

ABSTRACT

This final project aims to develop a coffee bean classification system that is able to distinguish between five classes of maturity and quality of coffee beans, namely super good ripe, good ripe, bad ripe, good raw and bad raw. The main focus of this project is on developing an interface that facilitates the retrieval of representative, high-quality datasets for training classification models.

The dataset generated from this dataset retrieval interface is then used to train the classification model. This process involves pre-processing stages, such as image normalization and dividing the dataset into training, validation, and test subsets. The classification model used can be a Convolutional Neural Network (CNN) or other appropriate method.

This final project emphasizes the important role of the dataset retrieval interface in producing varied and high-quality datasets for training coffee bean classification models. By combining aspects of visualization, interactivity and appropriate image retrieval tools, this project succeeded in supporting the development of an accurate classification model capable of classifying coffee beans into the five specified classes.

Keywords: *convolutional Neural Network (CNN), classification, coffee beans, interface*