

Beyond Linear Regression

$$y = ax^2 + bx + c$$

$$x = [x_1^2, x_1, 1] : \text{imagine our observation has single feature } [x = x_1]$$

$$\rightarrow y = \theta_0 + \theta_1 x_1 + \theta_2 x_1^2$$

if $x = [1, x_1, x_1^2]$
at linear regression

$y = x\theta$ & we're right back