Answer 1 :

I don’t think that DL will completely replace ML because DL is just a part of ML on large data sets. DL has high hardware requirements and though, being more advanced, many companies would fail to sustain its budgets enough to afford DL as a permanent measure.

Answer 2 :

Supervised learning-

Pros-

* We have an exact idea about the classes in the training data.
* Supervised learning is a simple process for us to understand. In the case of unsupervised learning, we don’t easily understand what is happening inside the machine, how it is learning, etc.
* It is possible to be very specific about the definition of the classes, that is, we can train the classifier in a way which has a perfect decision boundary to distinguish different classes accurately.

Cons-

* Supervised learning is limited in a variety of senses so that it can’t handle some of the complex tasks in machine learning.
* Supervised learning cannot give you unknown information from the training data like unsupervised learning does.
* It cannot cluster or classify data by discovering its features on its own, unlike unsupervised learning

Unsupervised learning-

PROs-

* It can detect what human eyes can not understand
* The potential of hidden patterns can be very powerful for the business or even detect extremely amazing facts, fraud detection, etc.
* Output can determine the unexplored territories and new ventures for businesses. Exploratory analytics can be applied to understand the financial, business and operational drivers behind what happened.

CONs-

* As seen in the above explanation unsupervised learning is harder as compared to supervised learning.
* It can be a costly affair, as we might need external experts to look at the results for some time.
* The usefulness of the results; are of any value or not is difficult to confirm since no answer labels are available.

Reinforcement learning-

PROs-

* Reinforcement learning can be used to solve very complex problems that cannot be solved by conventional techniques.
* The model can correct the errors occurred during the training process.
* Once an error is corrected by the model, the chances of occurring the same error are very less.

CONs-

* Too much reinforcement learning can lead to an overload of states which can diminish the results.
* Reinforcement learning is not preferable to use for solving simple problems.
* Reinforcement learning needs a lot of data and a lot of computation. It is data-hungry. That is why it works really well in video games because one can play the game again and again and again, so getting lots of data seems feasible.