



$y$

$$\hat{y} = \hat{\beta}_0 + \hat{\beta}_1 \cdot x$$

$\bar{y}$

$x$

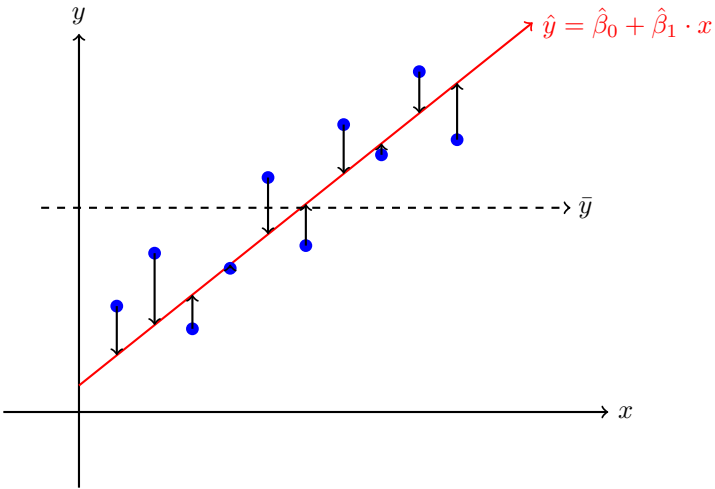


Figure 1: A simple linear regression illustration with residuals shown. Blue points are observed data, red line is the model, dashed line is the average of  $y$ , and black lines represent residuals  $y_i - \hat{y}_i$ .