Overview Of ML

a. **Define ML in your own words.**
   ML is a type of artificial intelligence that allows the user to feed a computer algorithm amounts of data and let them use those data to analyze, predict, and learn for themselves.
b. **In a paragraph, summarize the importance of data, pattern recognition, and accuracy in machine learning.**
   In machine learning, it is automatically creating analytical model and give a solution to real-time issues. Pattern recognition is an application of machine learning and help machine identify and classify all data and make prediction. Accuracy is the number of correctly predicted data points out of all the data points. More accurate model outcomes result in better decisions in real life.
c. **Describe the relationship between AI and ML.**
   Machine learning is an application of artificial intelligence. In other words, artificial Intelligence is the concept of creating smart intelligent machines and machine learning is just a subset of artificial intelligence.
d. **List at least 2 examples of modern machine learning applications and explain why these applications could not be built with traditional programming.**
   For example, when we press play on YouTube video, we're informing the ML algorithm to find similar videos based on our interests. Then, it will quickly and accurately recommend more about our interested topic or specific information according to our historical preference. In this process, it just needs data points, parameters, and characteristics, not need any pre code like traditional algorithm.
   In addition, for instance, in our email inboxes, spam identification is one of application of machine learning. It can automatically detect which email is spam according to subject and content. However, traditional programming cannot detect them because they cannot identify and classify.
e. **In a paragraph, define the terms observation, feature, quantitative data, and qualitative data and discuss their importance in machine learning.**
   For example, there is a table about physical examination. Observation is considered as data point. It also means various people in this table. Feature means different characteristics in one person like name, height, and weight. Quantitative data is the value of height and weight. It makes measuring various parameters controllable. Qualitative data is not including any numbers. In this table, hair color is a good example for qualitative data. They are so important in machine learning because we need these parameters and data points to find their relationship make us accurately predict the result.
f. **Write a paragraph describing your personal interest in ML and whether/how you would like to learn more about ML for personal projects and/or professional application.**
   In recent months, ChatGPT is popular. It is a chatbot launched by OpenAI and can answer a series of questions, admit its wrong answer, even doubt some unreasonable questions. It makes me interested on machine learning and artificial intelligence. I hope I can learn more about machine learning in this course.