

# Human activity recognition through wireless body sensor networks (WBSN) applying data mining techniques

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## Abstract

The research field on technologies and wireless sensor networks (WSN) are becoming one of the most disruptive technologies that support different scenarios of ubiquitous and generalized computing. WSN applied to the human body is generally called wireless body sensor networks. WSN can provide large quantities of data. The use of data mining techniques has allowed expanding WSN in new areas like biomedicine or telemedicine. The identification of psychological patterns and human activity recognition are two important trends to follow. In the current study, it is applied a SEMMA methodology to implement data mining clustering and classification techniques over RSS signal samples of a WBSN, based on IEEE 802.15.4 networks, with the intention of recognizing human activities based on samples. Two algorithms are applied, C4.5 and LTM for evaluate the rate success in the prediction.

## Keywords

Wireless body sensor networks (WBSN), C4.5 algorithm, LMT algorithm, SEMMA, Data mining