Muhammad Huzaifa Abbasi

Assignment -1

Q1- How and where is Facebook using Machine Learning to improve user experience? (2.5 marks)

- **Preventing Suicide**, Facebook can now help prevent suicides through the use of AI. AI can signal posts of people who might be in need and/or perhaps driven by suicidal tendencies. The AI uses machine learning to flag key phrases in posts and concerned comments from friends or family members to help identify users who may be at risk.

- **Easy Translation,** language is no more a barrier. This is simplified by Facebook AI based automatic translation system. Facebooks machine learning helps 800 million people every month find preferred translated posts in their news feed.

- **Analyzing Text,** A tool used by Facebook is called Deeptext, which decodes the meaning of the content posted to find the relative meaning. Facebook then generates leads with this tool by directing people to advertisers based on the conversations they are having.

- **Image recognition,** Facebook developed Deep Face to identify any image in a picture post. So, if you scroll through your Facebook photos or those of your friends', the individual faces in each of those photos are automatically identified. What's more, using these deep learning algorithms, Facebook can determine your mood; whether you are anxious or calm, or whether you are depressed. These data may be useful in helping Facebook identify people with or at risk of mental illnesses. Facebook says that its image recognizing tool has a higher success rate (97%) in identifying and discerning images in a photo than the human eye (96%).

Q2- How do you think deep learning can change the world and do wonders? (2.5 marks)

Deep learning is a subset of machine learning which is a subset of Artificial intelligence Deep learning is currently being applied at numerous places and mostly every industry is using it in one form or another some examples are Translation, Adding color to black and white images and videos, Autonomous vehicles, computer vision..., etc. Deep learning is already changing the world around us and in the near future it will be affecting every inch of one's life.

Q3- What is your dream AI project that can become into reality and can have a commercial value. Justify your answer. (5 marks)

As a future electrical engineer, I would like to design an AI based software that could automatically place/plot a distribution system in a selected area, taking multiple input variables as, distribution loads, Maximum Investment and taking in multiple other factors. The AI software would place all these factors together to design the best possible Power distribution system for that place, The AI software would tell us the type of cable to be used, the transformer to be installed...etc.

This project will have great commercial value as it would be designed for mainly the Electricity Distribution Companies like KE as this kind of software will be beneficial as they could now employ less people as this software alone would do the cost analysis, the literary needed, possible faults...etc.