

Using *NILS* to Solve Probabilistic Satisfiability for CNF Knowledge Bases^a

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Abstract

This report describes the set of functions developed for the Nonlinear Logic Solver (NILS) system. This allows any logical sentence to be converted to a Conjunctive Normal Form sentence, and then to a standard knowledge base representation wherein each conjunct may be given a probability. Functions are provided which then allow for the solution of PSAT (probabilistic satisfiability) using several alternative algorithms.