# ABSTRACT

Classification Tea leaves are a way to classify the types of tea leaves based on looking at the pattern of leaf bones, leaf texture, leaf shape, leaf tips and base of leaves, in this final project research at the Gambung Tea and Kina Research Center, with a total sample 11 types of stomach, but only types 1-6 were examined in this thesis, conventionally to classify tea plants is to look at the pattern of leaf bones, leaf texture, leaf shape and tip and base of leaves, this method is included manually because it takes time long and inefficient, therefore in this final assignment we will classify tea leaves by entering the image of tea leaves and then proceed with the Gray-Level Co-Occurance Matrix (GLCM) method and K-Nearest Neighbor (K-NN).

The method proposed in this final project is Gray-Level Co-Occurance Matrix (GLCM) and K-Nearest Neighbor (K-NN). The GLCM method is a statistical feature-based extraction method that is used to obtain features from each pixel image where these features will be used at the classification stage. The K-NN method is a classification method used to classify test data which can provide fast results and accuracy can be calculated, thus saving time, and this method can also provide information on the types of tea leaves.

The expected result of this final project is to be able to classify tea leaves based on their type with a short, efficient and high accuracy time.

*Keywords: Tea Leaves, Gray Level Co-Occurance Matrix, K-Nearest Neighbor, Image Processing*