# Fuzzy Logic

Fuzzy Logic is an approach to variable processing which allows for multiple truth variables compromising between the values of 0.0 – 1.0. Fuzzy Logic is utilised to handle the use of partial truths whereby a target value may range between completely true and completely false. Fuzzy Logic is directly comparable to Boolean Logic whereby values can either be “True” or “False” (and also can be either 1 or 0), in comparison Fuzzy Logic allows for values to be partially true e.g. a value could have 0.8 (thus still not being completely true in terms of Boolean Logic, but still not false).

Fuzzy Logic will be useful and applicable to my project for a number of reasons. Firstly, as I am dealing with lights, I would like to be able to control the intensity of a light. As my main aim for my project is to create a controller which allows for time-sensitive automated control of light, I can apply fuzzy logic so that the lights can slowly get brighter or dimmer depending on the time. E.g. At sunset I can slowly increase the brightness of a light as it gets darker outside. This is better than applying Boolean Logic on my light controller as the light will only function at 100% brightness or 0% brightness.