

## **Abstract**

**Mango is one of the types of Indonesian fruits and is very popular with so many people, young and old generation. Mango has very many types, so it is not uncommon for humans to find it difficult to determine the type of mango because of its shape and characteristics that are similar between one type and another. Moreover, currently in the mango production process, the sorting of mango species is still using the manual method of using human energy which is still time consuming in distinguishing the types of mangoes. A tool or system is needed that can distinguish the types of mangoes automatically and also precisely, in order to minimize the time and error of sorting the types of mangoes in the production process. Therefore, this study tries to create a system that can identify the types of mangoes. In this study applying feature extraction using Local Binary Pattern (LBP) and classification using the K-Nearest Neighbor (KNN) algorithm based on microscopic images of mango skin. The data used in this study are mango skin microscopic image data which consists of two types of data, 192 training data images and 48 test data images. The results of this study is system can distinguish the types of mangoes with an accuracy rate of 89,5%.**

**Keywords: identification, classification, feature extraction, microscopic images of mango skin, Local Binary Pattern, K-Nearest Neighbor**