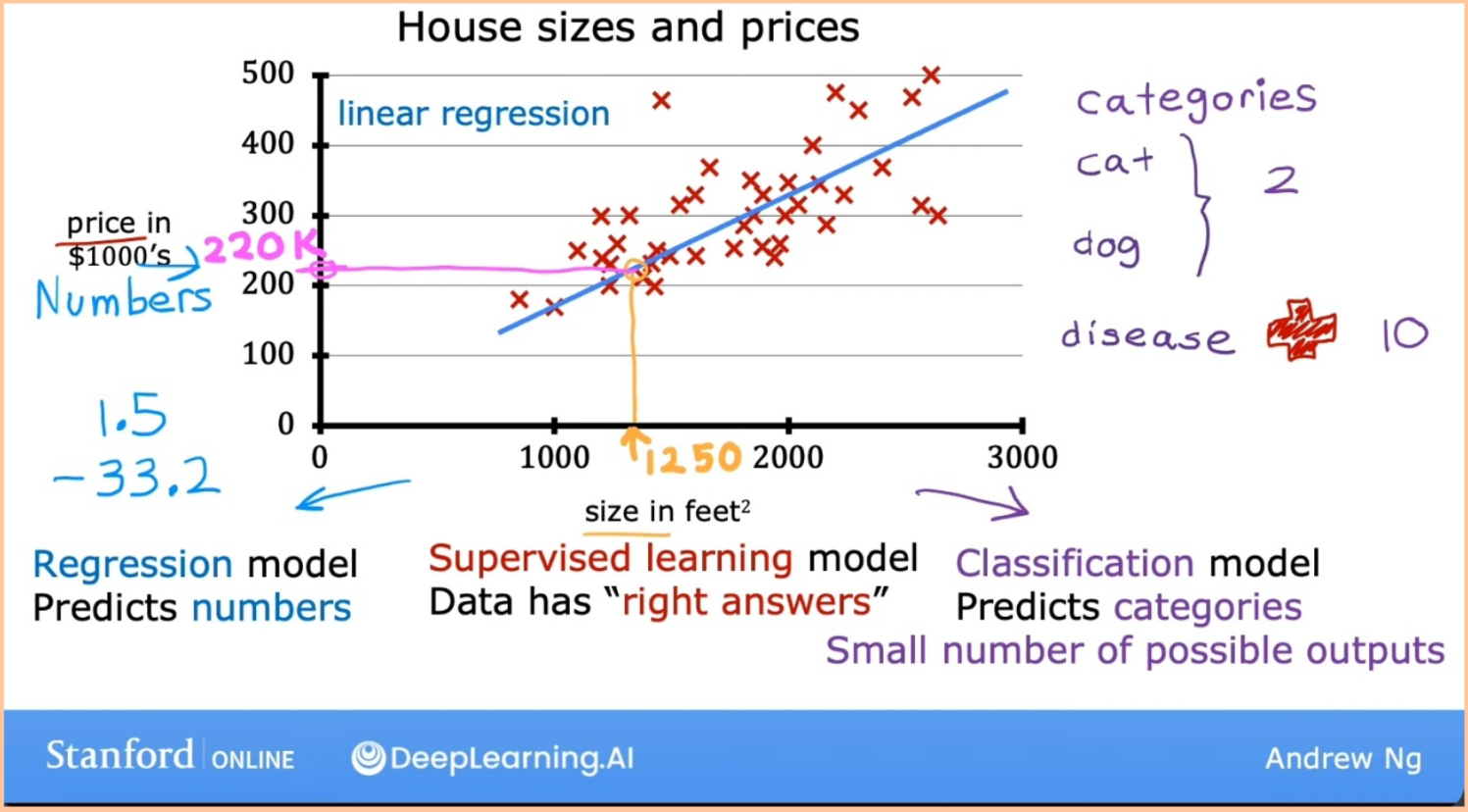
→ Linear Regression is just draw a straight line to the data



→ Let's say we draw a blue line using this algorithm.

→ Now based on this line we can predict any output based on input.

→ It is regression model since it predicts variety of numbers

→ We found this graph from a Data table:

Data table

size in feet²	price in $1000's
2104	400
1416	232
1534	315
852	178
…	…
3210	870

Stanford ONLINE DeepLearning.AI Andrew Ng

→ Terminology:

Terminology

Training set: Data used to train the model

	x size in feet²	y price in $1000's
(1)	2104	400
(2)	1416	232
(3)	1534	315
(4)	852	178
…	…	…
(47)	3210	870

$m = 47$

$x^{(1)} = 2104$ $y^{(1)} = 400$

$(x^{(1)}, y^{(1)}) = (2104, 400)$

$x^{(2)} = 1416$ $x^{(2)} \neq x^2$ not exponent

Notation:

x = "input" variable
feature

y = "output" variable
"target" variable

m = number of training examples

(x, y) = single training example

$(x^{(i)}, y^{(i)})$

$(x^{(i)}, y^{(i)})$ = i^{th} training example

index (1st, 2nd, 3rd …)

Stanford ONLINE DeepLearning.AI Andrew Ng

→ x = input

→ y = output / target

→ m = how many examples we have

Rest in the pic, Color seperated.