

this time: ANOVA

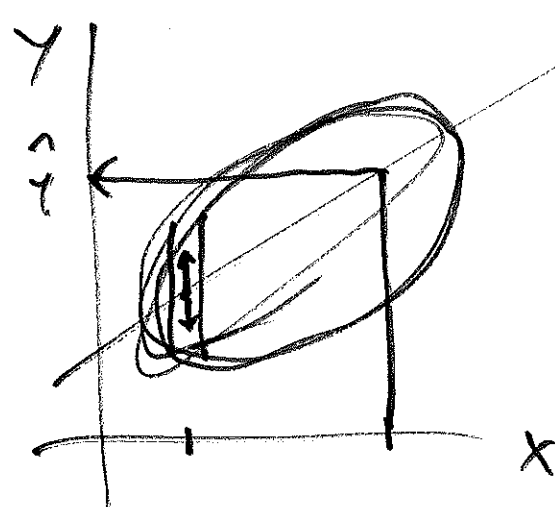
real: LN pp. L-302 → L-322

AM 57
29 Nov 18

next time: categorical data

today: LN pp. L-261 → L-286 ①

work 4 due by 11:59 pm on Fri 7 Dec 2018 @ canvas
 R-69 → R-72
 hours next M W F (hw 4)
 Tu Th



regression line for predicting y from x

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

$$SE(\hat{y}) = s_{y|x}$$

residual SD

= RMSE

uncertainty in

using \hat{y} to predict y L-261

$$y_i = \beta_0 + \beta_1 x_{i1} + \beta_2 x_{i2} + \dots + \beta_k x_{ik} + e_i$$

SD from normal e_i uses $s_{y|x}$

multiple linear regression (k=1 → simple linear regression)

L-269 | 1-way ANOVA

(2)

Fisher (1925)

L-275

L-271

L-272

$$n_1(\bar{y}_1 - \bar{y})^2 + n_2(\bar{y}_2 - \bar{y})^2 + \dots + n_I(\bar{y}_I - \bar{y})^2$$

↑
SSB

~~scribbled out text~~

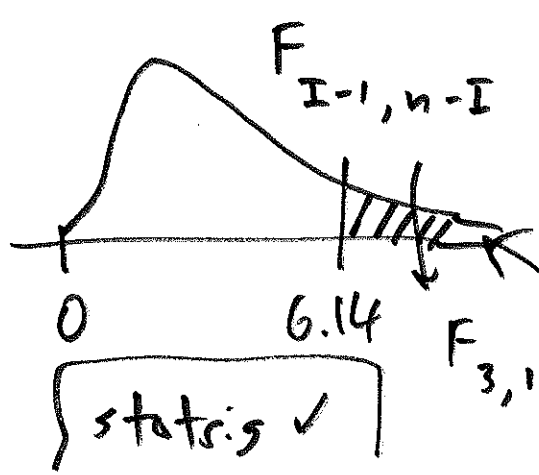
$$(n_1 - 1)S_1^2 + (n_2 - 1)S_2^2 + \dots + (n_I - 1)S_I^2$$

$$(n_1 - 1) + \dots + (n_I - 1)$$

= n - I

(12.50)

reject null if $p \leq 5\%$
↓
stat sig



low prob of F if null true & *

F_{3,16}

$\underline{P = .0056 = 0.6\%}$