CMPT 310 - D100 Artificial Intelligence Survey

Instructor(s): Steve Pearce

SFU Burnaby

Calendar Objective/Description:
Artificial Intelligence Survey

Instructor's Objectives:
Artificial Intelligence (AI) is the part of computer science concerned with systems that learn, reason and make/support decisions. The goal of this course is to provide students with a survey of different aspects of artificial intelligence. A variety of approaches with general applicability will be developed. The first topic is searching for solutions to complex decision and planning problems (search strategies and heuristics). Symbolic logic will be presented as a formalism for representing knowledge in AI systems. Probability as a mechanism for handling uncertainty in AI will be presented, with a focus on Bayesian networks. We will introduce basic concepts of machine learning, including as decision trees and neural nets.

Prerequisites:
see go.sfu.ca

Topics:
- Search
- Logic
- Game playing
- Reasoning under uncertainty (probability)
- Bayesian networks
- Machine learning

Grading:
To be discussed the first week of classes

Required Books:

Academic Honesty Statement:
Academic honesty plays a key role in our efforts to maintain a high standard of academic excellence and integrity. Students are advised that ALL acts of intellectual dishonesty will be handled in accordance with the SFU Academic Honesty and Student Conduct Policies (http://www.sfu.ca/policies/gazette/student.html).