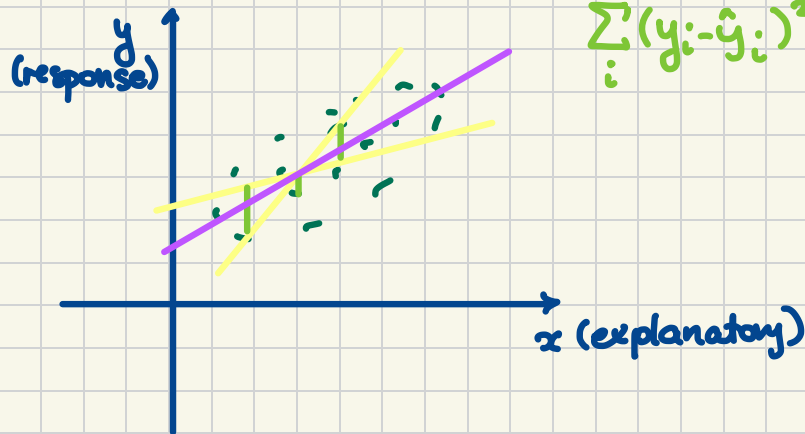
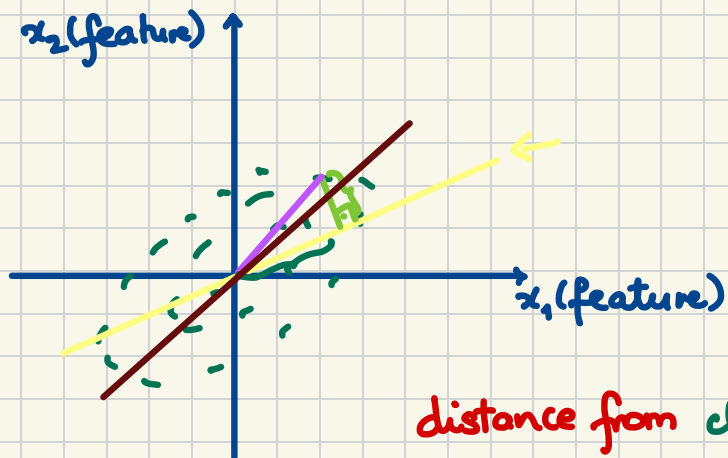


Geometry of Regression.



$$\sum_i (y_i - \hat{y}_i)^2 \rightarrow \text{min}$$

Geometry of Principal Components Analysis.



distance from cloud to line
 $\rightarrow \text{min}$

\Leftrightarrow

maximizing the variance