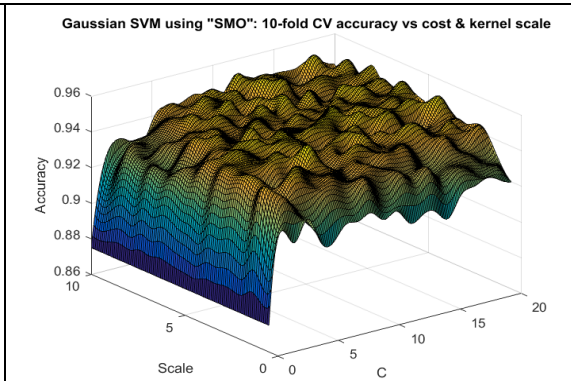
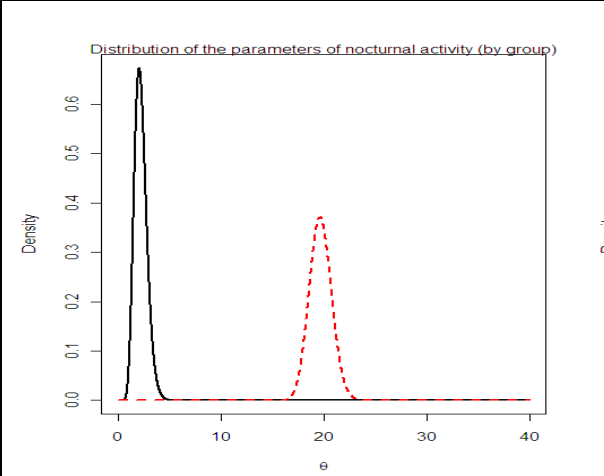


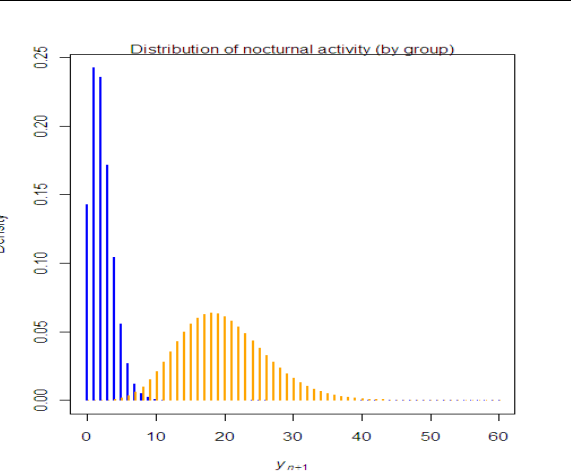
Robust regression: spline-smoothed predicted response surface (\approx beta-binomial model, not shown)



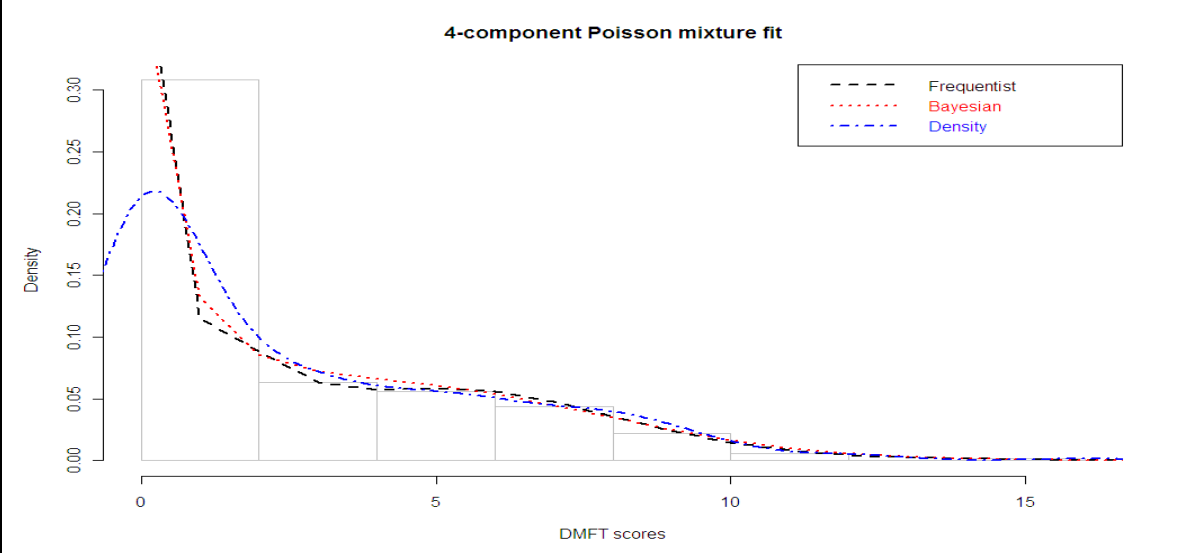
Support Vector Machine “SMO” using Gaussian kernel optimisation (*Matlab*)



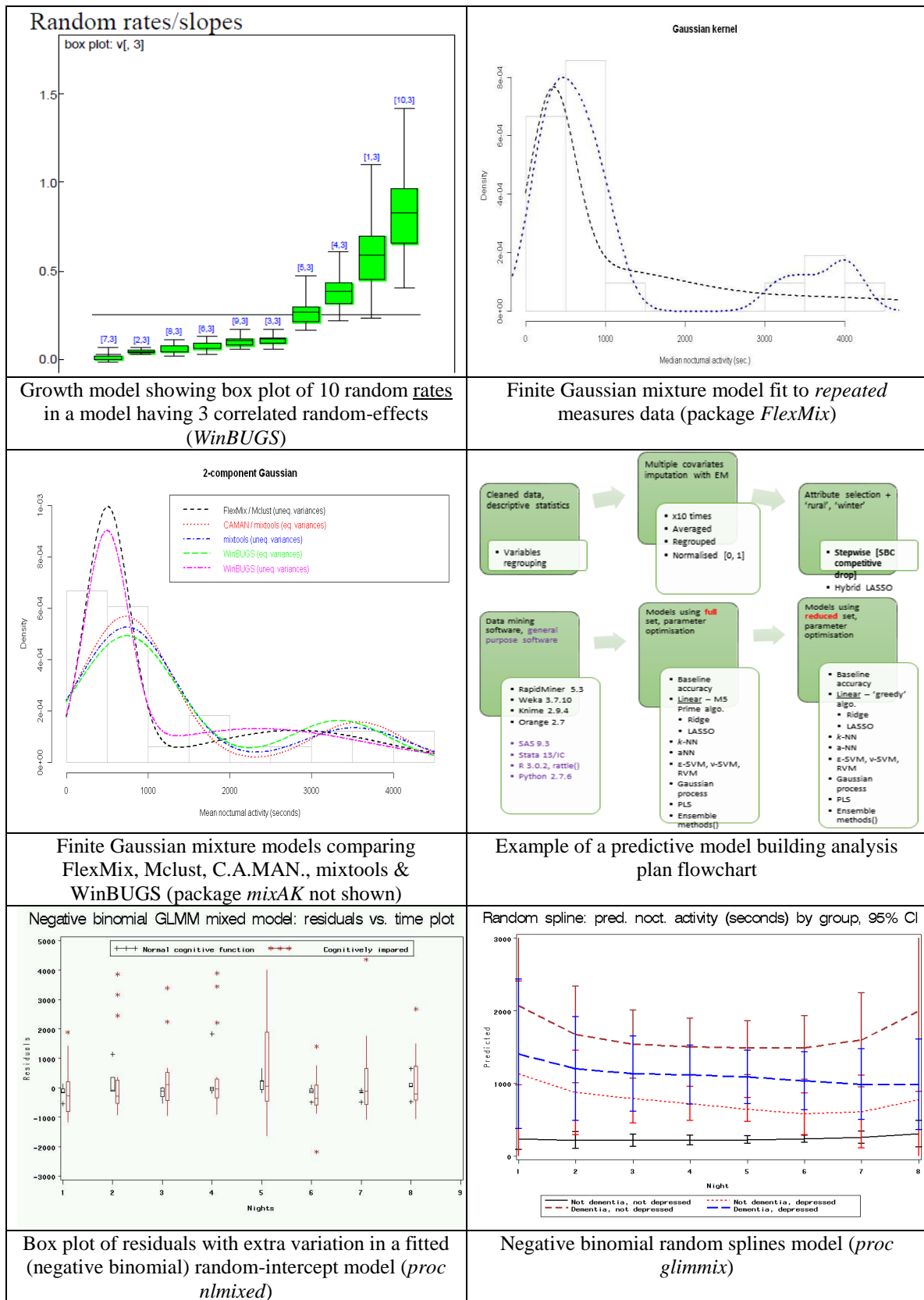
Gamma posterior distribution of $\theta|Y$ (by group)

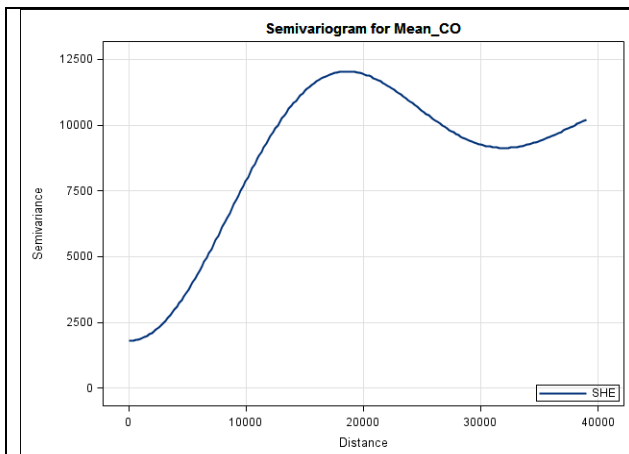


Negative binomial posterior predictive distribution of $\hat{Y}|Y$ (by group)

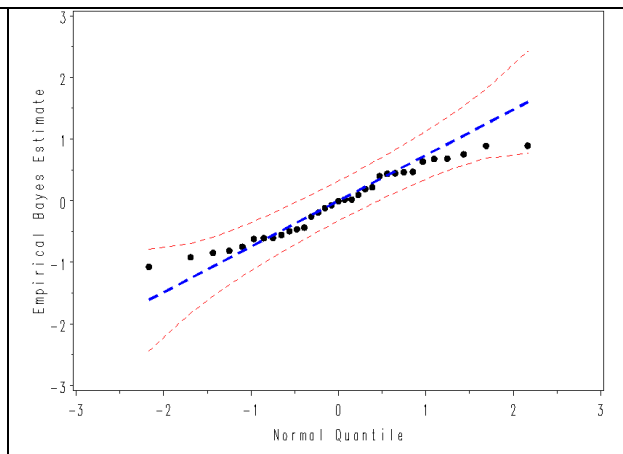


Finite Poisson mixture model: comparison of C.A.MAN. vs. WinBUGS fits

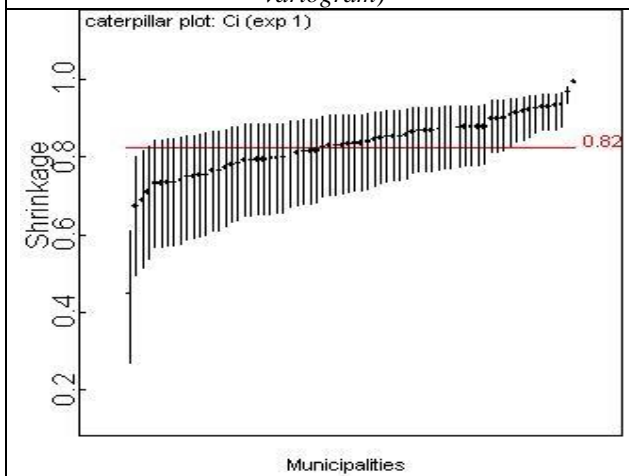




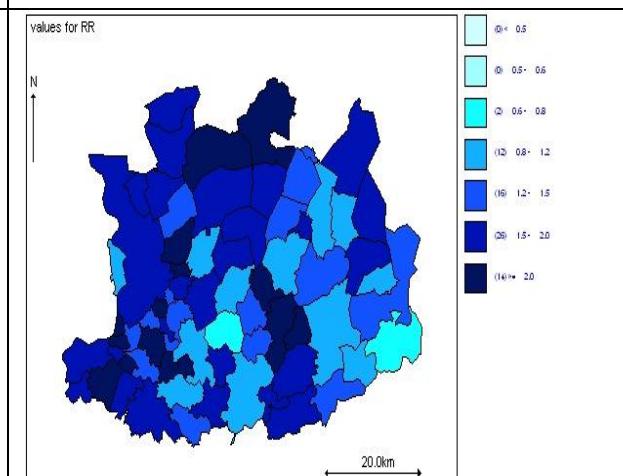
Semivariogram with ‘Sine-hole effect’ of air pollution data (showing nugget effect) (*proc krige2d, proc variogram*)



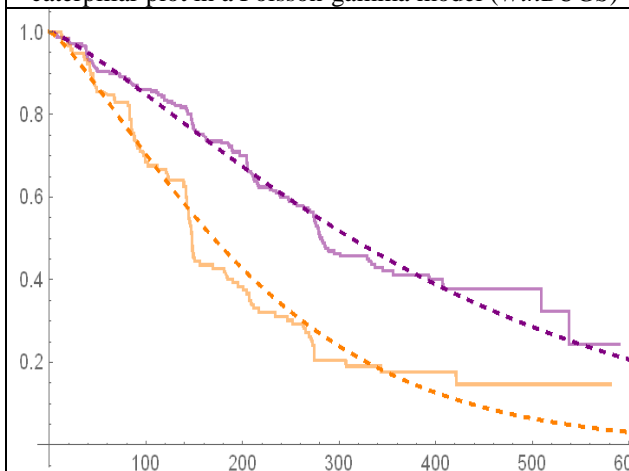
Empirical Bayes *qqplot* (\pm 95% CI) of random intercepts



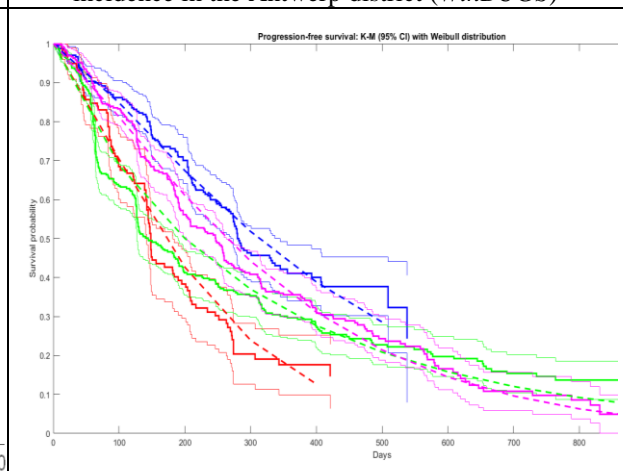
Disease mapping: ‘Bayesian shrinkage’ – ranked caterpillar plot in a Poisson-gamma model (*WinBUGS*)



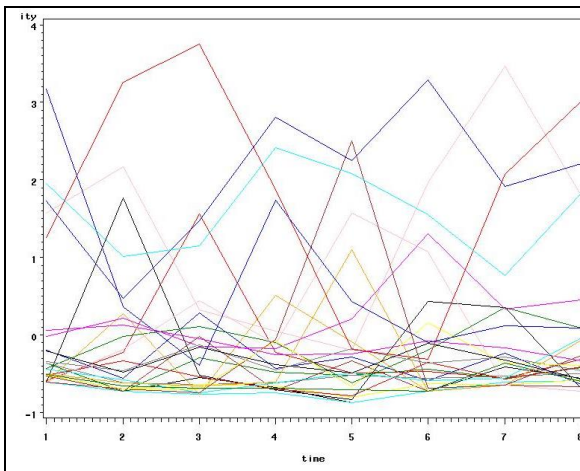
Disease mapping: CAR model of cervix cancer incidence in the Antwerp district (*WinBUGS*)



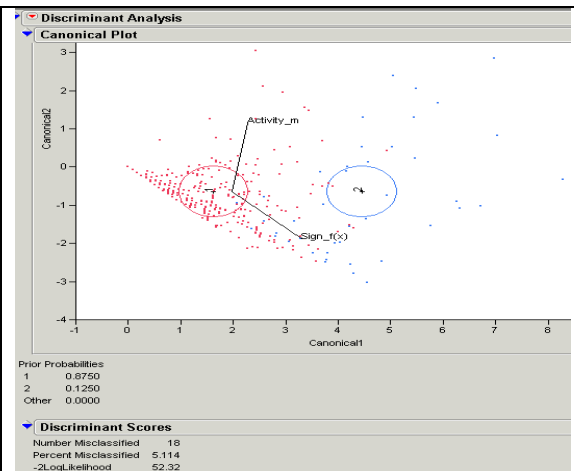
KM plot comparing new vs. control treatment overlaid by estimated Weibull distribution PFS (*Mathematica*)



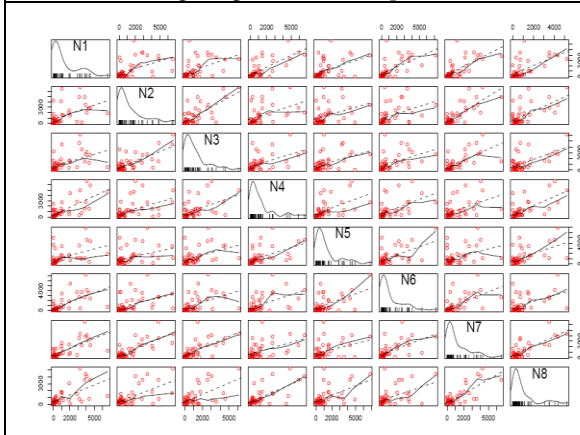
KM plot comparing new vs. control treatment overlaid by estimated Weibull distribution PFS (*Matlab*)



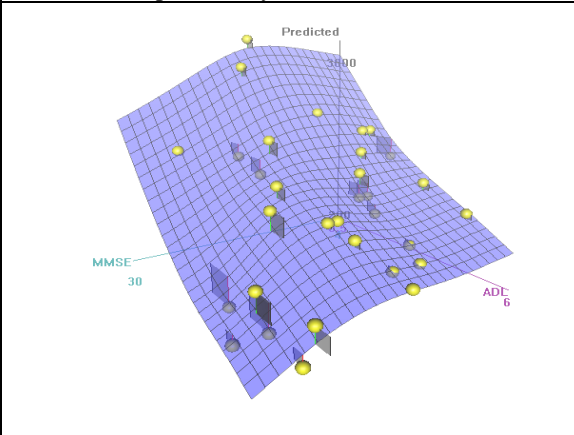
Tracking longitudinal data (*proc stdize*)



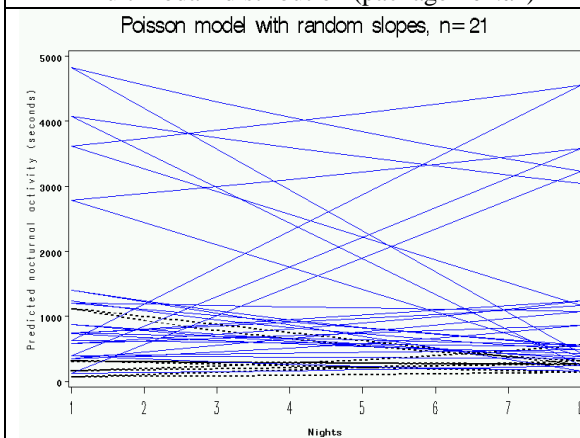
Linear empirical Bayes discrimination (*JMP*)



Correlation scatterplot between 8 repeated measurements; with diagonals showing right skewed 'multimodal' distribution (package *Rcmdr*)

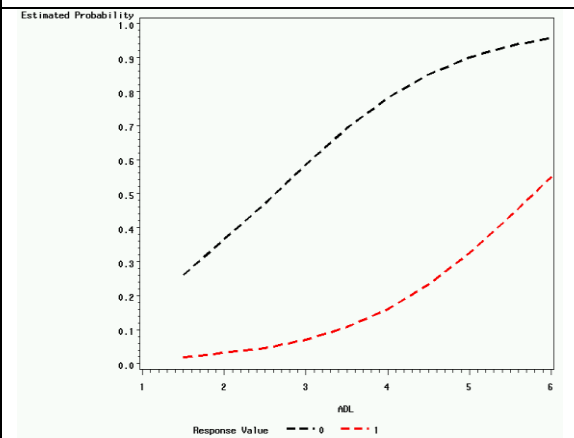


Spline-smoothed predicted response surface with squared residuals (screenshot during 360° rotation)

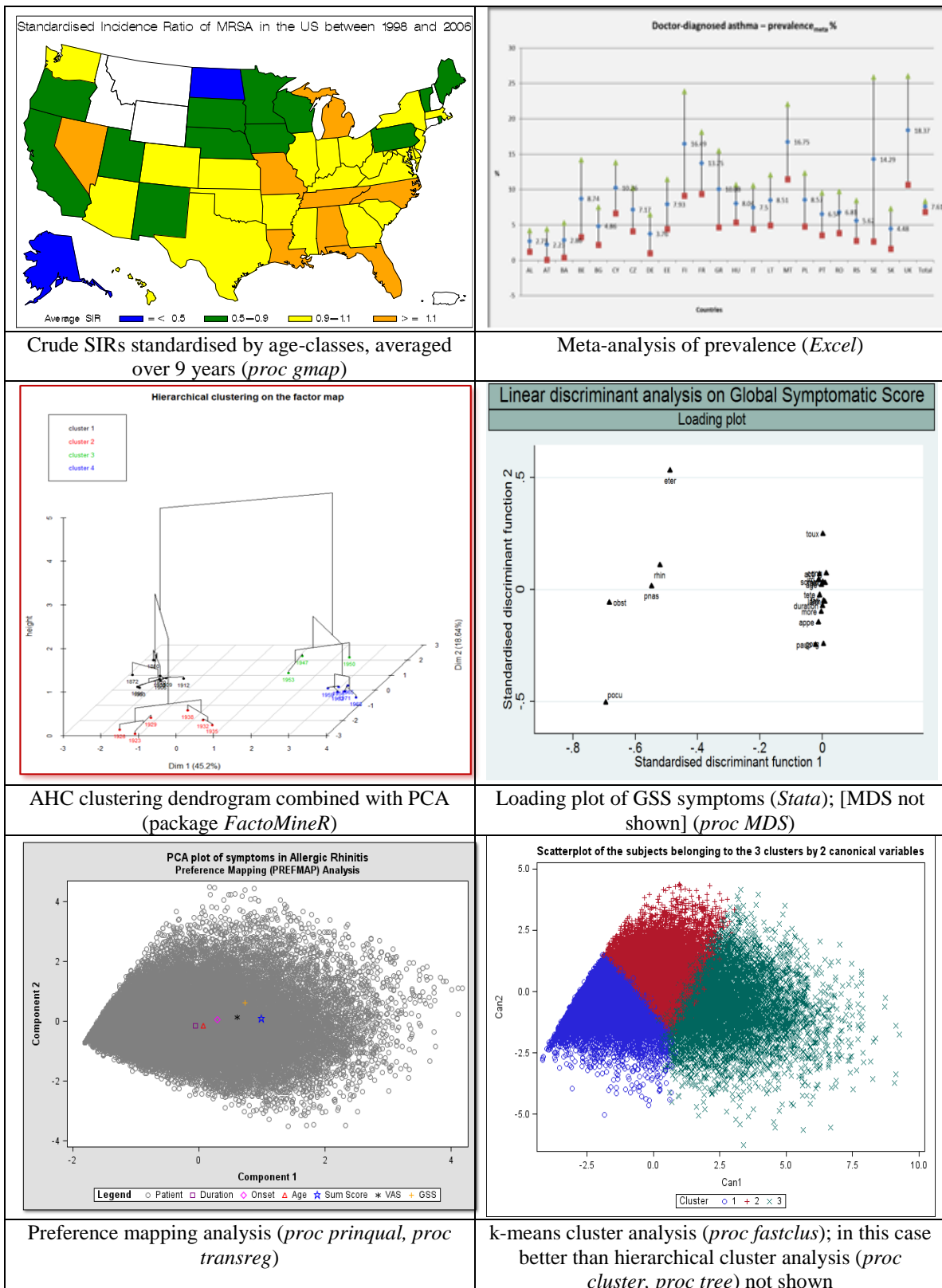


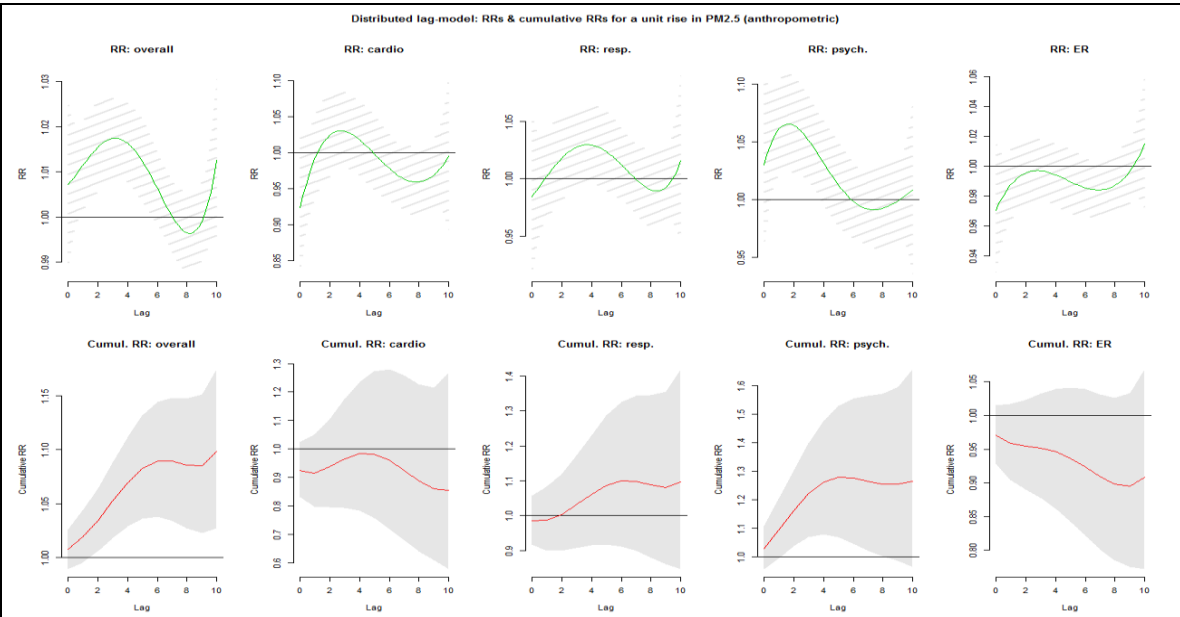
Poisson model with random slopes, $n=21$

Random slopes by group: Poisson model (*proc nlmixed*)

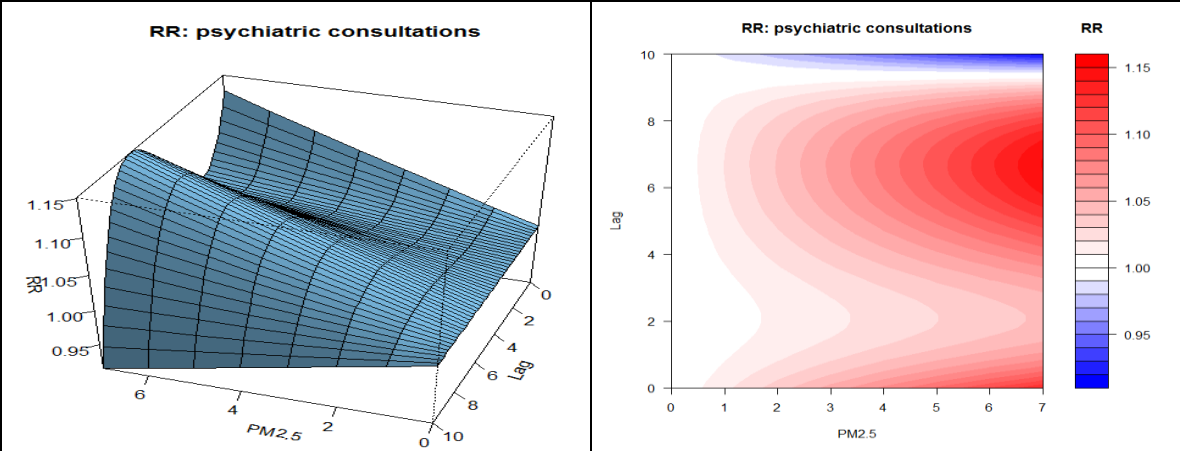


P-O model comparing 3 categories: 'worsening' (red), 'stable' (black) & 'improving' (reference) → subjects have a constant impact (OR) of ADL (exposure) across any level

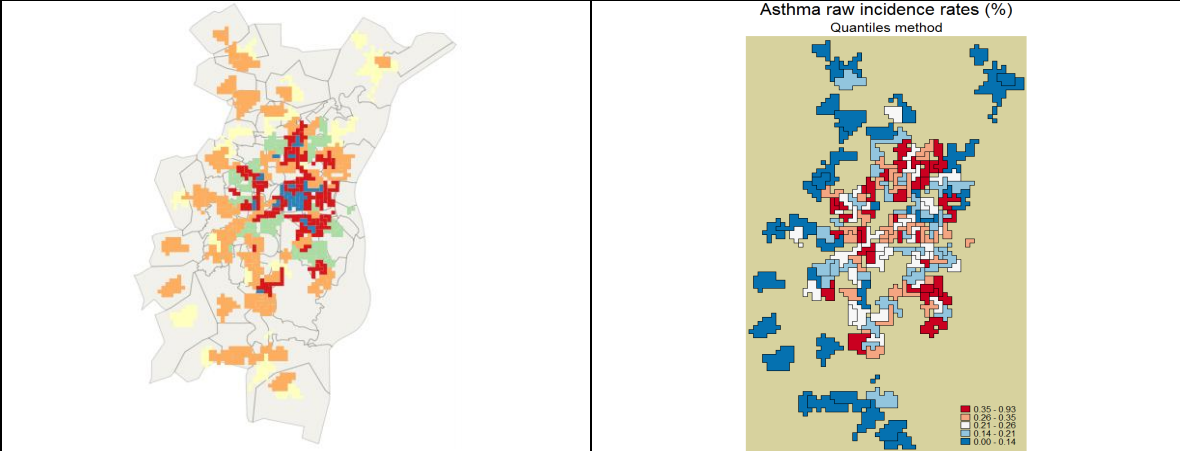




Time-Series Analysis (TSA) with GAMs: Distributed Lag Models (DLM) (package *dlm*)

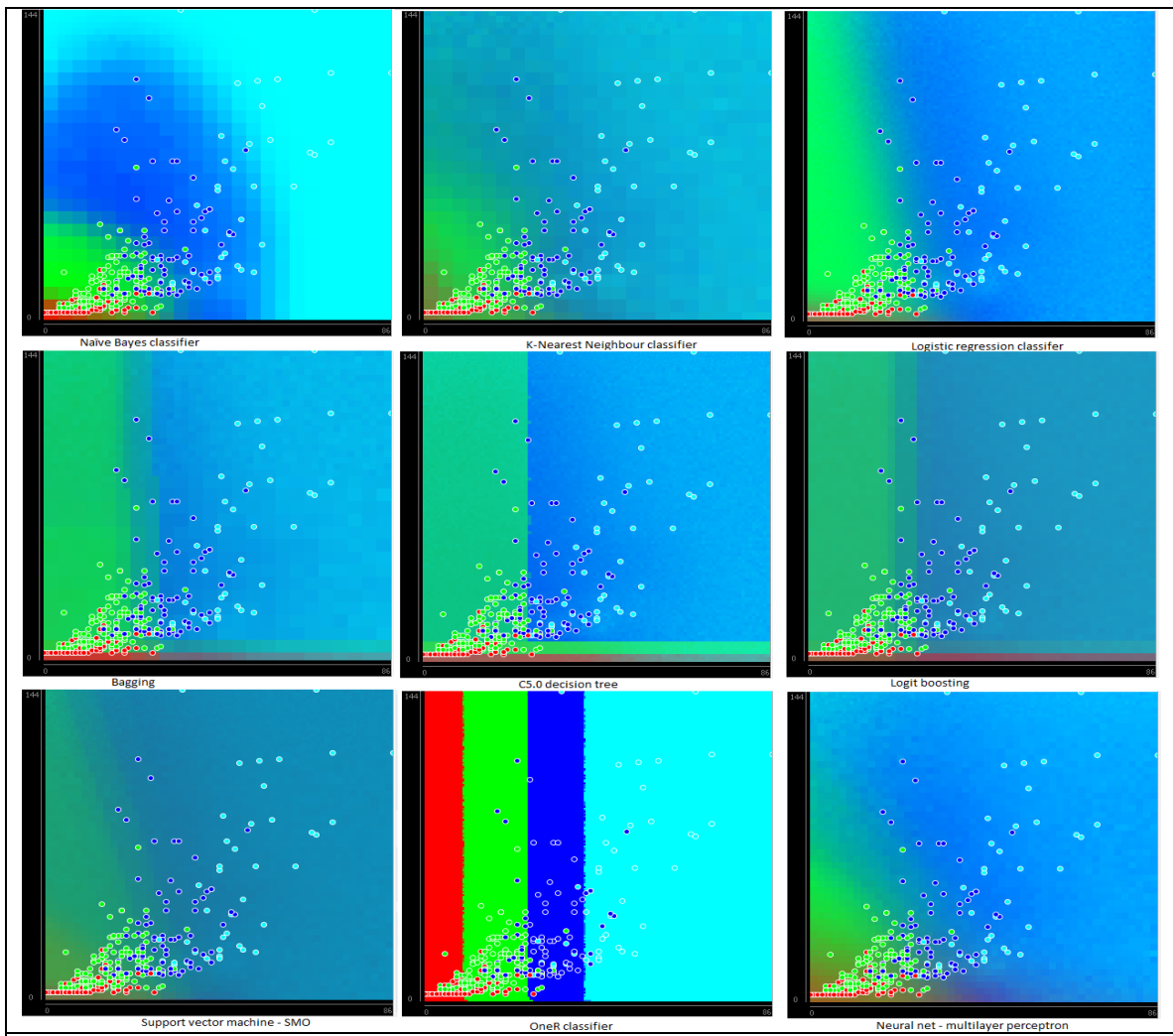


TSA with GAMs: DLM (package *dlm*)



IRIS map overlaid by new zoning map showing neighbourhood deprivation index (*QGIS*)

Raw incidence rates in the new zonings (*Stata*)



Decision boundaries of different classifiers (Weka)

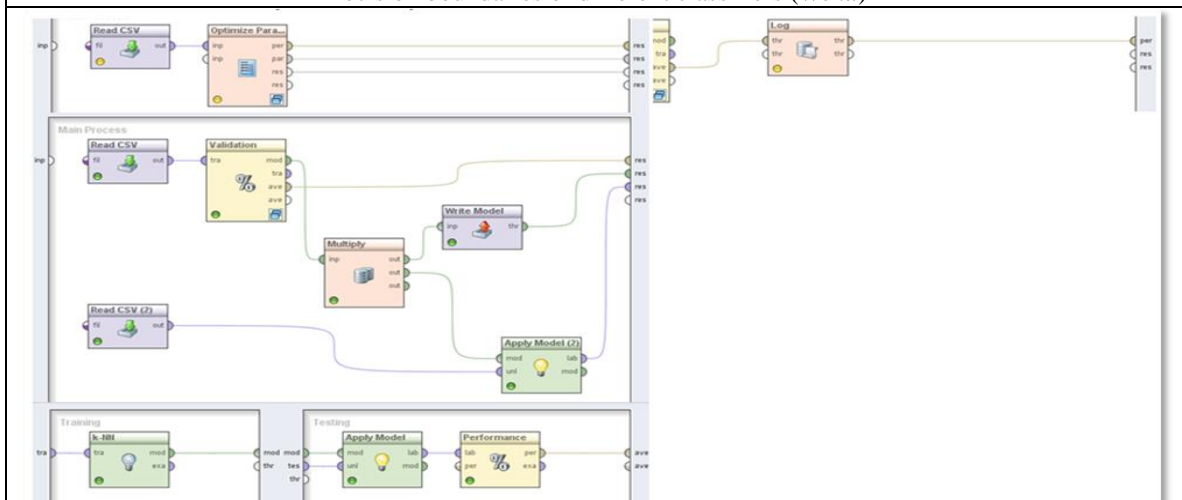
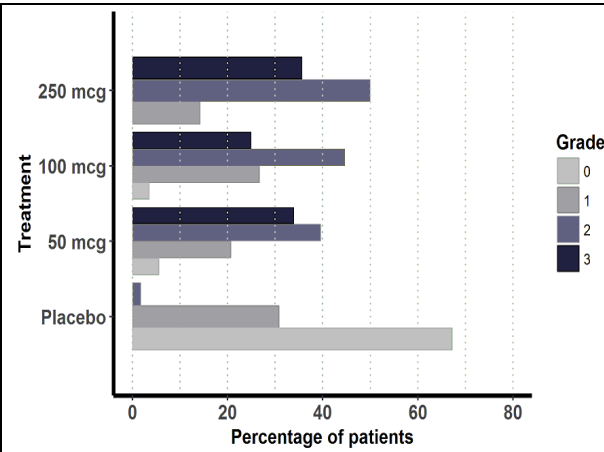
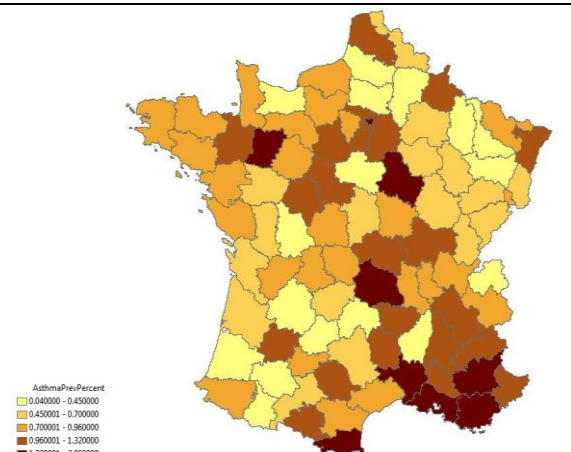


Figure 1. A flowchart on grid search parameter optimisation (top 2) followed by k -fold crossvalidation (bottom 2) (here, k -NN) using RapidMiner.

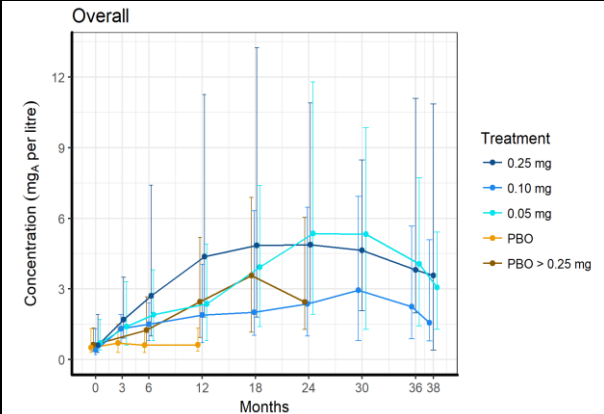
Parameter optimisation & predictive modelling flowchart (RapidMiner)



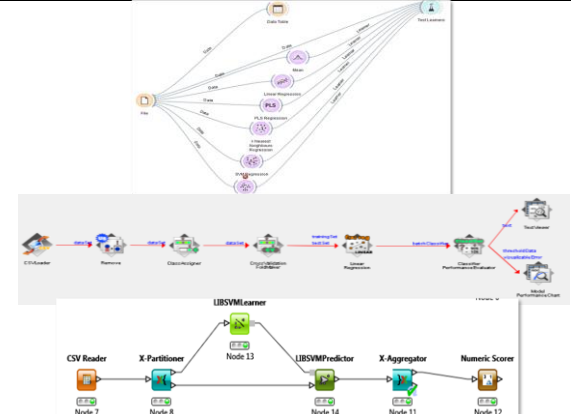
Barchart of % by treatment, grade (package *ggplot2*)



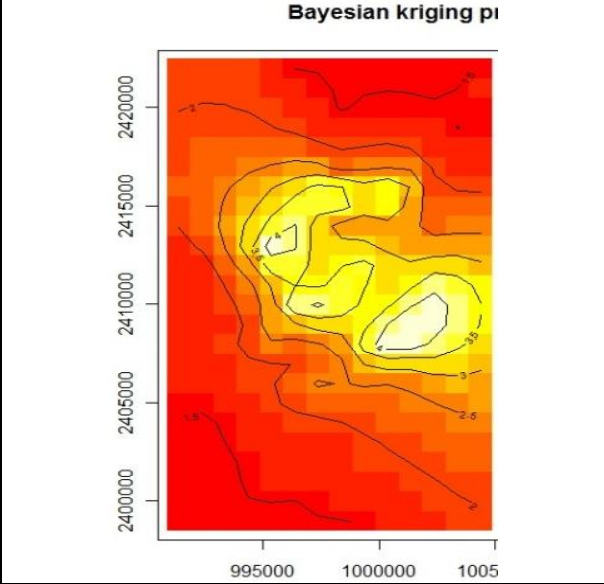
Prevalence % in France (*ArcGIS*) from the EGB cohort, map courtesy: NUTS3



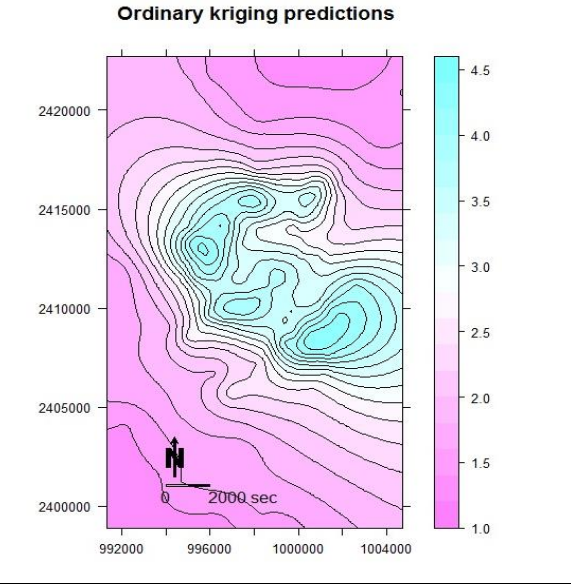
Median (IQR) by treatment w.r.t. study duration @ FU visits (package *ggplot2*)



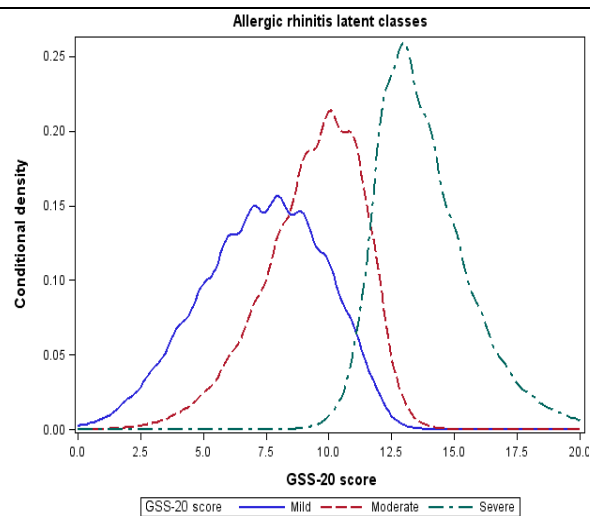
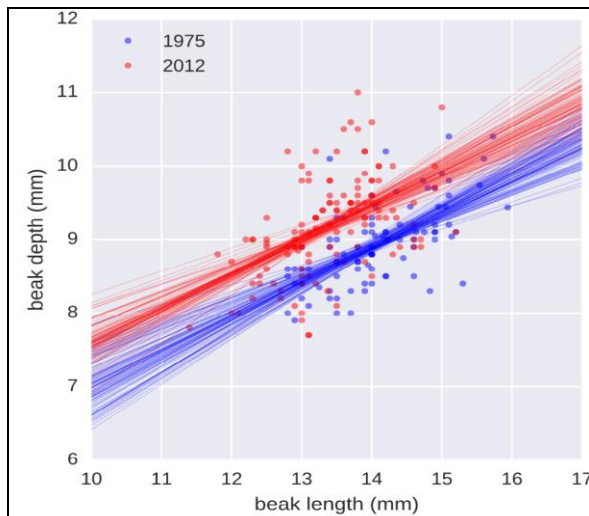
Predictive modelling process flow (*Orange miner*, *Weka*, *Knime*)



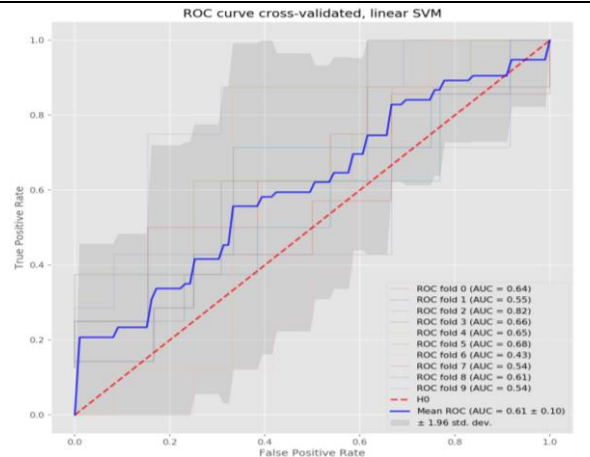
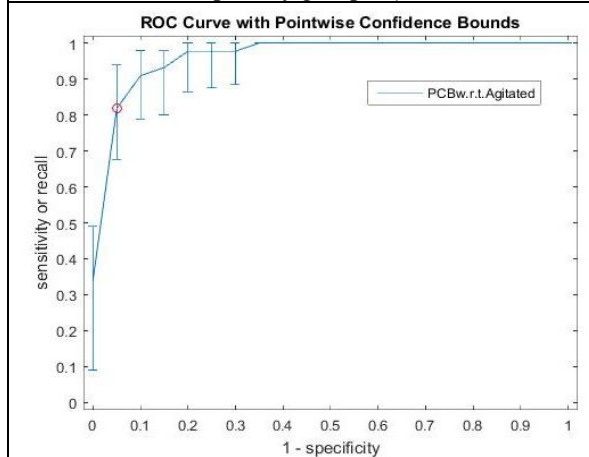
Bayesian Kriging of SES data (package *sgeostat*)



Kriging of SES data (package *gstat*)

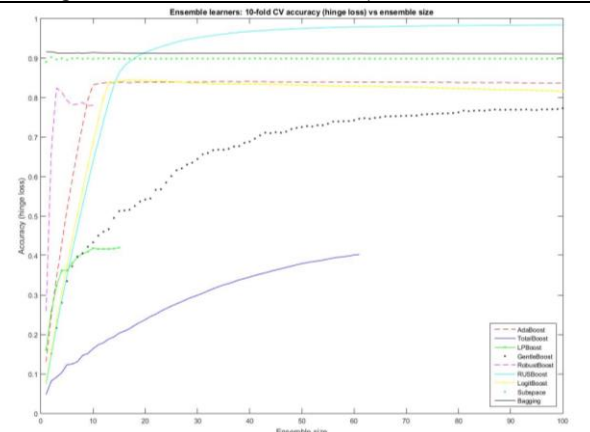
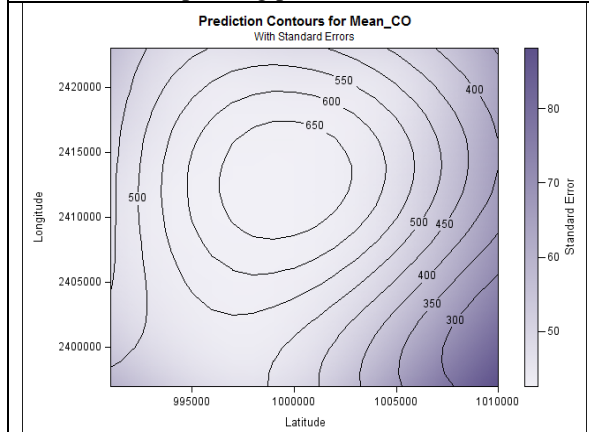


Bootstrapped linear regression overlaying the scatter plot, by group (*Python*)

Latent class analysis (*proc lca*)

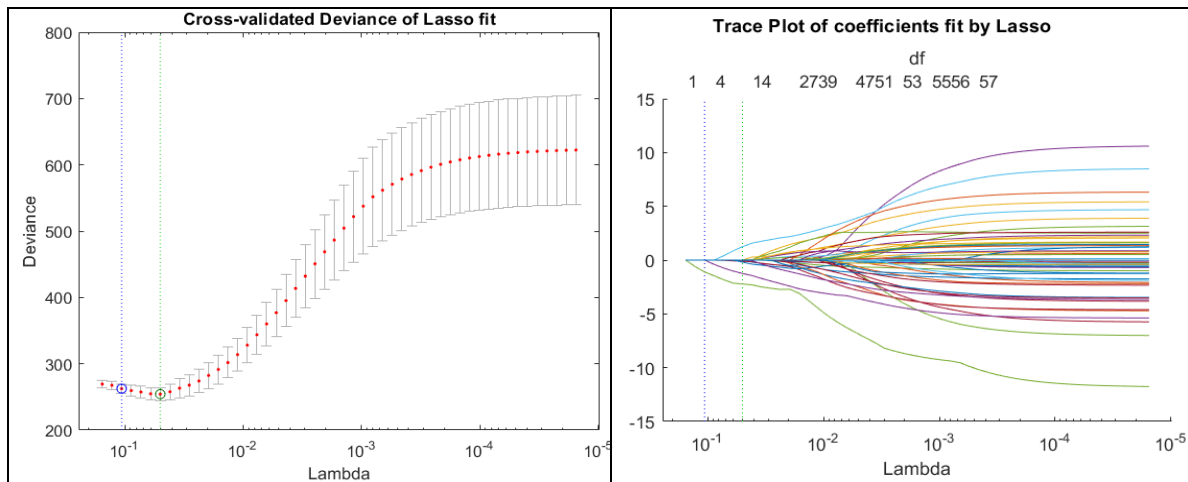
ROC curve with bootstrapped 95% CI & optimal operating point (*Matlab*)

ROC curve with 95% CI in a linear SVM model
using 10-fold cross-validation (*Python, scikit-learn*)



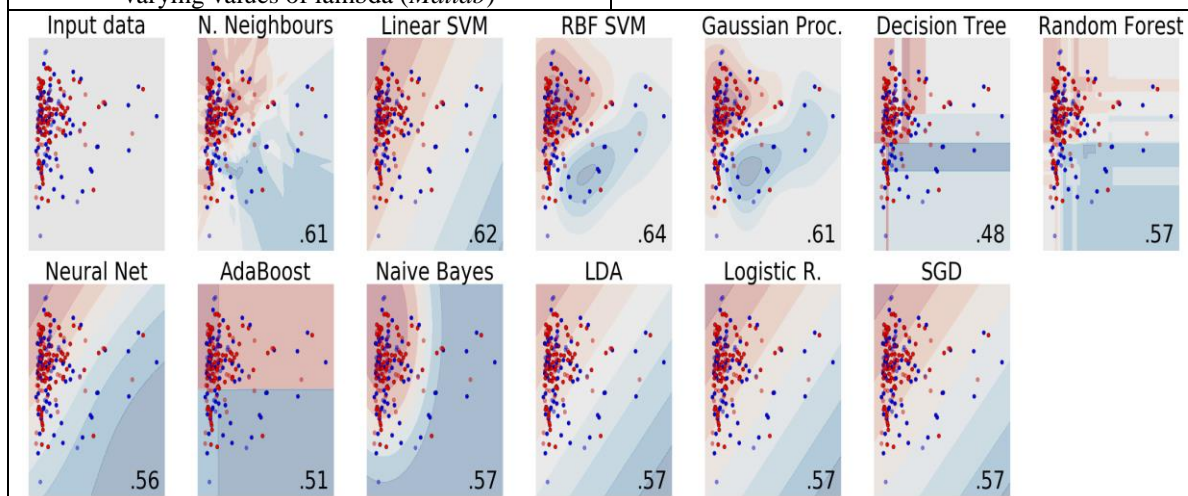
Kriging of air pollution (CO) data (*proc krige2d*,
proc variogram)

Ensemble supervised machine learning methods
(boosting, bagging, random subspace) (*Matlab*)

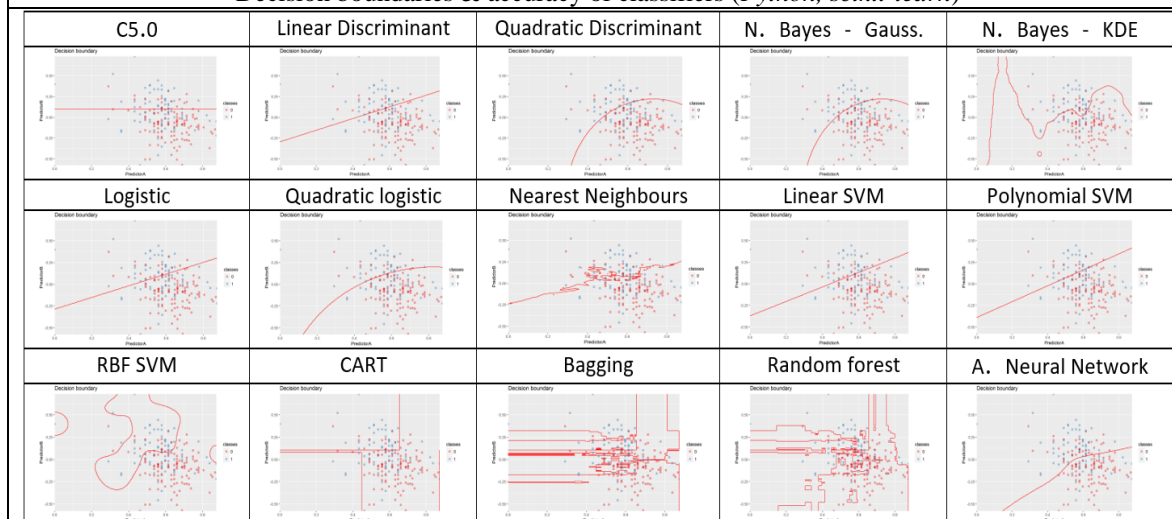


Lasso cross-validated deviance (95% CI) plot for 50 varying values of lambda (*Matlab*)

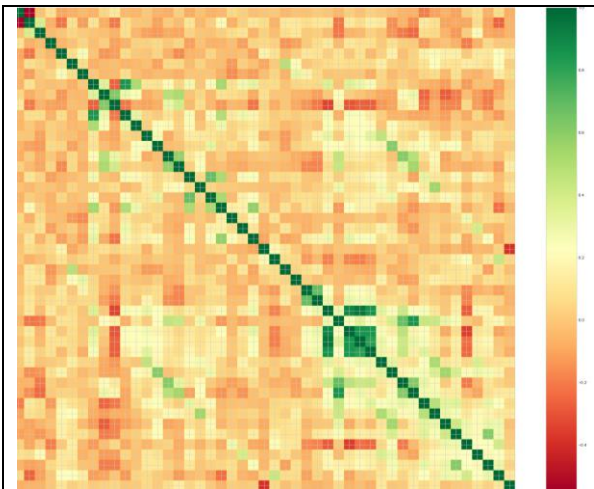
Lasso trace plot of coefficients (*Matlab*)



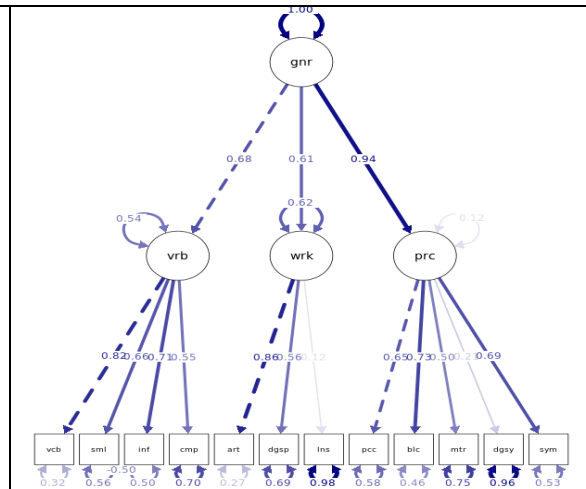
Decision boundaries & accuracy of classifiers (*Python, scikit-learn*)



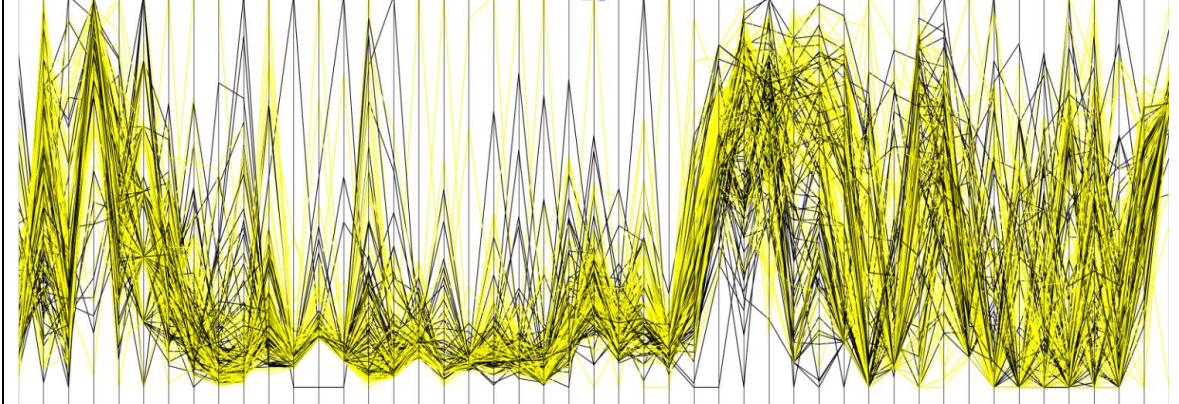
Decision boundaries of classifiers (package *caret*)



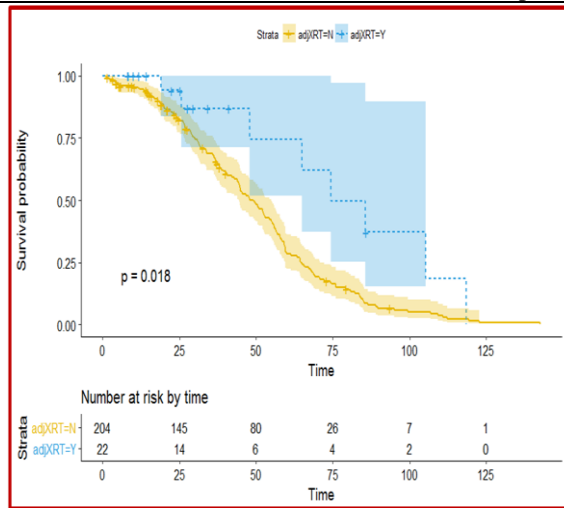
Correlation heat map after normalisation (*Python*)



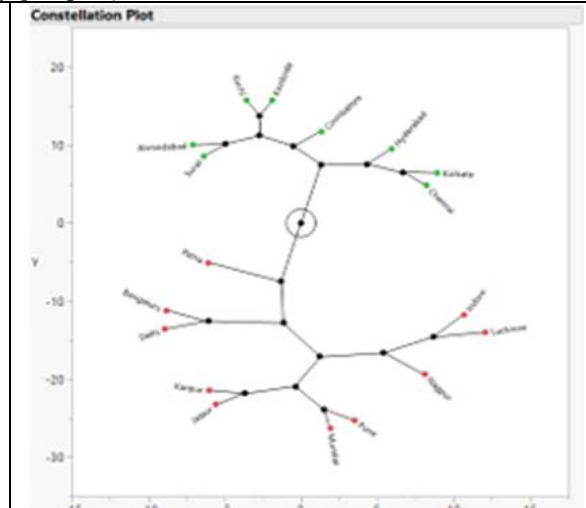
Hierarchical S.E.M. plot (package *lavaan*)



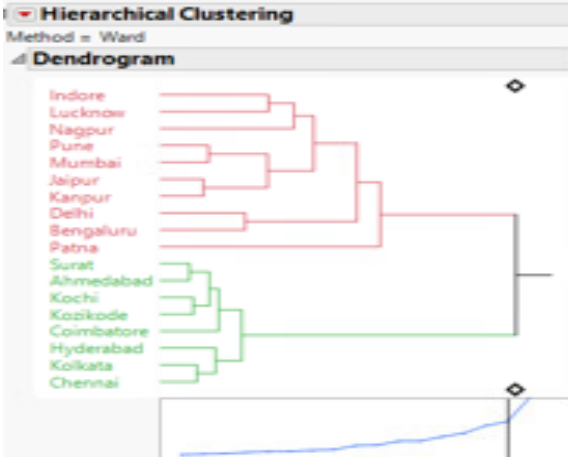
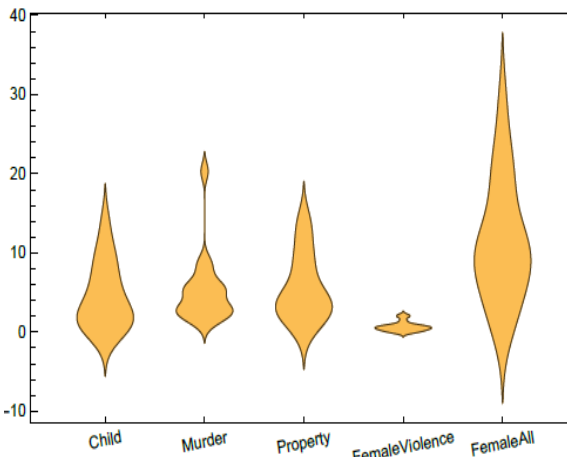
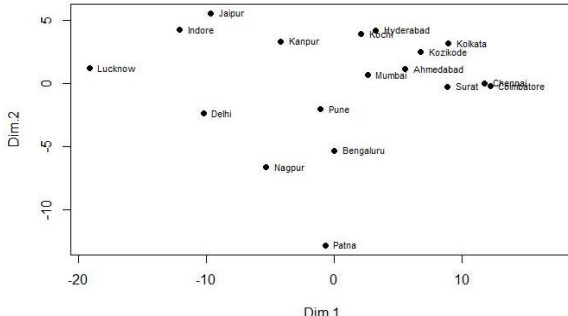
Parallel coordinates plot by group (*Python, seaborn*)



KM plot comparing RTX + CTX treated vs. untreated CRC patients (package *survminer*)



Constellation plot of 5 domains of crime scores in 18 Indian cities, showing 2 AHC clusters (Ward's) through a minimum spanning tree (*JMP*)

	
<p>Dendrogram of 5 domains of crime scores in 18 Indian cities, showing 2 clusters (Ward's method) (<i>JMP</i>)</p>	<p>Violin plot (akin to box plot) of 5 domains of crime scores in 18 Indian cities (<i>Mathematica</i>)</p>
	
<p>MDS of 5 domains of crime scores in 18 Indian cities (<i>cmdscale()</i>)</p>	