**AIDI1002 - SoW Modelling**

**Models**

**Textblob**

Our system will use the “textblob” library to first analyse the sentiment of product reviews. This supervised learning model takes a text input and tokenizes each word. Each token is given a score based on it’s sentiment value -1 for bad, 0 for neutral, and +1 for good. It also evaluates the token based on modifier words (eg. very, extremely, etc.). Once it does this the analysis is given across the entire text with two metrics: polarity [-1,1] and subjectivity [0,1]. Polarity being the sentiment value and subjectivity being how objective the sentiment was.

**Decision Tree**

We can use the outputs received from the textblob model to predict the overall sentiment of the specific product and offer probabilistic recommendations to the specific customer. This probability will come from their product rating and products within the same category and type with a higher rating. Or if a certain positive rating threshold is reached a different type within the same category can be recommended.

By breaking up the text into tokens we can match similar product types to ensure the customer gets a product that meets their needs and satisfaction.