

Coverage Prediction for Target Coverage in WSN Using Machine Learning Approaches

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Abstract

Mathematical programming techniques are widely used in the determination of optimal functional configuration of a wireless sensor network (WSN). But these techniques have usually high computational complexity and are often considered as Non Polynomial complete problem. Therefore, machine learning techniques can be utilized for the prediction of the WSN parameters with high accuracy and lesser computational complexity than the mathematical programming techniques. This paper focuses on developing the prediction model for determination of the node status to be included in the set cover based on the coverage probability and trust values of the nodes. The set covers are defined as the subset of nodes which are scheduled to monitor the region of interest with the desired coverage level.