1. **The original data of the Recursive feature elimination (RFE) process of the feature selection with 10-fold cross-validation.**
2. **The original data of the optimal mtry selection with 5-fold cross-validation.**



1. **The description of partial dependence correlation analysis.**

**Description**

Description Partial dependence plot gives a graphical depiction of the marginal effect of a variable on the class probability (classification) or response (regression).

**Details**

The function being plotted was defined as:

 $\tilde{f}\_{\left(x\right)}=\frac{1}{n}\sum\_{n=1}^{n}f\left(x,x\_{ic}\right)$

where x is the variable corresponding to the chosen clinical characteristic, and xiC represents the other variables in the clinical information. The summand was the predicted logits (log of a fraction of votes) for classification:

 $f\left(x\right)=log\_{Pk}\left(x\right)-\frac{1}{k}\sum\_{j=1}^{k}log\_{Pj}⁡\left(x\right)$

where K is the number of classes, and Pj is the proportion of votes for class j.

References:

Friedman, J. (2001). Greedy function approximation: the gradient boosting machine, Ann. of Stat.

Greenwell BM. 2017. pdp: An R package for constructing partial dependence plots. *The R Journal* 9:421-436.