

$x_1 = k x_2$ (linearly dependent)

$\hookrightarrow x_1 = (3.28)^2 x_2$

\rightarrow If $x_1 = k x_2$ then $X^T X$ is non-invertible

\rightarrow Too many features (Eg $m \leq n$) $\Rightarrow \begin{matrix} m=10 \\ n=101 \end{matrix}$

$\checkmark \hookrightarrow$ Delete some features

\Downarrow
 $\theta \in \mathbb{R}^{101}$

sometimes
work

, or use regularization

but, not always \Rightarrow there is too little data.