Universidade Federal de Santa Catarina **DAS / PPGEAS**
Inteligência Artificial
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Trabalho Prático
— Representação de Conhecimento —

Considerando o enunciado abaixo (extraído de [1, p. 45]):

> Tony, Mike, and John belong to the Alpine Club. Every member of the Alpine Club who is not a skier is a mountain climber. Mountain climbers do not like rain, and anyone who does not like snow is not a skier. Mike dislikes whatever Tony likes, and likes whatever Tony dislikes. Tony likes rain and snow.
>
> (a) Prove that the given sentences logically entail that there is a member of the Alpine Club who is a mountain climber but not a skier.
>
> (b) Suppose we had been told that Mike likes whatever Tony dislikes, but we had not been told that Mike dislikes whatever Tony likes. Prove that the resulting set of sentences no longer logically entails that there is a member of the Alpine Club who is a mountain climber but not a skier.

Faça:

1) Formalize o discurso acima em lógica de predicados.
2) Quando possível, escreva as provas utilizando dedução natural.
3) Implemente uma base de conhecimento em Prolog que represente o discurso e permita que os itens (a) e (b) possam ser verificados por meio de consultas Prolog.
4) Avalie a adequação da linguagem Prolog na resolução do problema.

Referências

[1] Ronald J. Brachman and Hector J. Levesque. *Knowledge Representation and Reasoning*. Elsevier, 2004.