

## Abstract

Video tracking is a branch of computer science of computer vision which can track an object by estimating the position of objects over time in thesequence of image. Examples of the application of video tracking is in the field of surveillance. In the field of surveillance, video tracking can be used as an observation tool for pedestrians. To address the problem, an algorithm is needed that can track an object over time.

In this final project, it will be implemented tracking method using Particle Filter Condensation algorithm. Condensation stands for Conditional Density Propagation, which uses factored sampling, previously applied to the static images, in which the probability distribution are generated by random sample-set.

The results of this study indicate that the tracker can track an object (tracker is not lost)when given particle is 15 or more . Tracker will fail to track the object when given particle is less than 15.

**Keyword:** video tracking, Condensation