

ASSINGMENT NO: 1

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

Facebook use several different machine learning algorithm to enhance user experience and add new features and functionalities here are some areas where FB uses ML:

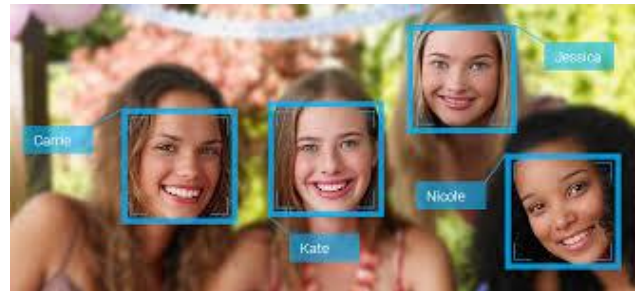
People You May Know

Facebook analyze the user profile their friend list, common check ins, their mutual friends and several different factors to calculate the people you probably may be known .If a user stalked someone's profile you can see that the other day that person profile is coming on the people you may know section. This all done by using ML algorithms

Facial Recognition system

Facebook uses a DL application called DeepFace to teach it to recognize people in photos.

When you upload a photo with your friend Facebook can recognize your friends on social media it gives tag suggestion this is also done by ML algorithms it analyzes the pixels of face in image and detect a face.



Facebook News Feed

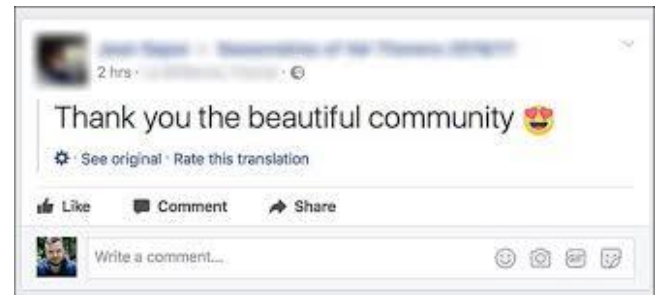
It's a common experience that the content you most like , the posts of the person you chat most, upcoming events in which you are interested in past ,public figures or businesses that you interact with a lot are given top priority and appear on the top of your newsfeed. Also post and that are popular (have many likes, comments and share) have higher chance to appear on top of the feed.

Targeted Advertising

Facebook uses deep neural networks to decide which adverts to show to which users. This can be done by calculating and analyzing the content you share and like most, your past searches, the category of business and pages you liked that types of sponsored advert is coming on your feed.

Language Translation

Imagine you have a friend whose language is unknown to you and he/she uploaded some content or pic with caption Facebook allow to translate the content by clicking the “See Translation” button so that you can understand it correctly. This is also done by ML by looking for basic vocabulary and select the most accurate answer.



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

Deep learning is a subtype of machine learning that creates features and techniques to do directly from data and do what naturally humans can do. Deep learning is doing wonder in the present world you have a *smartphone* is *smart devices* is *smart cars*, *smart assistant* and many more technological devices that involves deep learning

Present days deep learning is involved in every field considering **health sector** deep learning is being used for *disease diagnosis* and to *detect cancer cells* also for *drug discovery*.

We have smart **weather forecasting application** that analyze and observe complex label data to predict climate and natural hazards and upcoming happenings. By using deep learning techniques **smart cars** can detect object and road sign and traffic lights which helps to reduce the number of accidents that happens present days, **smart assistance** can do what you want to perfume by using **speak recognition** , we have **automated**

translation and Facial recognition features. Now black and white images can be colored automatically by **image colorization** using deep learning.

For **entertainment purposes** Netflix advises and suggest you what movie you should watch next similarly Amazon suggest you what your favorite category product to buy you can now play games for example chess game know which attempt can make him win by analyze the previous data. By using deep learning a **robots** are being taught by observing human action and do task a human can do. Considering all these parameters Machines are able responding just like humans making todays life easier, better and time saving and all these thing are done by deep learning.

Considering the demerit of deep learning deep learning required the massive data to perform task and produced accurate result more over a single error can cause serious problems. Deep learning has an effect on human intervention because robot are replacing human jobs and people are becoming lazy and machine dependent.

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

My dream project is for dumb people. Dumb people face the problem of conversation and make someone to understand what they are trying to say. Dumb people do communicate by their hand gesture and many times LISTNER need to have a knowledge of hand gesture and their meanings or it's is important to have a translator with them while communicating with them we can solve this problem by a machine or gadget utilizing machine learning technology as in machine learning, machines are able to get data and learn themselves if we fed raw data of hand gesture and their meaning as raw input and get a voice message as output we can able to do communication with dumb people and understand their language

The device should work by recognize and analyze hand gestures and produce the relevant voice speech output describing what a dump person is trying to say this help the normal people to understand to communicate with dumb people this device has a limitation that it should be portable to ease communication



Market value:

This project is a useful tool for speech impaired and patients which fill the communication gap between patients, doctors and relatives. This project will give dumb a voice to speak for their needs and to express their gestures

