University of Toronto - Winter 2016
Department of Computer Science

CSC 384: Introduction to Artificial Intelligence

Lecture Slides and Readings

The course material will be covered primarily in lectures and tutorials. Some examples will be done in class only, and will not appear in these notes. It is your responsibility to take notes in class to augment these slides with the extra pertinent information presented during class.

The recommended text book also contains material that will help clarify the topics covered in the lectures.

This term there are 3 sections of CSC384, taught by two different instructors. We will be covering the same basic material but the slides we use in class may be slightly different. Feel free to peruse both, but you will only be responsible for whatever is in your instructor's slide deck.

Topic	Readings Russell and Norvig (R&N)	Sheila's Slides	Sonya's Slides	Notes
Introduction What is AI	Chapter 1 presents a more complete and very interesting overview of the history and goals of AI research. Chapter 2 also contains some interesting ideas about one way to think about the structure AI systems.	01-Introduction 01-Introduction (4 pp)	01-Introduction 01-Introduction (4 pp)	
Uninformed and Heuristic Search	Chapter 3 presents the search techniques covered in the lectures. Chapter 4 can be read for enrichment at this point. We'll return to some ideas in this chapter later in the course.	02-Uninformed Search 02-Uninformed Search (4pp) 02-Heuristic Search 02-Heuristic Search (4pp) 02-Heuristic Search Tutorial ** 02-Heuristic Search Tutorial(4pp) ** ** - *Updated Jan 24*	02-Search (Heuristic and Uninformed) 02-Search (Heuristic and Uninformed) (4pp)	[Sheila and Sonya:] These are interim slides and may be updated slightly.
Game Tree Search	Chapter 6.1,6.2,6.3 (R&N,2nd ed) Chapter 5.1, 5.2, 5.3 (R&N,3rd ed)	03-GameTreeSearch 03-GameTreeSearch (4pp) Make sure to go through	03-GameTreeSearch 03-GameTreeSearch (4pp)	The following is a fun program for practicing alpha-beta pruning. The following is a great walk-thru of alpha-beta pruning. These slides, covered during

	Chapter 6.6 (respectively 5.7) also makes for interesting reading!	the alpha-beta pruning walk-thru in the notes section.	[updated Feb 1]	covered during tutorial for the evening section, are drawn from the site above -- Alpha-Beta example. [Sheila and Sonya:] These are interim slides and may be updated slightly.
Constraint Satisfaction Problems	Chapter 5.1-5.2 (R&N, 2nd ed) Chapter 6.1, 6.2, 6.3 (R&N, 3rd ed.)	04-Backtracking Search ** 04-Backtracking Search (4pp) ** CSP Class Exercise CSP GAC Class Exercise Soln ** - Updated Feb 13	04-Backtracking Search 04-Backtracking Search (4pp)	[Sheila and Sonya:] These are interim slides and may be updated slightly.
Probability Review, Intro to Bayesian Networks	Chapters 13 and 14 (R&N, 2nd or 3rd ed)	Uncertainty Tutorial 05-Uncertainty ** 05-Uncertainty (4pp) ** ** - Updated Mar 12	05-Uncertainty (Part 1) 05-Uncertainty (Part 1) (4pp) [updated Feb 29] 05-Uncertainty (Part 2) 05-Uncertainty (Part 2) (4pp)	These slides contain a variable elimination example and were covered in both classes: Probability + VE examples. [Sheila and Sonya:] These are interim slides and may be updated slightly.
Midterm Review		Midterm Review Midterm Review (4pp)	These slides contain an overview of midterm topics Midterm Review .	
Knowledge Representation and Reasoning	Chapter 7-10 (R&N, 2nd ed) Chapter 7-9, 12 (R&N, 3rd ed.)	05-KR ** 05-KR (4pp) ** ** - Updated Mar 30 In-Class KR Tutorial * ** - Updated Apr 1	06-Knowledge Representation 06-Knowledge Representation (4pp) [updated Mar 21. Also refer to Sheila's slides for unification/non-ground resolution examples as they were presented in class] In-Class KR Tutorial * ** - Updated Apr 1	[Sheila and Sonya:] These are interim slides and may be updated slightly.

Planning	Chapter 10		07-Planning 07-Planning (4pp)	[Sheila and Sonya:] These are interim slides and may be updated slightly.

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