Multiple Linear Regression

$$Y = mx + C$$

Linear Reg

① I/P → 1 o/p

$$Y = mx + C$$

$$Y = \beta_1 x_1 + C$$

L.R

x_1, x_2, x_3

↳

$$Y = \beta_1 x_1 + \beta_2 x_2 +$$

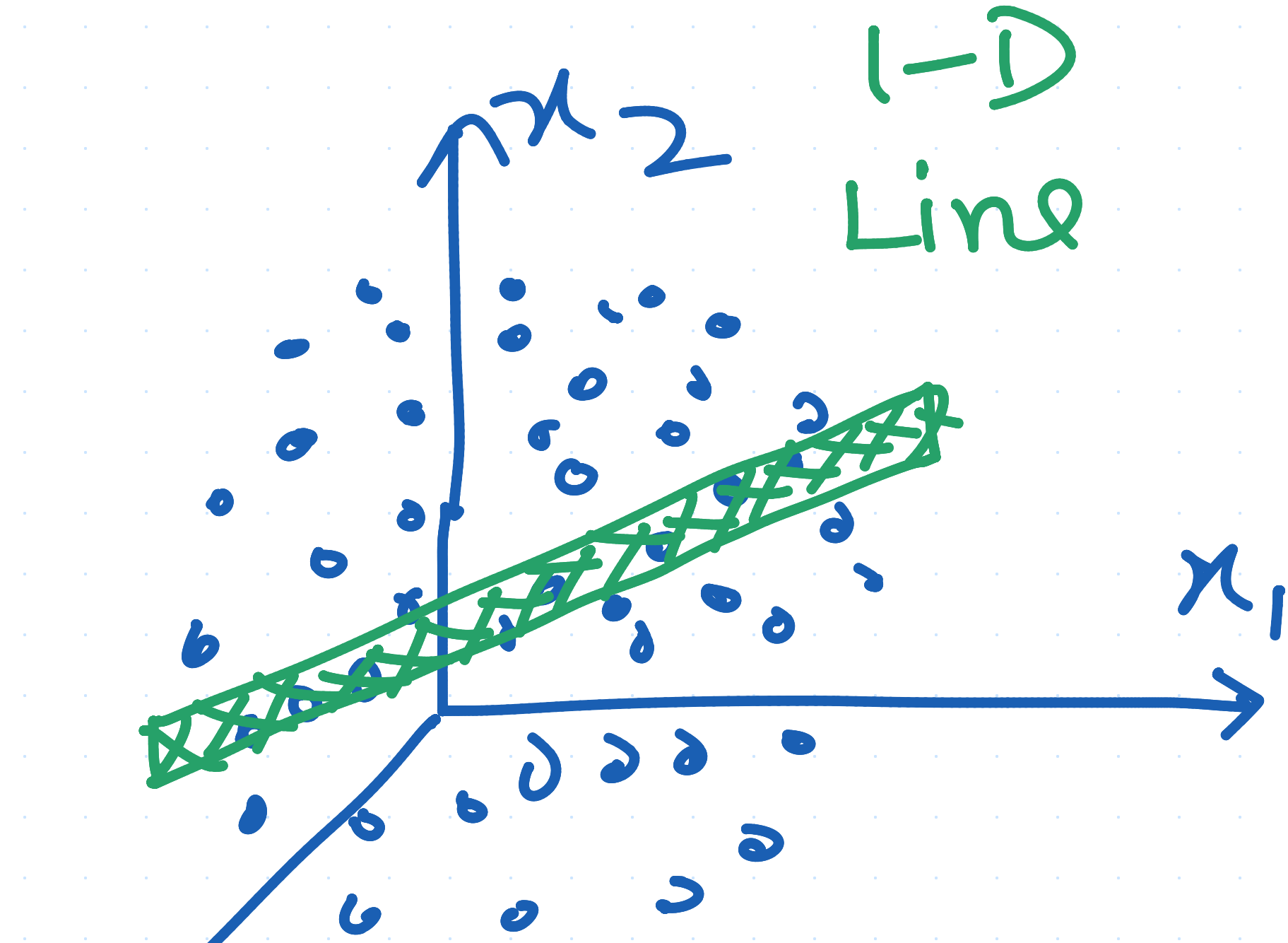
$\beta_3 x_3 + \boxed{\beta_0} \rightarrow$ offset

where

$\beta_1, \beta_2 -- \beta_n$

$\hookrightarrow$ weights

$\beta_0 \rightarrow$ offset



1-D
Line

2-D → Plane

3-D
↳ n-d → Hyper plane

$$Y = \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \underline{\beta_0}$$

$$Y = \sum_{i=1}^{n} \beta_i x_i + \beta_0$$