Abstract

One of the most important rules of interference is resolution. Resolution basically works by using the principle of proof by contradiction. Propositional Resolution works only on expressions in clausal form. Before the rules of resolution can be applied, the premises and conclusions must be converted to this form. First part of this work consists of basic information about resolution like what are literals, clauses, empty clause, predicate, facts, rules, conjunctive normal form etc. What is it used for, what is their aim. One of the aims of this work is differentiating resolution between clauses-when clauses containing variables and When clauses containing no variables. When clauses containing no variables resolution are very easy and simple and then no need to substitution. When clauses containing variables resolution becomes complicated and then need a proper substitution through the cancellation of complementary literals. So substitution is an important role in resolution. Unification has been used in my work for performing resolution in predicate calculus. The unification algorithm tries to find out the Most General Unifier (MGU) between a set of atomic formulae. Theorem proving using resolution has also been included in my work which helps to solve many problems.

References

- [Pastre2002] D. Pastre, Strong and weak points of the MUSCADET theorem prover, AI
- Foundation of artificial intelligence and expert system by Janakiraman.
- Artificial intelligence,3rd edn, by Elaine Rich ,Kevin Knight, Shivashankar B Nair.
- Introduction to &apos;Artificial intelligence and expert system&apos; by Dan W. Patterson, PHI
- Resolution By Ankit Shah, Professor Harper Langston Discrete Mathematics Summer 2007
- Artificial intelligence notes- reasoning methods, lecturer: Co?kun Sönmez

Index Terms

Computer Science Applied Mathematics

Keywords
Resolution principle Substitution Unification complementary literals Skolemization