

outcome
obs i

$$p(y_i | x_i, \hat{\theta}^{-i})$$

[Time = 250, mean-fix = 0.6]

↑ predictor obs i

n looic
WAIC

K

AIC_c

$$\frac{n}{K} < 40$$

$$\frac{100}{10} = 10$$

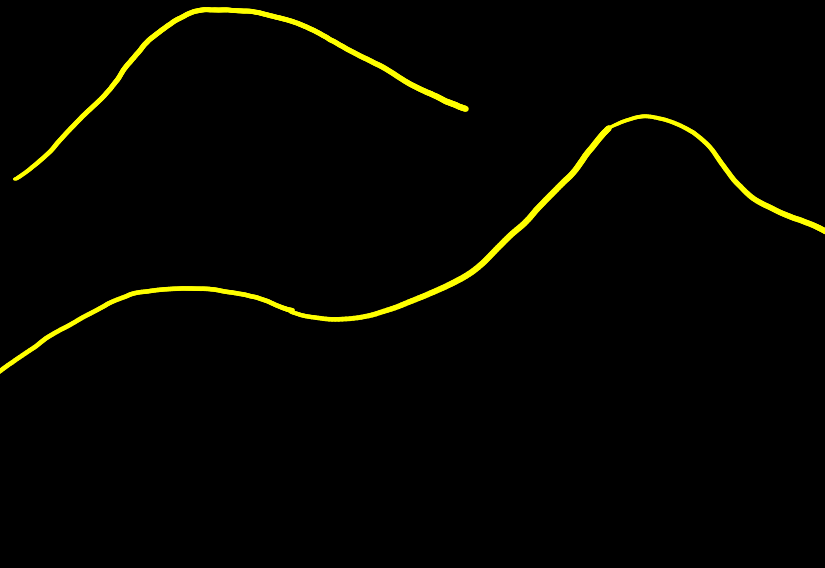
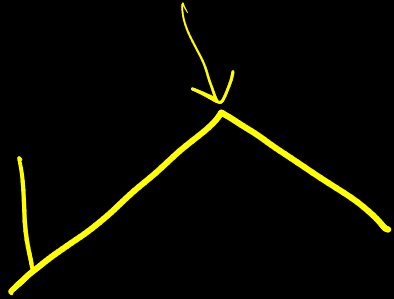
$$\frac{100}{2} = \underline{\underline{50}}$$

lower \Rightarrow AIC_c ✓
not low = AIC

$$AIC_c \rightarrow AIC$$

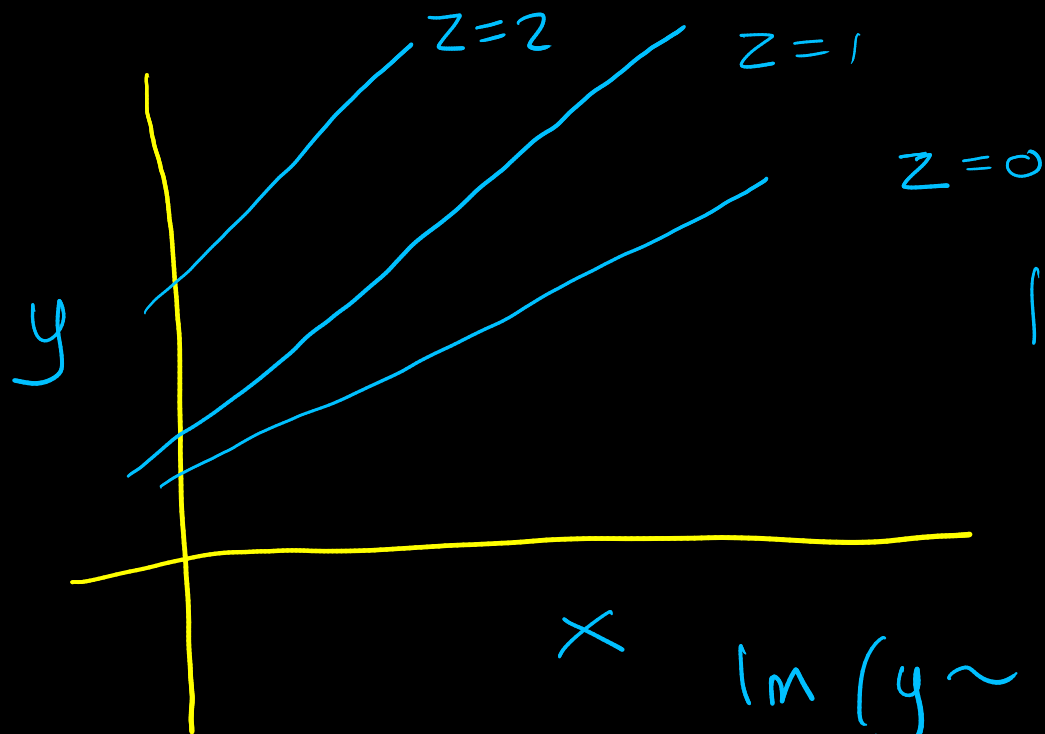
$$\frac{n}{K} \rightarrow \infty$$

piecewise linear



piecewise cubic polynomial
which join continuously

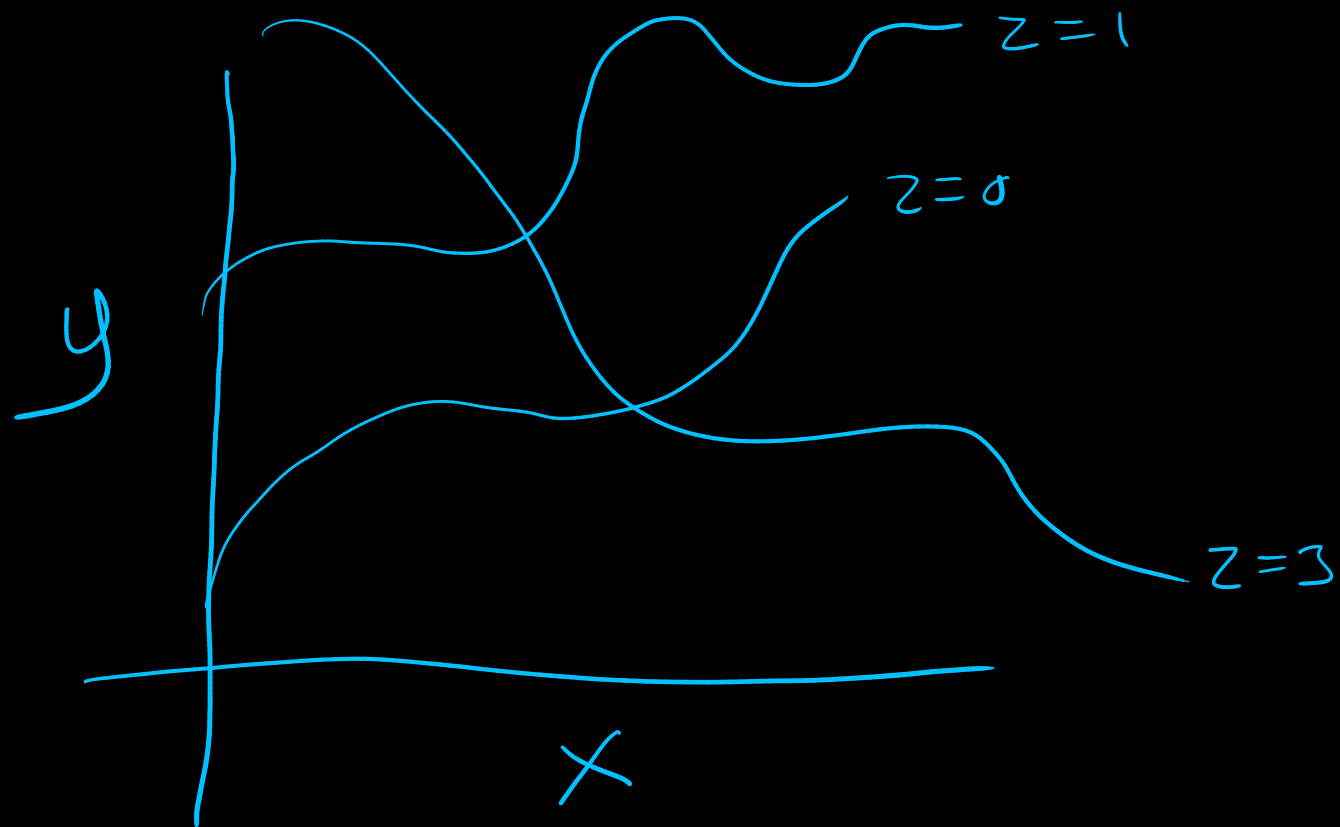
+



$$\text{Im}(y \sim x * z)$$

$$y \sim x + z + x : z$$

$$x \quad \text{Im}(y \sim \text{bs}(x) * z)$$



$$y \sim N(\mu, \sigma^2)$$

$$p(y) = \left[\frac{1}{\sqrt{2\pi\sigma^2}} \right] e$$

$$- \frac{|y - \mu|^2}{2\sigma^2}$$

$$- \frac{|x - \mu|^2}{2\sigma^2}$$

$$\phi(x) = e$$



$$(y_1, n_1, d_1), (y_2, n_2, d_2) \dots (y_{15}, n_{15}, d_{15})$$

$$\downarrow$$

$$(1346, 1443, 2), (577, 694, 3) \dots$$

$$\left[\begin{array}{l} y_i \sim \text{Binomial}(\theta_i, n_i) \\ \log \left[\frac{\theta_i}{1-\theta_i} \right] = F(d_i) \end{array} \right.$$

$$\xrightarrow{\quad} \beta_0 + \sum_{k=1}^K \beta_k \phi_k(d_i)$$