

Abstract

Snakebites are one of the leading causes of human deaths in the world. The highest number of snakebite cases has been recorded in tropical countries such as South Asia, Southeast Asia, and Sub-Saharan Africa. Indonesia alone has an estimated 12,739–214,883 cases of snakebites, with a mortality rate of 20–11,581 death. Snakebite marks can be used to identify the type of snakebite, whether the bite came from a venomous snake or a non-venomous snake, so that the first aid given to the victim will be more effective. In this research, a Random Forest classifier was used to classify snakebite images into two classes: venomous snakebite and non-venomous snakebite. The Random Forest algorithm has been proven robust in handling outliers and noise and has been shown to produce better accuracy than other algorithms by reducing the correlation between Decision Trees. The model then was evaluated and yields f1 score of 91.53%, sensitivity value of 91.67% and a specificity value of 83.33%.

Keywords: classifier, snakebite, image processing, classifier, random forest