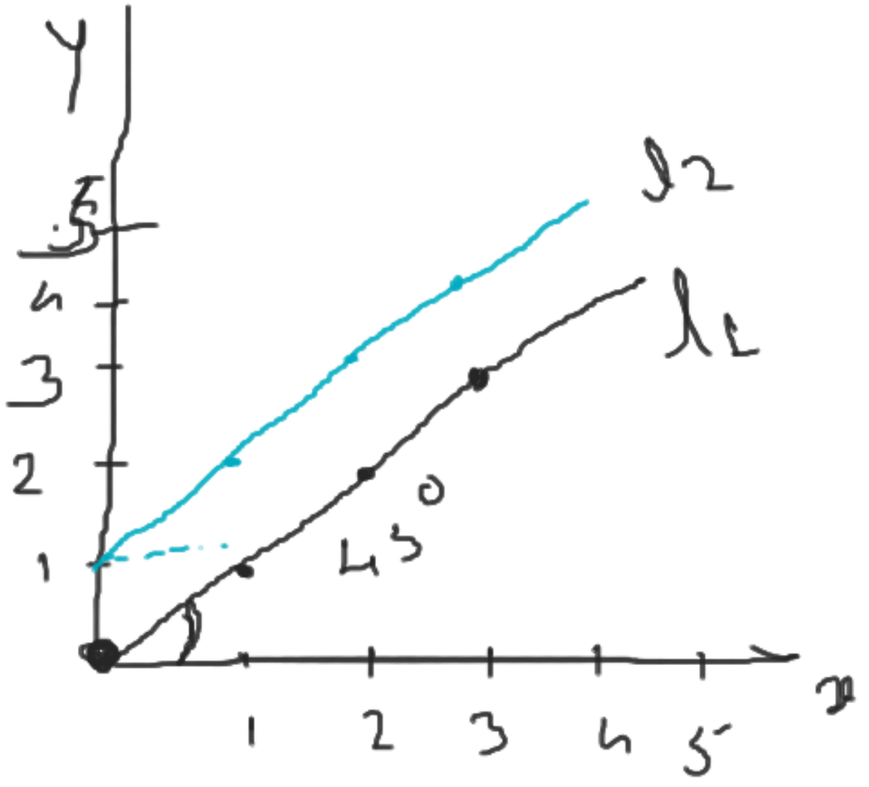
Line equation



when $y = x$

$\tan 45 = 1$

$y = 1x$

$y = mx$

$y = \tan 45 (x)$

When $y \neq x$

constant will be there.

when $x = 0$

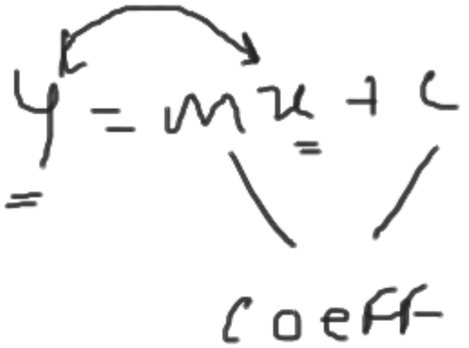
what is $y = ?$

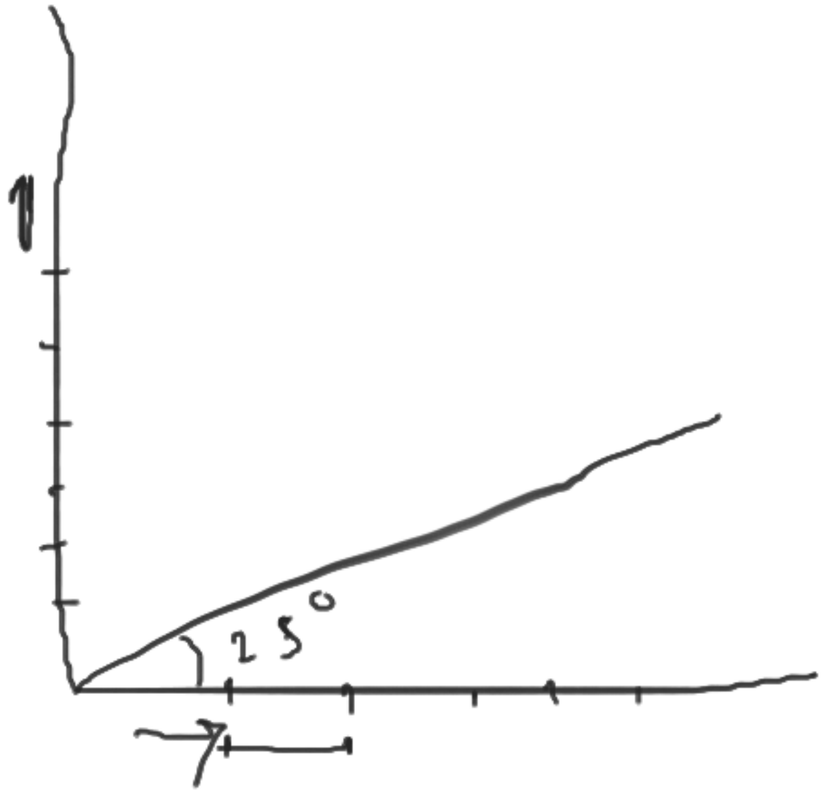
Constant intercept

$l_1 =$ $y = mx$

$l_2 =$ $y = mx + c$

BFL Forming / model





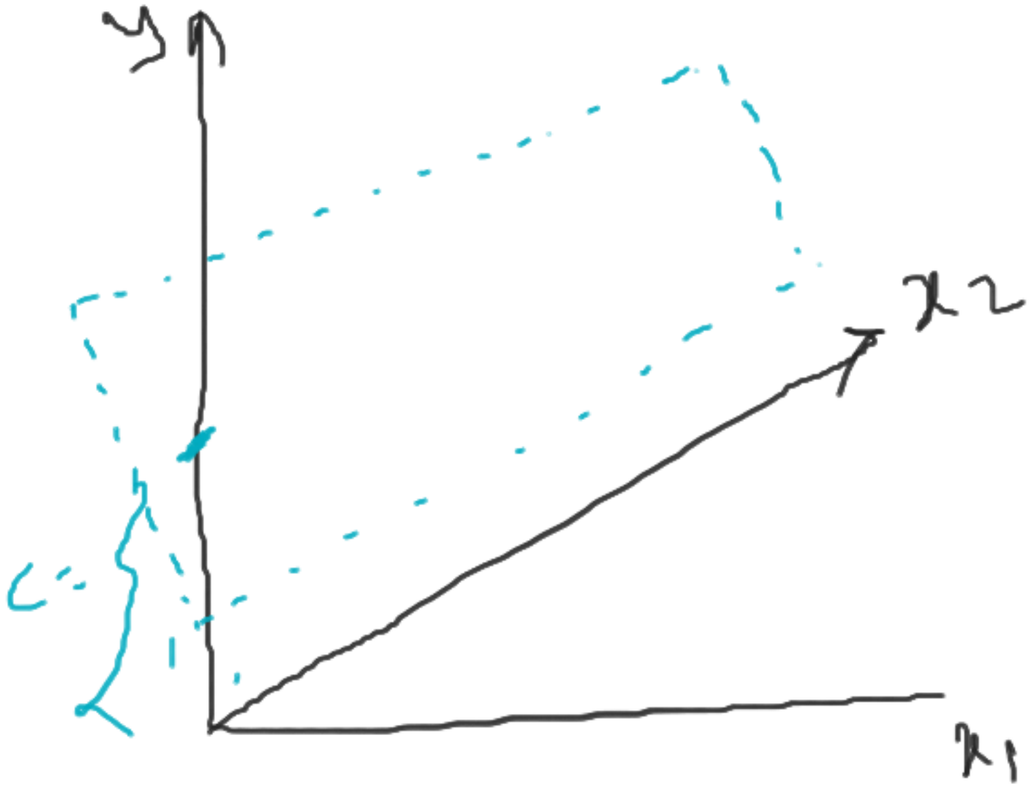
$y = mx + c$

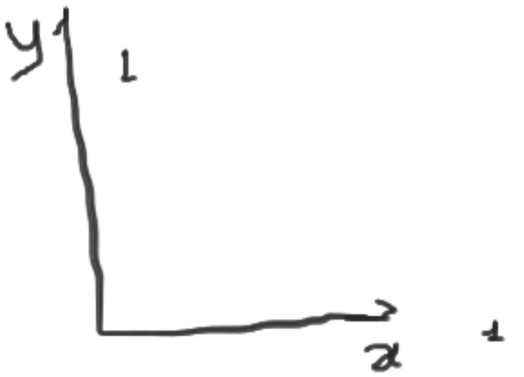
$= \tan(25) \times x + C$

what's tan 15

When we have multiple features

$y = m_1 x_1 + m_2 x_2 + c$

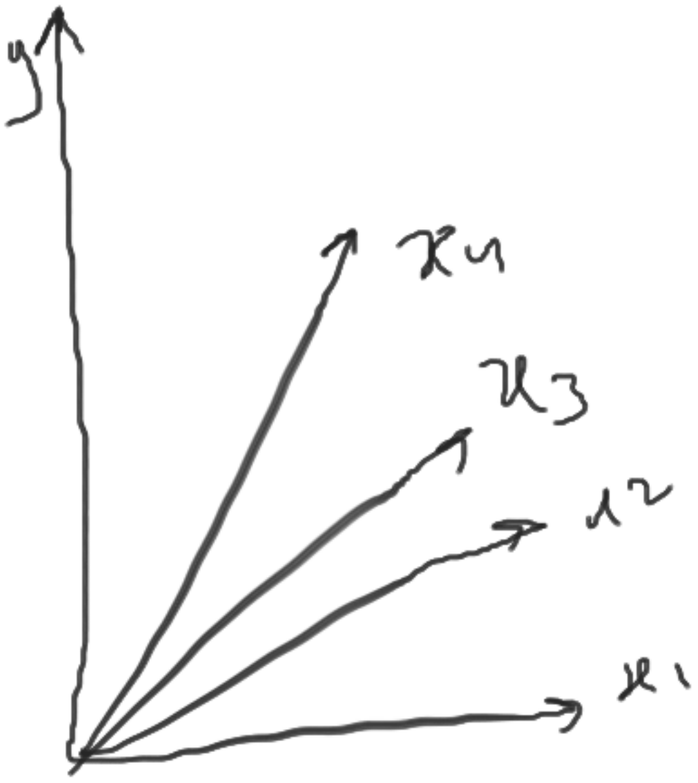




feature space 3D

model d = 2D

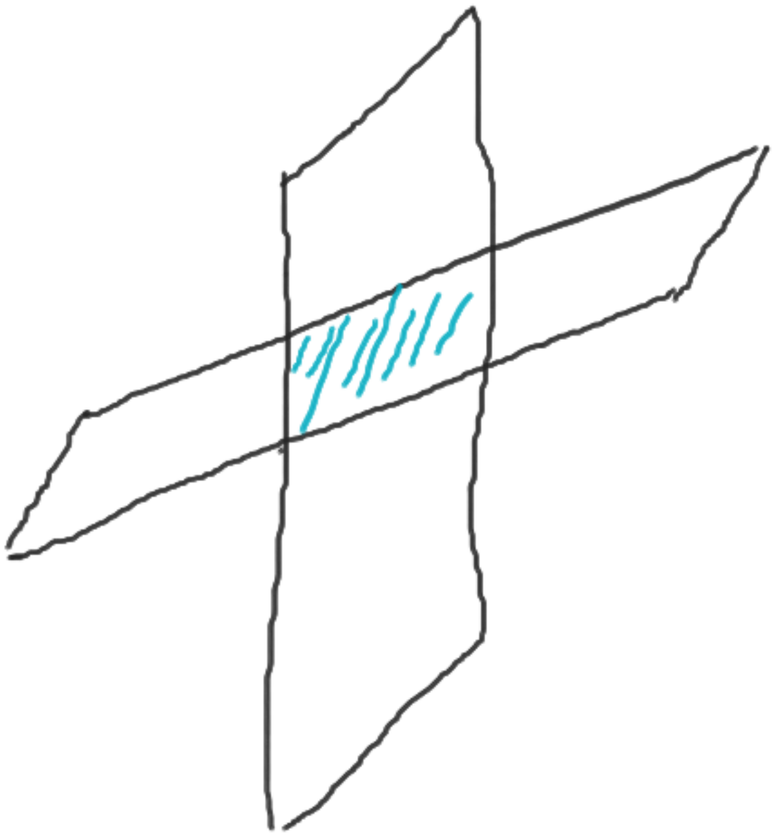
5-13

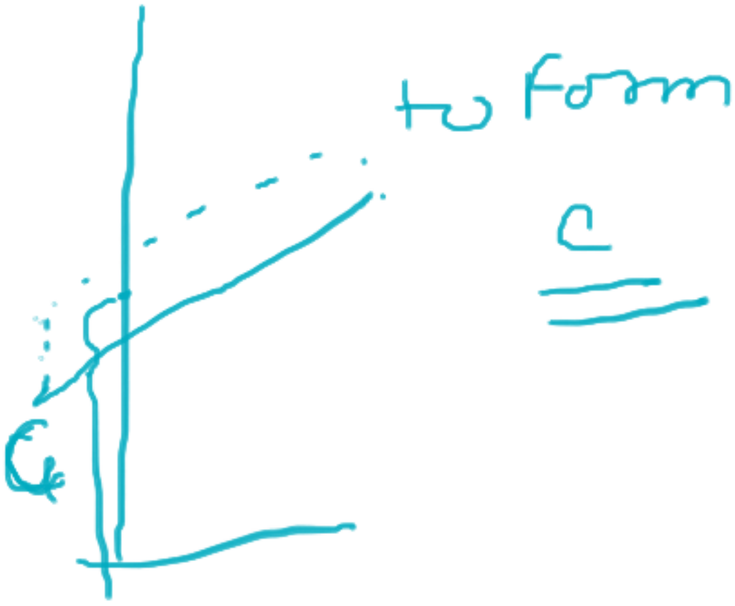


feature space = dimensions
ind + dep

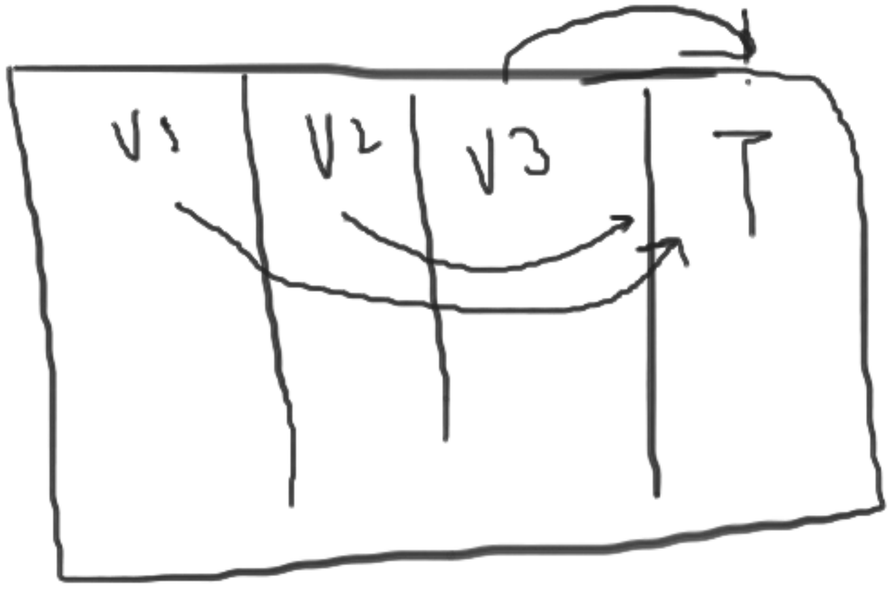
model dimen : ind

how planes cuts 4 axes to form C





Independence: ind var are ind to each other

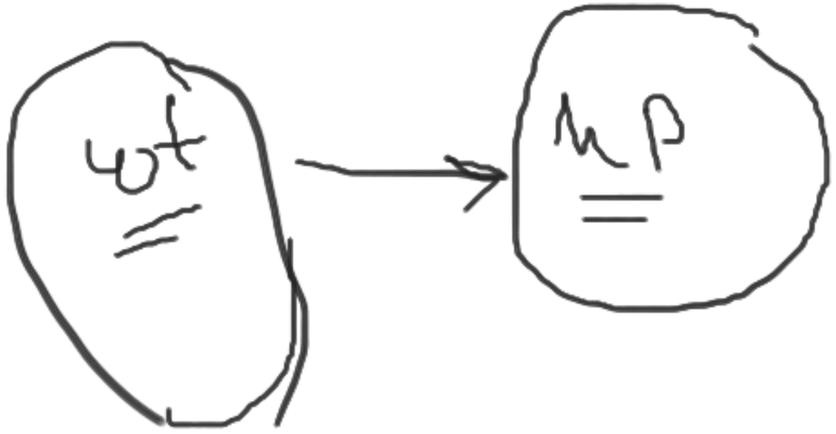


$V1 \not\perp\!\!\!\perp y \mid T$

$V2 \not\perp\!\!\!\perp y$

$V3 \not\perp\!\!\!\perp y$

more wt more hp

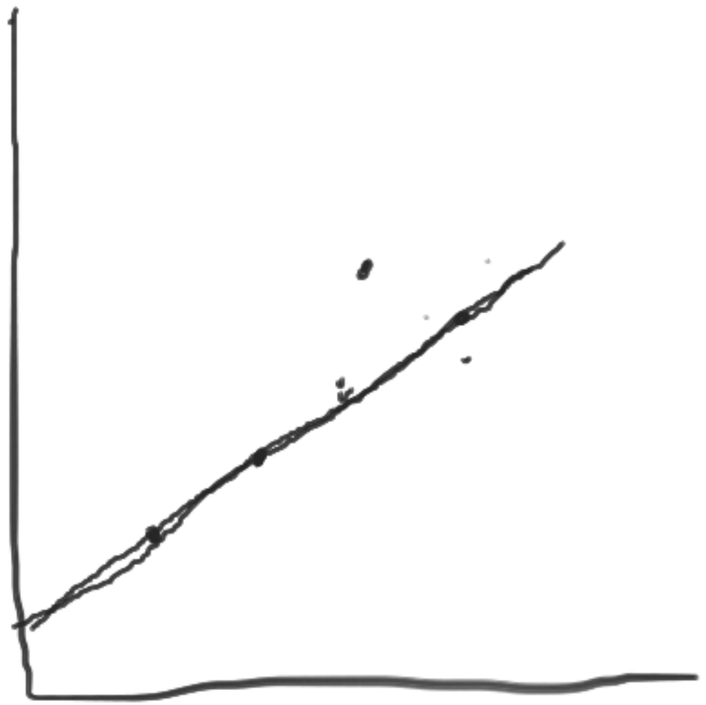


speed (y)

This problem is problem of

colinearity

$V_1 > V_2$



$y = w_1 x_1 + w_2 x_2 + \dots + w_{50} x_{50}$

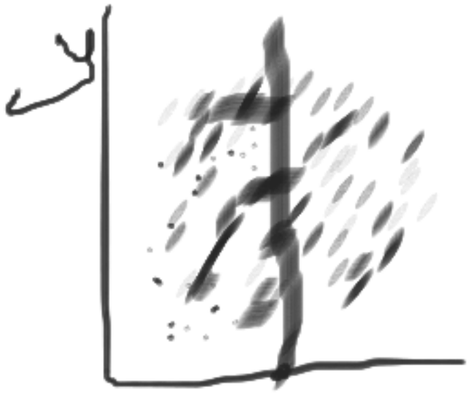
correlation = -1 to $+1$

$-1, -0.5, 0, 0.5, 1$

$=$

↓

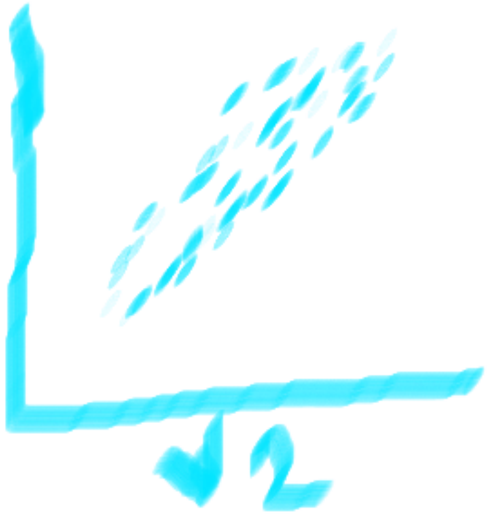
no linear relation



Bad

Predictor

NO correlation



Good

predictor

+ve corr

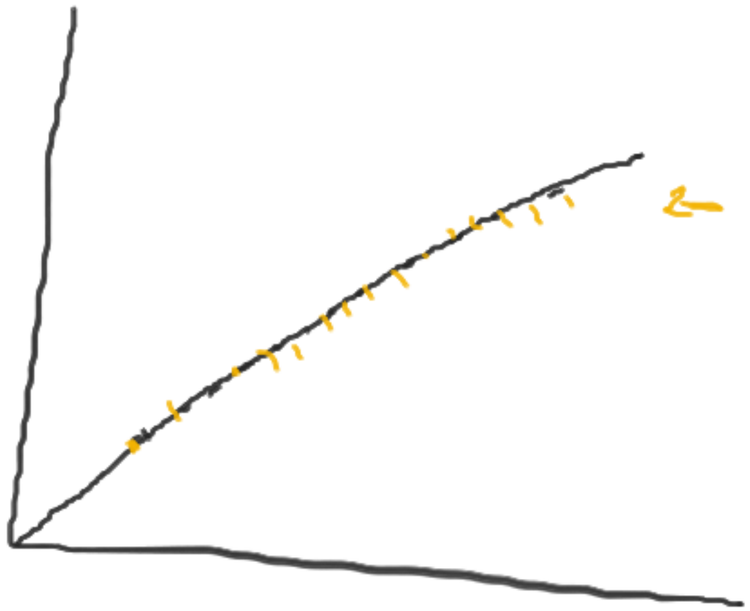
Good

predictor

-ve corr

R-value = Coeff of correlation

Ideal solution => Doesn't exist



← Ideal line

R = 1 $\quad$ x = y

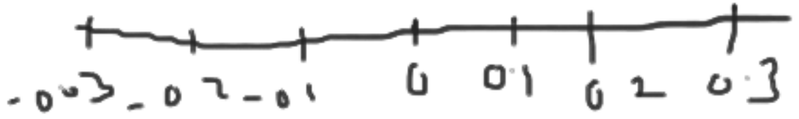
R value

+0.7 to +1
-0.7 to -1

} Good Predictors

R value

-0.3 +0 +0.3



} Bad Predictors