

# Model CW

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## 1 Regression

The role of Regression is to generate a model to represent the relationship between the given data. In order to accurately predict the model the error (also known as residual) between the given data and the predicted data is minimised (The predicted data, is that given by the model). In this coursework (and in general) the error is calculated using a square error, in order to prevent negative and positive errors from cancelling each other out. The formula for this is as follows:

$$\Sigma(y - \hat{y})^2 \tag{1}$$

where  $y$ , is the given data, and  $\hat{y}$  is the predicted data calculated by the estimated model.