## Linear Regression

*Supervised Learning*

Finds the relationship between two variables on a -1 to 1 scale (with a scalar var input). + meaning as one increase the other is likely to aswell. – meaning as one increase the other is likely to decrease. Values closer to zero suggest there is no relationship. (-+1-0.5 strong, +-0.4-0.2 med below that is weak).

**Common uses -** Predicting/Forecasting

**Examples -** Agricultural scientists often use linear regression to measure the effect of fertiliser and water on crop yields.

For example, scientists might use different amounts of fertilizer and water on different fields and see how it affects crop yield. They might fit a multiple linear regression model using fertilizer and water as the predictor variables and crop yield as the response variable