

Fuzzy Logic in Machine Learning

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The purpose of this talk is twofold. First, it is intended to convey an idea of the state-of-the-art in fuzzy logic-based machine learning, to be understood as the application of formal concepts, methods, and techniques from fuzzy set theory and fuzzy logic in the field of machine learning and related research areas, such as data mining and knowledge discovery. In this regard, potential contributions that fuzzy logic can make to machine learning will be especially highlighted, though some deficiencies of this line of research will also be pointed out. Second, some promising directions of future research in this field shall be sketched and promoted, including problems of ranking and preference learning, the representation of uncertainty in model induction and prediction, and the use of fuzzy modeling techniques for feature generation.