Assignment 2 Problem 1

In the documentary AlphaGo - The Movie, those terms of AI and machine learning like deep learning, neural networks, reinforcement learning, supervised learning, and unsupervised learning were mentioned. AlphaGo primarily relies on reinforcement learning where it learns playing games by playing itself; it uses supervised learning in the training of the model to train it initially on human games. Go was selected as the target for AI development because of the extreme complexity of the game and the strategic depth it requires, which forced AI to demonstrate reasoning and creativity. The most impressive aspect was that AlphaGo could make innovative moves that even professional players find surprising.

Assignment 2 Problem 2

In the case of Deep Blue, though it demonstrated computational intelligence, it did not have any sorts of human-like understanding. It claimed victory due to millions of moves per second it could calculate, great chess databases, and the knowledge of its own makers and collaborating chess grandmasters. Credit for this victory goes to the team at IBM who engineered and programmed the system.

Assignment 2 Problem 3

An implication of Google Duplex is in the context of how it could make tasks such as making appointments easier. However, that gives us a very important ethical question related to transparency in AI-human interaction. For companies, it is an opportunity for clients' interactions to be automated and improved in satisfaction. Google Duplex is an example of narrow AI. Its outstanding feature was its natural style of conversation-like 'pauses' and 'fillers'.

Assignment 2 Problem 4

The video on the Turing Test further burrowed into its importance in determining the question of whether machines can think like humans or show human-like intelligence. The test involves a human judge engaged in interaction with a machine and another human via text. The machine passes if the judge is unable to discern which one is human, and which machine. Turing predicted it happening by 2000; though progress has been made, no AI has yet fully achieved this. Mitsuku's 2016 transcript handled small talk and humor similarly to conversational human beings. Eugene Goostman, a Russian chatbot programmed to mimic a 13-year-old Ukrainian boy, is the first chatbot in history to have won the Turing Test competition by successfully mimicking human behavior back in 2014.