

Machine Learning (ML) is an interesting and still developing field in Computer Science. It allows applications to be trained with large amounts of data, to accomplish tasks that a simple set of algorithms could not. The more data available, the more the application will be able to detect patterns and the more accurate it will be. ML applications can vary being something like self-driving cars, chat bots, or even detecting diseases by a picture of an individual. These applications are not simple and require many factors to be considered, so it is easier to train it to understand, rather than create a complicated static algorithm to follow. This allows for a more capable and powerful form of AI, the only caveat being the high amount of data required to train the model. This data can be a range of things such as numeric values (quantitative data) or even values stored in image or audio files (qualitative data). Observations are a group of features (a recorded value) corresponding to one example. The more observations there are, the easier it is to find patterns and correlations between different features.

ML is such an interesting concept. The idea of computers teaching themselves how to do accomplish a goal feels almost like science fiction. I have in the past coded an AI for chess using algorithms that go through many possible board states and finds the best move accordingly. However, with machine learning I could have downloaded a database of millions of chess games and have the AI teach itself. ML will be an important part of many software in the years to come especially with the emergence of technologies like ChatGPT.