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1. How and where is Facebook using Machine Learning to improve user experience?

1. **Automatic friend tagging suggestions**: When a pic is uploaded on Facebook, a suggestion asking if you want to tag your friend in the pic appears. This is done by Facebook's face detection and recognition algorithms based on the advanced deep learning neural network research project Deep face.
2. **Mutual friend analysis**: Facebook uses the clustering algorithm (comes under unsupervised learning) to find mutual friends.
3. **Newsfeed**: I think face book uses ML to arrange your Newsfeed too. Like posts of close friends may come up first. Posts related to your favorite pages come up first.
4. **Friend Suggestions**: Machine learning is used by FB to suggest new friends based on mutual friend circles.

2. How do you think deep learning can change the world and do wonders?

Deep learning is a subset of machine learning where artificial neural networks, algorithms inspired by the human brain, learn from large amounts of data. Similarly, to how we learn from experience, the deep learning algorithm would perform a task repeatedly, each time tweaking it a little to improve the outcome.

Recently DL is being used in the field of medical sciences to track or to figure out cancer cells / tumor cells etc. And that's how DL can do wonders

3. What is your dream AI project that can become into reality and can have a commercial value. Justify your answer.

There are some actual facts that prove my statement:
According to current research projects show that artificial intelligence (AI) can also be used for the greater good. Here are five global problems that machine learning could help us solve.

Health:

For example, a recent ground-breaking discovery of the disease Amyotrophic Lateral Sclerosis (ALS), was made through a partnership between Barrow Neurological Institute and the artificial intelligence company IBM Watson Health. IBM Watson, the artificial intelligence computer, reviewed thousands of pieces of research and was able to identify new genes linked to ALS.

Transportation:

According to a report by Stanford University, not only will self-driving cars reduce traffic-related deaths and injuries, but they could bring about changes in our lifestyles as well. We will have more time to work or entertain ourselves during commutes.

Education:

AI can transform how we learn. Last year, students at Georgia Tech University in the US were startled to discover that their helpful teaching assistant had in fact been a robot all along. After initial teething problems, the robot started answering the students' questions with 97% certainty.

Energy:

Google has used its artificial intelligence platform Deep Mind to predict when its data centres will get too hot. Cooling systems are only activated when required. AI has saved Google around 40% in energy costs at its server farms.