

## **ABSTRACT**

As one of the tropical country, Indonesia has to deal with malaria disease. Malaria can be a dangerous disease if the sufferers get a late medical treatment. The late medical treatment caused by the misdiagnosed of patient. It can cause the severe malaria which has complications. This study creates a system prediction to classify the severe malaria disease using Classification and Regression Tree (CART) method and the probability of malaria complication using Naïve Bayes method. If the patient classified severe malaria then the patients will be predicted if there any probability of complication by the severe malaria. The classification will be evaluated using F-Score, Recall dan Precision were the highest result of these evaluation measures consecutively 0.551, 0.471 and 0.717. While the complication prediction will be evaluated using accuracy with the highest accuracy 81.2% which predicted the complication is Hypoglycemia.

Keywords: Malaria, Classification and Regression Tree, Naïve Bayes