1 Design Matrix

1.1 Initial description

The design matrix is what relates the criteria $\vec{\beta}$ to a prediction of outcomes, $\vec{\tilde{y}}$.

$$\vec{\tilde{y}} = \hat{X}\,\vec{\beta} \tag{1}$$

And through manipulations of this relation, one can tweak β to arive at a good prediction for y on a statistical level. The accuracy of the prediction can then be measured through analysing the average errors between prediction and the known *training values.*