

## ABSTRACT

The development of technology is rapidly increasing, making it easier for humans to meet their needs. For example the importance of using radar (Radio Detection and Ranging) in everyday life. Radar is an electromagnetic wave system that has functions for detecting, tracking and imaging. In detecting a target, the radar obtains information in the form of distance, azimuth and speed from the target. In the detection of targets on the radar there must be problems that arise when detecting targets, one of which is if the radar detects there is no target but actually there is a target, it is called a false alarm.

False alarm situation that appears continuously then the source on the radar will run out. The radar is said to be good if there are constant false alarm values and minimizes the occurrence of miss detection. To minimize this problem the bootstrap method will be used. Bootstrap will adaptively detect targets against the background that noise and interference cannot be avoided.

In this test will be simulated using software how the radar detection performance using the bootstrap method is compared with the performance of NP detectors with parameters training cell = 32 cell, guard cell = 2 cell, CUT = 1 cell, PFA =  $10^{-2}$ , and N-bin = 10.000. The results obtained are radar detection performance where threshold is determined by resampling in the bootstrap method better than using NP detectors, because the bootstrap method produces a threshold that maintains false alarms so getting more accurate results does not depend on noise in minimizing false alarms.

**Keywords :** *Radar, False Alarm & Miss Detection, Bootstrap, Threshold*