

Overview of ML

- a) Machine learning is a branch of artificial intelligence which deals with creating models from data and then using improving those models to find relationships in datasets.
- b) Data is the foundation of any machine learning algorithm. Any model that is created needs starting data so that other data can then be discovered. For this data to be discovered, the machine learning algorithm must be able to perform pattern recognition. This can come in many forms, regression, classification, and many others, but accuracy is something that all machine learning algorithms have. Specifically with supervised learning, measuring accuracy is paramount to be able to improve the model over time.
- c) Machine Learning is a branch of Artificial Intelligence. The reason for this is that AI deals with creating computer algorithms which can think like the human mind. Machine Learning deals specifically with the way the mind can learn and recognize patterns.
- d) One of the most prevalent uses for machine learning is to recommend things to users. This could be to recommend websites through the search engines, to recommend products in e-commerce websites, or anything else that is recommended. The reason why all of these applications can't be created through traditional programming is that a lot of the recommendation is done with the data that has been collected of users, that starting data is used to create a model and then the model is used to predict what to recommend to the user. This is something that cannot be done with traditional programming.
- e) An observation, also known as a row, is a data point in a machine learning algorithm. A feature, also known as a column, is what is being measured in the observation. These features can either be targets which are to be predicted or other attributes which help with the prediction. Quantitative and qualitative data are two different types of data which can be measured. Quantitative is numerical data while qualitative is categorical data.
- f) I believe that machine learning is the future of computing. I want a career in the machine learning space. But first I want to learn everything there is to know about machine learning so that I can then use it in the industry.