-style-type: none"> SAM
Mixed/Multivariate	Genetic Algorithm	<ul style="list-style-type: none"> GA
High Dimensional	Regression Based	<ul style="list-style-type: none"> MsGI SparseDDiscrim VHDClassification

CLASSIFICATION USING CLUSTERING

Type of Data	Method of Classification	CRAN Package
Mixed/Multivariate	Monte Carlo Simulations- Spatial Point Pattern	<ul style="list-style-type: none"> ADS
Mixed/Multivariate	Regression Based	<ul style="list-style-type: none"> LongClust MixAK
Mixed/Multivariate	Poissons	<ul style="list-style-type: none"> PoiClaClu
Mixed/Multivariate	Discriminant Analysis	<ul style="list-style-type: none"> CCDA
Mixed/Multivariate	Non Parametric –Correlation Based	<ul style="list-style-type: none"> CorrBin
Mixed/Multivariate	Gaussian	<ul style="list-style-type: none"> Mixture
Categorical Data	Logistic Regression	<ul style="list-style-type: none"> NominalLogisticBiplot
High Dimensional	Regression Based	<ul style="list-style-type: none"> HDClassIf

CLUSTERING BASIC

Type of Data	Method of Clustering	CRAN Package
Mixed/Multivariate	Regression Based – Multi Cluster	<ul style="list-style-type: none">• CBA• CClust (Convex)• Cluster• ClusterFly• ClustMD• ClustofVAR• FlecClust• FlexCWM• FPC• FunClustering• HTSCluster• HybridClust• LongClust• MClust• NsCluster• OriClust• PdfCluster• RegClust• SoftClustering• TrimCluster• VisuClust
Mixed/Multivariate	Regression Based – Binary Cluster	<ul style="list-style-type: none">• BiClust
Mixed/Multivariate	Correspondence Analysis	<ul style="list-style-type: none">• AnaCor
Mixed/Multivariate	Multi-Dimensional Scaling	<ul style="list-style-type: none">• AMap• SMACof• SOD• SuperMDS
Mixed/Multivariate	K Means	<ul style="list-style-type: none">• AKMeans• CKMeans (1D)• FDAKMA• KML• RSKC• SKMeans• SparCL• WSKM• YKMeans (Using Target Variable)
Mixed/Multivariate	Discriminant Clustering	<ul style="list-style-type: none">• SODC
Mixed/Multivariate	Hierarchical/ Dendrogram	<ul style="list-style-type: none">• ClusterGAs (Genetic Algorithm)• DendoExtend• DendExtendRCPP• DendroExtras• DendSer• DendSort• DynamicTreeCut• FastCluster• ModalClust• PVClust• SparCL
Mixed/Multivariate	Bayesian	<ul style="list-style-type: none">• BayesClust• BayesQR• Clust• CatNet
Mixed/Multivariate	Monte Carlo	<ul style="list-style-type: none">• EMC• EMCC
Mixed/Multivariate	Gaussian	<ul style="list-style-type: none">• EMCluster
Mixed/Multivariate	BiPlots based on PCA	<ul style="list-style-type: none">• BiPlotGUI• BiPlotBoot• BPCA
Mixed/Multivariate	Neural Network	<ul style="list-style-type: none">• Kohonen (SOM)• NetClust• SOM• SOMPlot

Mixed/Multivariate	Fuzzy Logic	<ul style="list-style-type: none"> FClust
Mixed/Multivariate	Ensemble Models	<ul style="list-style-type: none"> Clue Clues
Mixed/Multivariate	Factor Analysis	<ul style="list-style-type: none"> FactoClass
Mixed/Multivariate	K Nearest Neighbour	<ul style="list-style-type: none"> KKNN NNClust
Mixed/Multivariate	Probabilistic Distance	<ul style="list-style-type: none"> FPDC
Mixed/Multivariate	Genetic Algorithm	<ul style="list-style-type: none"> GA4Stratification
Mixed/Multivariate	Graphical Based	<ul style="list-style-type: none"> GCExplorer GClus Mixer
Categorical Variables	Regression Based	<ul style="list-style-type: none"> ExtraCat MVC
High Dimensional	Regression Based	<ul style="list-style-type: none"> RRCovHD

CLUSTERING ADVANCED

Type of Data	Method of Clustering	CRAN Package
Mixed/Multivariate	Regression Based – Multi Cluster	<ul style="list-style-type: none"> ACTD AORistic APCluster ClusterGeneration ClustSig CoClust (Copula Based) CoreLearn Corm CRS CVXCluster GABI KMLCov ISOPam PMClust (Parallel Model) PropClust (Propensity) RankCluster RobustReg ScottKnott SnowFall TightClust WeightedCluster
Mixed/Multivariate	Regression Based – Binary Cluster	<ul style="list-style-type: none"> SuperBiClust
Mixed/Multivariate	Segmentation Analysis	<ul style="list-style-type: none"> Segmentor3IsBack
Mixed/Multivariate	Step Wise Clustering	<ul style="list-style-type: none"> RSCA
Mixed/Multivariate	Supervised Clustering	<ul style="list-style-type: none"> SupClus
Mixed/Multivariate	Hierarchical/ Dendrogram	<ul style="list-style-type: none"> CompHClust FlashClust
Mixed/Multivariate	Bayesian	<ul style="list-style-type: none"> ABC BayesMCCLust Direct
Mixed/Multivariate	Markov Models	<ul style="list-style-type: none"> ReMM
Mixed/Multivariate	Covariance Based	<ul style="list-style-type: none"> CovReg RobuMeta
Mixed/Multivariate	Co Clustering of Both Rows and Columns	<ul style="list-style-type: none"> BlockCluster
Mixed/Multivariate	Generalised Additive Models	<ul style="list-style-type: none"> RobustGAM
High Dimensional	Regression Based	<ul style="list-style-type: none"> RobustHD WeightedKMeans

TIME SERIES

Type of Data	Method of Time Series Models	CRAN Package
Mixed/Multivariate	Auto-Regressive Type	<ul style="list-style-type: none">• ArDec• BentCable• BootPR• Deseasonalize• CTS (Continuous Time)• FitAR• MAR• MAR1• MAR1S• MARSS• TsDyn (Non Linear)• Var.ETP• Vars
Mixed/Multivariate	ARMA/ARIMA/SARIMA	<ul style="list-style-type: none">• ArFima• FARMA• FitARMA• Forecast• FracDiff• GLARMA• PerARMA
Mixed/Multivariate	Statistical Time Series	<ul style="list-style-type: none">• Asta
Mixed/Multivariate	Bayesian	<ul style="list-style-type: none">• BayStar• BSTS• EnsembleBMA
Mixed/Multivariate	Miscellaneous	<ul style="list-style-type: none">• AutoSearch (GETS Model)• BBMM (Brownian Bridge)• BrainWaver (Graph Theory)• DSE (Dynamic Systems Estimation)• Dyn (Dynamic)• DynLM (Dynamic)• LTSA (Linear)• MVTSPlot• NETS (Network Estimation)• RobFilter (Robust)• RTS (Raster)• SLTL (Loess and Harmonic)• Spectral.methods• SplusTimeSeries• TED (Turbulence Event Detection)• Tiger (Grouped Time Series)• TimSac• TSA• TSClust (Time Series Clustering)• TSeries• TSLars (Linear Angle Regression)• WMTSA (Wavelet Methods)• XTS (Extensible)
Mixed/Multivariate	Structural Time Series	<ul style="list-style-type: none">• STSM• STSM.Class
Mixed/Multivariate	Non Linear Chaotic	<ul style="list-style-type: none">• FNonLinear• NLTS• NonLinearTseries• TSeriesChaos
Mixed/Multivariate	Fractal Time Series	<ul style="list-style-type: none">• Fractal• FractalRock
Mixed/Multivariate	Hierarchical	<ul style="list-style-type: none">• HTS
Mixed/Multivariate	Irregular time Series Data	<ul style="list-style-type: none">• ITS• ITSMR• RobPer (Robust)• TSAgg• Zoo
Mixed/Multivariate	Tests for Stationarity	<ul style="list-style-type: none">• Locits
Univariate Data		<ul style="list-style-type: none">• FlowField• QuantSpec

SURVIVAL ANALYSIS

Type of Data	Method of Survival Models	CRAN Package
Mixed/Multivariate	Cox Models / Proportional Hazards model	<ul style="list-style-type: none">CoxMeCoxPhfCoxBoostCoxPhwCoxRidgeCoxRobustPHMMPlsRCoxSurvBayes
Mixed/Multivariate	Hazard Rate Analysis	<ul style="list-style-type: none">AHAZBGPHazard (Markov Beta-Gamma)
Mixed/Multivariate	Kaplan Meier	<ul style="list-style-type: none">JackKnifeKMEKMCKM.CIKMConfBandRankHazard
Mixed/Multivariate	Log Rank Test	<ul style="list-style-type: none">LogRankA
Mixed/Multivariate	Risk Prediction Models	<ul style="list-style-type: none">RiskRegressionSurvCISurvIDINRIWTCRsk
Mixed/Multivariate	Miscellaneous Survival Models	<ul style="list-style-type: none">AIM (Adaptive Index Model)AdapEnetClassDynSurv (Dynamic)Complex.Surv.Dat.SimGUTSKAPS (K Adaptive)LbiaSSurvrelSurv (Relative Survival)RMS (Regression Model Strategies)RPart & RPart.Plot (Recursive Partitioning)SGLSmoothHRSmoothSurvSurvGINISurvivalSurvivalMPLSurvivalROCTimeReg (Flexible)
Mixed/Multivariate	For Interval/Right Censored Data	<ul style="list-style-type: none">BPCPFHTestISSMuHazProdLimRandomSurvivalForestSMNCensRegSmoothHazardSurvRegCensCovSurvPreSmoothTBSSurvival
Mixed/Multivariate	For Truncated Data	<ul style="list-style-type: none">Depend.Truncation
Mixed/Multivariate	Bayesian	<ul style="list-style-type: none">BastaBayHazSpBayesSurv
Mixed/Multivariate	Random Forest	<ul style="list-style-type: none">RandomForestSRC
Mixed/Multivariate	Parametric	<ul style="list-style-type: none">FitDistrPlusFlexSurvSpatSurv
Mixed/Multivariate	Semi Parametric	<ul style="list-style-type: none">ICSurv
Mixed/Multivariate	Non Parametric	<ul style="list-style-type: none">BsHazard (Smoothing Hazard)ConvexHaz

Mixed/Multivariate	For Recurrent Event Data	<ul style="list-style-type: none"> SurvRec
Univariate High Dimensional Data	Cox Models	<ul style="list-style-type: none"> UniCox

ASSOCIATION CONJOINT /TRANSACTION PATTERN ANALYSIS

Cran Package	Details
<ul style="list-style-type: none"> Arules ArulesNBMiner ArulesSequences ArulesViz 	Rules
<ul style="list-style-type: none"> AssotesteR 	Genetic Association
<ul style="list-style-type: none"> BayHap 	Bayesian
<ul style="list-style-type: none"> Conjoint ConjointChecks FaisalConjoint MConjoint 	Conjoint Analysis
<ul style="list-style-type: none"> FMultiVar RFGLS 	Market Analysis
<ul style="list-style-type: none"> DRM 	For Categorical Data

PROBABILISTIC CHOICE MODELLING

Cran Package	Details
<ul style="list-style-type: none"> EBA 	Elimination by Aspects
<ul style="list-style-type: none"> KlaUser 	
<ul style="list-style-type: none"> MLogit MnLogit ZeligChoice 	Logit Models
<ul style="list-style-type: none"> RChoice 	Discrete Choice Modelling

FRAUD ANALYTICS

Cran Package	Details
<ul style="list-style-type: none"> Benford.Analysis 	Benford Analysis
<ul style="list-style-type: none"> BenfordTests 	Model Validation

MISCELLANEOUS MODELS

Cran Package	Details
<ul style="list-style-type: none"> QDAP QDAPTools QDAPDictionaries RTextTools Tau TextIR TextCat Txtometry Vowels WordCloud WordMatch 	Text Mining
<ul style="list-style-type: none"> aCRM 	Customer Relationship Management
<ul style="list-style-type: none"> Ada AdaBag BagRBoostR Boostr GMMboost 	Boosting/Bagging
<ul style="list-style-type: none"> ReliabilityTheory 	Reliability Analysis
<ul style="list-style-type: none"> GEnsemble HybridEnsemble 	Ensemble of Models
<ul style="list-style-type: none"> SetRNG 	Random Number and Seed Generation

GENERAL MODEL VALIDATION

Cran Package	Details
<ul style="list-style-type: none">A3AdequacyModelAICcModAvgCombMSCFit.ModelsFMEGainsLSMeansS2DVerificationSpatSatSperroRestTAMRMS.GOF	Model Accuracy
<ul style="list-style-type: none">ComparisonCompareTestsEffectsSBSA (Bayesian-Sensitivity Analysis)Sensitivity	Model Comparison
<ul style="list-style-type: none">NonParaEff	Non Parametric Models
<ul style="list-style-type: none">PlotMCMCScagnostics	Diagnostic Plots

REGRESSION VALIDATION

Cran Package	Details
<ul style="list-style-type: none">FWDSelectLmTest (Linear)NLSTools (Non Linear)PResidualsRegTestRelalmpo (Linear)RFit (Linear)RalkChalk	Select Best Models
<ul style="list-style-type: none">CvToolsGVLMA	Cross Validation
<ul style="list-style-type: none">ConfReg	Confidence Estimators
<ul style="list-style-type: none">HEPlots	Hypothesis Tests
<ul style="list-style-type: none">LMMFitRobustAFTVisReg (Visualization)	Goodness of Fit
<ul style="list-style-type: none">ACDOrdinalLogisticBiplot	Ordinal Prediction Models
<ul style="list-style-type: none">NonPModelCheck	Non Parametric Models

CLASSIFICATION VALIDATION

Cran Package	Details
<ul style="list-style-type: none">AUC (Performance Measure Curves)DAIMHMeasureSoftClassVal	Diagnostic Tests
<ul style="list-style-type: none">BinomTools	Regression model for Binomial Output
<ul style="list-style-type: none">LogisticDx	Logistic Regression Models

CLUSTERING VALIDATION

Cran Package	Details
<ul style="list-style-type: none">• ClustEval• Clv• CValid• MixSim	Cluster Evaluation
<ul style="list-style-type: none">• NbClust	Determine Best No. of Clusters
<ul style="list-style-type: none">• SigClust	Statistical Significance

ROC ANALYSIS

Cran Package	Details
<ul style="list-style-type: none">• GGROC• HUM• PROC• PrognosticROC• ROC632• ROCPlus	ROC
<ul style="list-style-type: none">• RiskSetROC• ROCT	For Censored Survival Data Time Series Models
<ul style="list-style-type: none">• ROCR	For Classification
<ul style="list-style-type: none">• TimeROC	For Survival Analysis
<ul style="list-style-type: none">• ROCwoGS• SROC	Non Parametric Models