a. Machine Learning - In my mind, I view machine learning as the practice of teaching a program to recognize an object or pattern based on human pattern recognition.
b. There are several reasons that data, pattern recognition, and accuracy in machine learning are all important. In regards to data, machine learning would not be possible without a healthy and prolific quantity of data. It is from a qualified set of data that pattern recognition can be trained. As pattern recognition is trained it is understood that a computer would be able to analyze a significant amount of data for patterns to make predictions. Predictions that could influence the decisions of lawmakers, law enforcement, and business executives. It is from this ripple effect that the accuracy of machine learning is imperative. Without accuracy, any prediction would be equivalent to a blind guess. A solid trust in the accuracy of machine learning would translate to increased investments and practice of machine learning.
c. From my understanding machine learning is a subset of artificial intelligence that incorporates computer science and a few subsets of mathematics. Here
d. 2 examples of modern ML applications are search engines and social media. In both these instances an end-user is shown results based on predictive analysis of their interaction history as well as their current search input. It is this functionality that is not possible through a traditional program. An implementation of the examples above would result in a manually scripted experience for each user.
e. There are a few key definitions when explaining the components of data. Two items in data are features and observations. A feature, also known as an attribute, is a predictor that explains a target value. These features are labeled as either qualitative and quantitative. Qualitative data is used to fit information into categories. Quantitative data is a numeric feature that describes a value associated with an instance. An observation, sometimes called an instance or example, refers to a piece of data. The combination of these components are used to grade and teach information to a computer through machine learning. Once specific data points are designated, teaching a computer to predict a specific feature of an instance could be possible.
f. Personally I am inexperienced and know very little about machine learning. I see buzzword articles from the largest tech companies labeling machine learning as a disruptive technology that will set the tone of business and productivity going forward. So I am excited to get more familiar with the topic. Specifically I would like to understand how to better read data. I am passionate about finance and am all too familiar with ridiculous amounts of data out there. I currently work as an investment analyst for a PE company in RE. So getting a pulse on economic data is a must.