

Analysis of Fuzzy Decision Trees on Expert Fuzzified Heart Failure Data

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The prevalence of **heart failure** is 2-3% of the adult population and it is expected to grow. Half of all patients diagnosed with it die within four years. To minimize life-threatening situations and to minimize costs, it is interesting to predict mortality rates for a patient with **heart failure**. In this paper, a **fuzzy decision tree** based on classification ambiguity and a **fuzzy decision tree** based on cumulative information estimations are presented. They are employed on a **heart failure data fuzzified** on the basis of medical **expert** knowledge. After a transformation of **fuzzy decision trees**, the use of medical **expert** knowledge allows us to create a group of **fuzzy** rules that is easily interpretable by medical **experts**. Our study shows that different types of **fuzzy decision trees** can have significantly different accuracy results and interpretability.

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