ABSTRACT

Gait recognition is a part of computer vision that serves to recognize a subject (human) with a certain distance without regard to biometric aspects such as iris, face, and fingerprint so as to produce a display of raw data in the form of images as input. Research on the gait recognition has been widely used in recent years. Latent Conditional Random Field (L-CRF) is one of the gait recognition algorithms with better results. Although the results of the accuracy of the subject's performance with normal running conditions (#NM) are better, but there are still problems in the accuracy of performance with other running conditions such as carrying a bag (#BG) and wearing a coat (#CL).

Latent Conditional Random Field (mL-CRF) modification is one method that is still related to L-CRF, but has differences in pairwise parameters. Its advantages are better results in training and testing data from identical domains. This method can solve problems with the performance of objects that stick or block individuals. This study uses the silhouette frames in the CASIA data set linked to the B database containing 124 subjects with 110 sequences per subject.

The single-gait recognition algorithm that will be varied in the analysis is the comparison of the accuracy of training samples and the comparison of sample angular accuracy. The processing of mL-CRF data is done based on training samples (LT74 & MT62) and 11 observation angles that will be compared with L-CRF without modification, as well as previous studies. In this study, the LT74 on mL-CRF was the best training sample which resulted in an increase in accuracy of 0.89% (#NM), 1.32% (#BG), 1.54% (#CL) against L-CRF without modification.

Keywords: *Gait,* CASIA-B, L-CRF, *silhouette frames*.