

$$\begin{array}{l} \textit{input} \textit{output} \textit{ssupervised learning} \\ XiXx_i^Tx_iY\hat{Y}\hat{Y}\hat{G} \\ X^T=(X_1,X_2,\ldots,X_p)Y \end{array}$$

$$\begin{array}{l} \hat{\beta}_0 \\ \beta \end{array}$$

$$RSS(\beta)=(y-X\beta)^T(y-X\beta)XN\times pyN\beta X^TX$$

$$\Pr(X,Y)$$