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An Automatic Machine Learning Approach to Ultra-Wideband Real Time Positioning

Ultra-Wideband positioning systems are being used more and more for tracking both people and objects in dynamic environments. One of the most accurate positioning strategies in this context is the use of a Time Difference of Arrival data acquisition mechanism coupled to a multilateration approach. An alternative to this method is based on replacing multilateration with machine learning. In order to determine the optimum machine learning algorithm from a set of multiple options automatic machine learning is a valid possibility. The project described in this paper aims to implement automatic machine learning through the use of an auxiliary component, the Training and Evaluation Engine. Finally, machine learning results are compared with multilateration results, in order to determine if the presented approach brings improvement to the state of the art.

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