Problem 3 Report

Given two different data sets “MMI” and “Mind Reading” to test two different active learning strategies “Random Sampling” and “Uncertainty-based sampling”.

The following are the plots to visualize the accuracy of one strategy over the other for the two datasets.

Chart, line chart

Description automatically generated

From the MMI dataset, it can clearly be seen that active learning based on uncertainty-based sampling gives more accurate results than the one based on random sampling for the same number of iterations.

Chart, line chart

Description automatically generated

From the Mind Reading dataset, it can be seen that although, for the initial few iterations, uncertainty-based sampling did not provide much better results than random sampling, but eventually it became better.