$$\hat{y}_i = x_i \hat{\beta}$$

$$\hat{\beta} = \frac{\sum x_i y_i}{\sum_j x_j^2} = \frac{1}{k} \sum x_i y_i \qquad , \quad k = \sum_j x_j^2$$

$$= \sum \frac{x_i}{k} y_i$$

$$\hat{y}_i = x_i \sum_j \frac{x_j}{k} y_j = \sum_j^n x_i \frac{x_j}{k} y_j$$

$$\text{sub } k \Rightarrow \quad a_{ij} = \frac{x_i x_j}{\sum_k x_k^2}$$