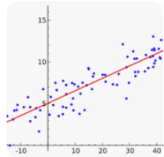Home Learning Task 7

Task 1:

Select one or more choices from the list of common Machine Learning Algorithms, do some investigations and write me a short summary. I am looking for the following:

• Is it Supervised/Unsupervised/Reinforcement learning?	• Linear Regression
• What does the algorithm do?	• Logistic Regression
• In which situations will it be most useful?	• Decision Tree
• (Optional) Can you find any examples of where this algorithm has been used?	• SVM (Support Vector Machine)
	• Naive Bayes
	• KNN (K-Nearest Neighbours)
	• K-Means
	• Random Forest

Answer to HLT 7, Task 1	Linear Regression
• Is it Supervised/Unsupervised/Reinforcement learning?	It is a Supervised Machine Learning model.
• What does the algorithm do?	The model aims to model the relationship between a certain number of features and a continuous target variable. i.e it finds the linear relationship between the dependent and independent variable. Linear regression
• In which situations will it be most useful?	Making prediction to predict the value of a variable based on the value of another variable. A proven way to scientifically and reliably predict the future. Organisations collect masses of data, and linear regression helps to use that data to better manage reality — instead of relying on experience and intuition. Linear regression can take large amounts of raw data and transform it into useful information. For example, performing an analysis of sales and purchase data can help uncover specific purchasing patterns on particular days or at certain times. Programs can perform the linear regression method: Sklearn linear regression Linear regression Python
• (Optional) Can you find any examples of where this algorithm has been used?	Linear regression is used in everything from biological, behavioural, environmental and social sciences to business.