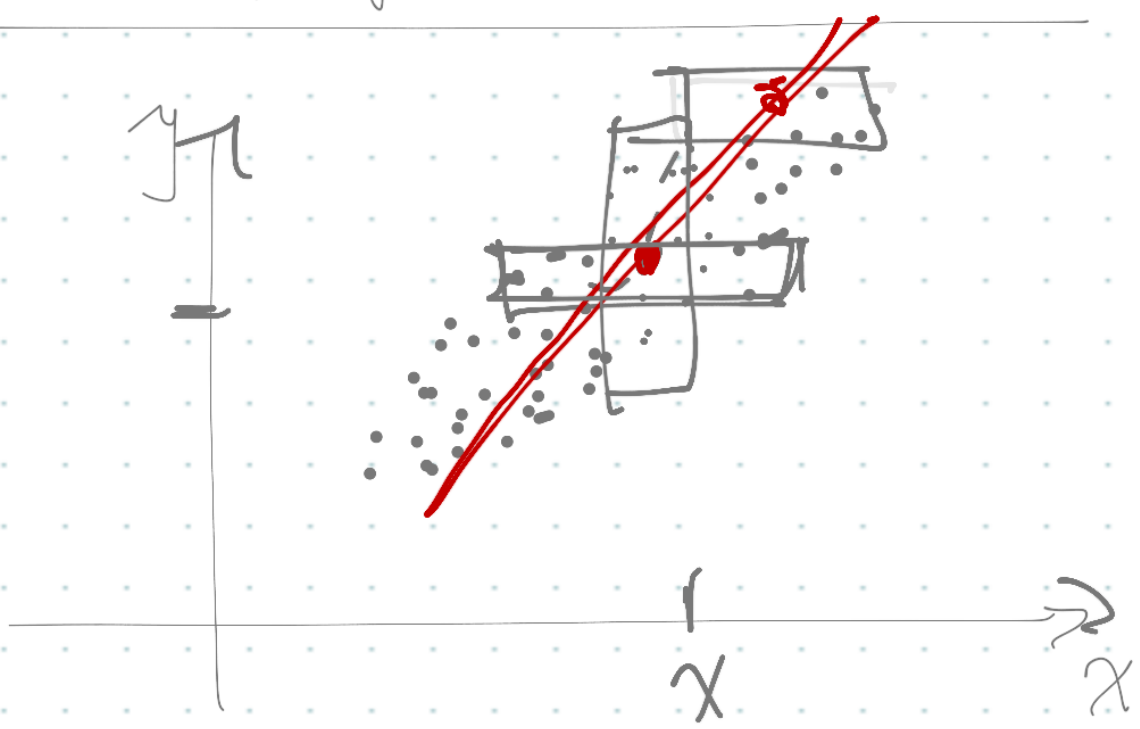
Two Regression Lines



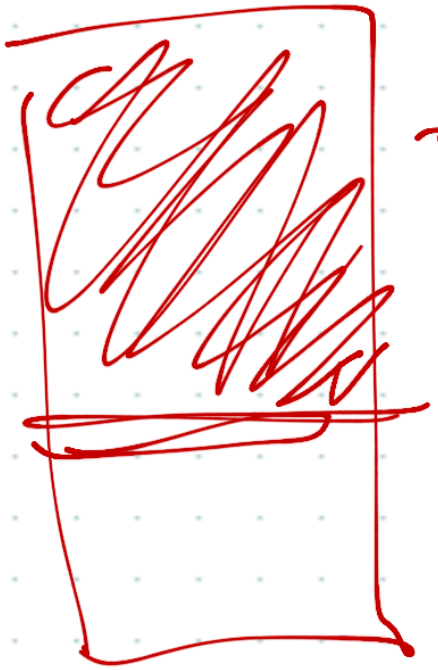
$$E(X \mid Y = y)$$

$$E(Y|X=x) = \mu_y + \rho\left(\frac{X-\mu_x}{\sigma_x}\right)\sigma_y$$

- Building Regression models for prediction
- RG ? ✓
-

$$y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$$

$$Y = \tilde{\beta}_0 + \tilde{\beta}_1 X_1 + \varepsilon$$



Training (build model)

testing (prediction)