

Model 1

- a model in ML is a mathematical representation that is trained to recognize patterns in data and make predictions or classifications based on those patterns.

(Ex of common type)

- a mapping function between input and output

input, Feature,
independent var

var 1

Model

output, target,
dependent var

var 2

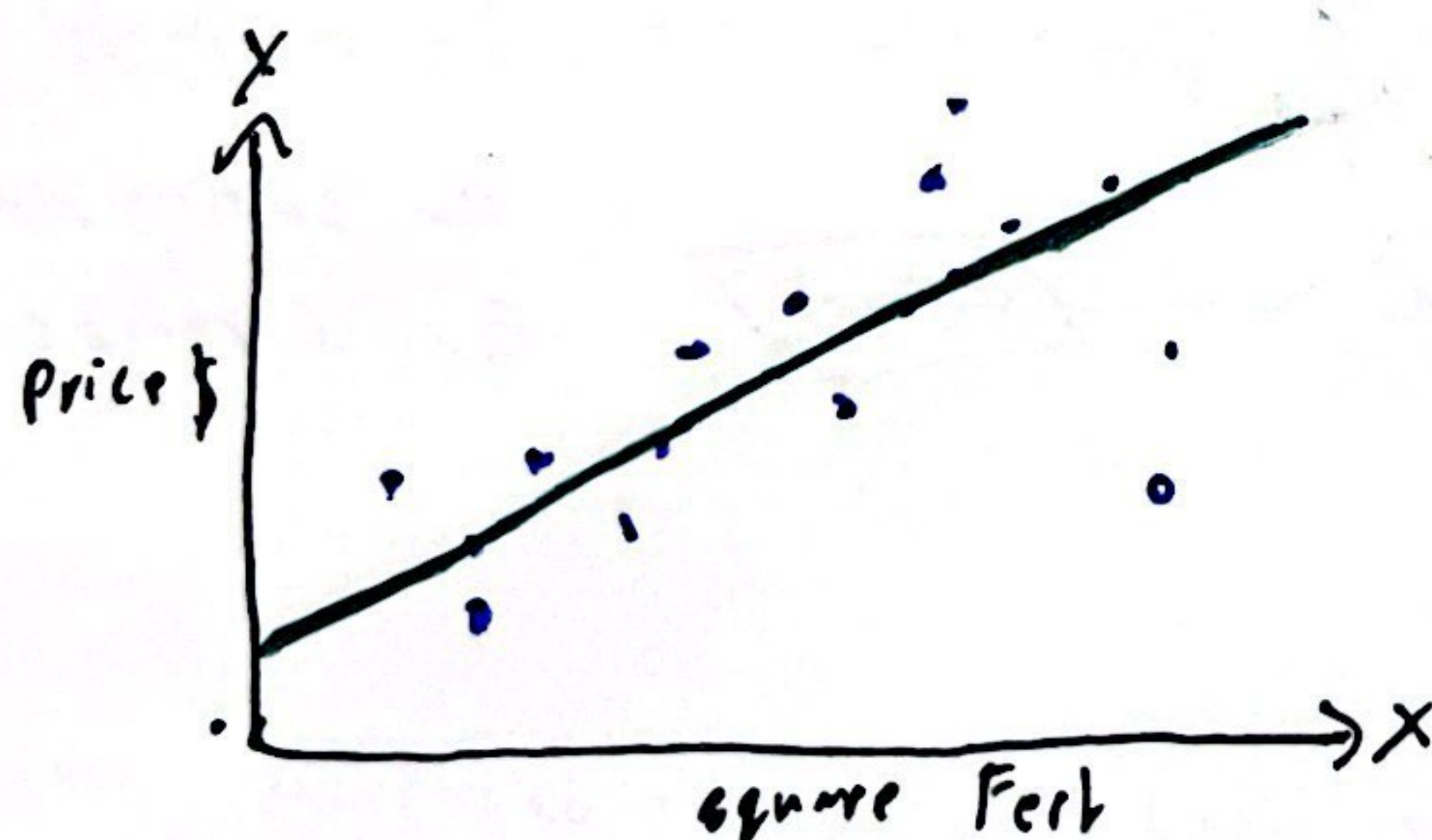
* in linear regression the model is the final

regression line : $Y_i = \beta_0 + \beta_1 X_i$

\downarrow \downarrow \downarrow
 dependent var const / intercept slope / coefficient
 var independent var

Ex: we might have a model that predicts house prices based on square footage of house.

- this model predicts a linear relationship



- here we plot all house prices against sq ft and put a line of best fit through it
we find it says: on avg each sq foot add 200 \$ / sqft

Then $Y(x) = 200x + 1000$

- the model is the intercept / slope of the line

* Now after training if we want to predict price of 250 sqft house

\Rightarrow sqft = 250

Model: $200x + 1000 = 200(250) + 1000$

$= 51,000 \$$ is the prediction of the model