Overview of Machine Learning

Define ML in your own words

(1) Machine learning is a field of computer science that gives computers the ability to learn without being explicitly programmed. It allows computers to learn from data, identify patterns and make decisions with minimal human intervention. (2) Data is important that it allows the machines to try and identify patterns or features which would allow it to make its own descision regarding similar data. The more data available, the higher the accuracy of any predictions or action that the model takes. (3) ML is a subset of AI. (4) Object detection and Speech to Text systems would not have been able to developed in a pre ML world as they required active participance of intelligence detection of patterns determining which features are valuable and which are not. Not only that, but for computers even distinguishing what is a car is difficult, as cars come in many different shapes and sizes. An observation is basically a row of attributes to a object such that the attributes can either be quantitative or qualitative. (5) A feature is then a column of the table that can only be qualitative or quantitative homongenously. Quantitative data deals with numbers, while qualitative data deals with text. Depending on the data you have be it qualitative or quantitative, you have to employ different methods to build the ml model. (6) My interest in ML soared as I have heard of its uses in Natural Landuguage Processing and Object Detection. Often my personal projects focus on some ML type solution to a given problem, and often I do not know what or how to implement the solution, so I am taking this class to fill in the holes in my knowledge of ml.