Spike sorting is a process used to classify different types of neurons based on their spike waveforms. One method for determining a threshold value for spike sorting is to calculate the median absolute deviation, which was calculated as the 75% percentile of a normal distribution, where N(0.75)≃0.6745. For task 2, ANN algorithm was used for spike sorting. ANNs are suitable for this task because they can learn to recognize patterns and make predictions based on large amounts of data. They are also flexible, have multiple layers and a large number of neurons, which allows them to learn complex patterns and make more accurate predictions. However, this algorithm struggled to correctly identify overlapping peaks. Therefore, a KNN algorithm was implemented as an alternative in later tasks. KNN algorithms can be effective for spike sorting because they consider the waveforms of multiple nearby spikes, which can help make more accurate predictions about the type of neuron that produced a given spike waveform. Initially, the KNN algorithm used had an issue with correctly classifying individual spikes, but this was resolved through parameter optimization. High precision and recall results, upwards of 90%, were obtained, proving the effectiveness of both models.