**TTA HOME LEARNING TASK**

Linear regression

* Linear regression is supervised learning. It performs a regression task, regression models based on a target prediction value based on independent variables. It is mostly used for finding out the relationship between variables and forecasting.

Logistic regression

* Logistic regression is supervised learning because it uses true labels for statistical analysis; it is often used for predictive analytics and modelling, and extends to applications in machine learning.
* It is used in statistical software to understand the relationship between the dependent variables by estimating probabilities using a logistic regression equation. This can help predict the likelihood of an event happening or a choice being made.

Decision tree

* Is a supervised learning technique that predict values of responses by learning decision rules derived from features. This can both be used in the regression and classification context.
* DT/CART models are an example of a more general area of machine learning known as adaptive basis function models. These models learn the features directly from the data rather than being prespecified. Example in quantitative finance ensembles of DC/CART models are used in forecasting, either future asset prices/directions or liquidity of certain instruments.