# Assignement 1 Medical machine learning

Q1 :

A first example would be for finding a perfect diet for a person based on its age, gender, weight, fat mass, sports activities and location (to find products that are not too difficult to get from nearby supermarkets). There could be an incredible number of nutrition possibilities, especially when the person wants to vary the food, he/she is eating every day. The deep learning algorithm could try to come as close as possible to the optimal diet. This would surely need to a lot of data and computing power. So, this would maybe take a long time to become reality.

Another example is about social media picture. It is so difficult to find the most attractive filter for a picture. But using a lot of image recognition and image postprocessing, this would be eventually possible. Since for example the deep learning could for example know which blue is the best looking for an ocean picture and adapt it. This could be very useful for influencer to gain followers and in the end become richer thanks to advertising.

A last example is about sports. A deep learning application could possible tell how a person playing basketball could improve his/her movement for shooting the ball to the basket. The data used could be NBA games and successful shots in order to know which is the best position possible.

Q2:

The relationship with data and algorithm is a little similar to steam engine and coal. Since there in order to train the algorithm in the beginning, a lot of data is needed (preferable with an output given to train the algorithm better). But after some point, when the algorithm is efficient enough no more training data is essential anymore. It just needs inputs to calculate the output itself. This is the main difference with steam engine that always need coal in order to function, otherwise this engine is useless.

Of course, continuously training the algorithm is better, so it gets almost perfect. A little bit like the CAPTCHA data that is continuously collected in order to improve Google Maps street recognition.