a. define ML in your own words

Machine learning allows computers to take in data to improve their ability to recognize patterns in data.

b. in a paragraph, summarize the importance of data, pattern recognition, and accuracy in machine learning

Data is required for a computer to train on and create a model for a particular task. Pattern recognition allows computers to find patterns in data to build a model using the patterns it finds. Accuracy determines how much the models a computer generates can be relied on.

c. describe the relationship between AI and ML

Machine learning has overlaps with AI. Both are different from static traditional programs but ML focuses more on pattern recognition.

d. list at least 2 examples of modern machine learning applications, and explain why these applications could not be built with traditional programming

Weather forecasts use a vast quantity of data and there aren't clearly defined rules to build a traditional program from.
Recommendations on various social media applications would be too large of a task to find patterns by people to create traditional programs.

e. In a paragraph, define the terms observation, feature, quantitative data, and qualitative
data and discuss their importance in machine learning

Observations are data points in a set of data used for training. Features are columns of the set of data and are what a machine learning program finds patterns between. Quantitative data is numerical while qualitative data is not which changes the way that the data is approached.

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

Personally I didn't know much about ML when signing up for the class. It sounded interesting and I don't know what exactly I want to do with my degree. Once I am farther along in the year I will know if I want to learn more about ML.