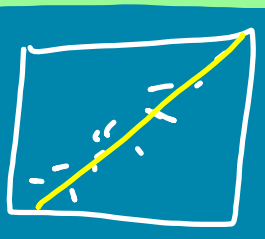
October 9, 2025

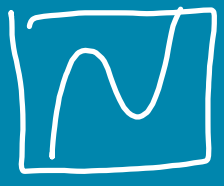
Regression

Linear

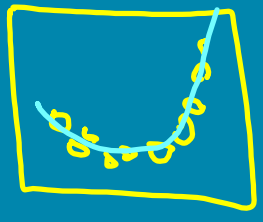


Cubic

$y = x^3 + x^2 \ldots$

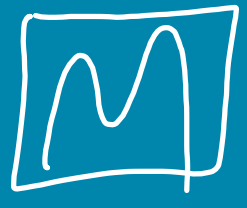


Quadratic



Quartic

$y = x^4 + \ldots$



Exponential

(Natural) Logarithmic

$y = a + b\ln(x)$

Power

$y = ax^b$

$b = 2$

$b = 3$

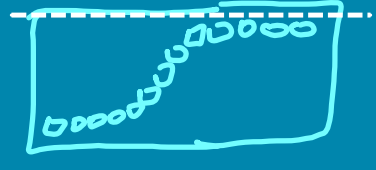
$b = \frac{1}{2}$

$b = \frac{1}{3}$

$b = -2 - \frac{1}{x^2}$

Logistic

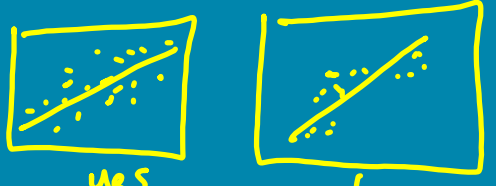
$y = \frac{c}{1 + ae^{-bx}}$



carrying capacity

Key Conditions:

1) Are the points evenly balanced on each side of the curve?



yes

No

2) r^2 = coefficient of determination
- describes how well the curves fits the points

r = correlation coefficient
- describes the relationship between the x- & y- coord.

3) How well does it predict the future?

Predictions

1) Run regression on spreadsheet page.

Know x-coord
Table (Ctrl-T)

Know y-coord
Graph & Intersect