Most materials in this course are based on materials from http://aima.cs.berkeley.edu/ and http://ai.berkeley.edu

Chapter 0
Course Details

COMP 3270
Artificial Intelligence

Dirk Schnieders

Outline

- Syllabus
- Assessment
- Plagiarism
- Staff
- Slides
- Recording

Prerequisite

- COMP2119 Introduction to Data Structures and Algorithms
  - or equivalent

Staff

- Instructor (Exam, Forum, Lecture): Dirk Schnieders
  - Email: sdirk@cs.hku.hk
  - Office: CB324
  - Consultation hours: Friday, 2:00 - 4:00 pm
- TA (Quiz 1, A1, A2, Forum): Wu Yijie
  - Email: wuyj@connect.hku.hk
  - Office: HWG01 [g103]
  - Consultation hours: tbd
- TA (Quiz 2, A3, A4, Forum): Cui Zhiming
  - Email: cuizm.neu.edu@gmail.com
  - Office: CB401
  - Consultation hours: tbd

Syllabus - Schedule*

*subject to change

Week	Tue Session (2h)	Topic*	Fri Session (1h)	Topic*
1	3 Sep, 10:30 - 12:20	0. Course Details, 1. Search (Uninformed)	6 Sep, 11:30 - 12:20	1. Search (Informed)
2	10 Sep, 10:30 - 12:20	1. Search (Informed, Local, CSPs)	13 Sep, 11:30 - 12:20	1. Search (Adversarial)
3	17 Sep, 10:30 - 12:20	1. Search (Adversarial)	20 Sep, 11:30 - 12:20	2. Markov Decision Processes
4	24 Sep, 10:30 - 12:20	2. Markov Decision Processes	27 Sep, 11:30 - 12:20	2. Markov Decision Processes
5	1 Oct, 10:30 - 12:20	Public Holiday	4 Oct, 11:30 - 12:20	3. Reinforcement Learning
6	8 Oct, 10:30 - 12:20	3. Reinforcement Learning	11 Oct, 11:30 - 12:20	3. Reinforcement Learning
7	Reading Week			
8	22 Oct, 10:30 - 12:20	4. Markov Models	25 Oct, 11:30 - 12:20	Quiz 1
9	29 Oct, 10:30 - 12:20	4. Markov Models	1 Nov, 11:30 - 12:20	5. Hidden Markov Models
10	5 Nov, 10:30 - 12:20	5. Hidden Markov Models	8 Nov, 11:30 - 12:20	5. Hidden Markov Models
11	12 Nov, 10:30 - 12:20	5. Hidden Markov Models	15 Nov, 11:30 - 12:20	6. Bayes Nets
12	19 Nov, 10:30 - 12:20	6. Bayes Nets	22 Nov, 11:30 - 12:20	6. Bayes Nets
13	26 Nov, 10:30 - 12:20	*Buffer (time permitting: Machine Learning)*	29 Nov, 11:30 - 12:20	Quiz 2

Syllabus - Topics*

*subject to change

- Part I: Search and Planning
  - 1. Search (Uninformed, Informed, Local, CSPs, Adversarial)
  - 2. MDPs (Value Iteration, Policy Iteration)
  - 3. RL (Temporal Difference Learning, Q Learning)
- Part II: Probabilistic Reasoning
  - 4. MMs (Probability Review, Markov Chain, Mini-Forward Algorithm)
  - 5. HMMs (Forward Algorithm, Particle Filtering)
  - 6. BNs (Inference, Sampling)
- Part III: Machine Learning
  - COMP3314

Assessment - Weight

- Exam: 50%
- Quiz 1: 8%
- Quiz 2: 8%
- Assignment 0: 0%
- Assignment 1: 9%
- Assignment 2: 9%
- Assignment 3: 8%
- Assignment 4: 8%

mark = quiz 1 + quiz 2 + A1 + A2 + A3 + A4 + exam
grade = m(mark)
the mapping function m() will not be published

Assessment - Quiz 1 & 2

- Written, closed book, calculator allowed
- Cheating cases will receive 0 marks and referred to program director
- Bring your student ID or HKID
- No show
  - 0 marks unless sick leave certificate or official leave from university
- Dates: 25 Oct & 29 Nov
- Time: 11:35 - 12:15 (please arrive by 11:25)
- Quiz 1 will cover
  - Chapter 1 - 3
- Quiz 2 will cover
  - Chapter 4 - 6

Assessment - Assignment 0, 1, 2, 3 & 4

- 5 Programming Assignments
  - Python 3
  - 2-3 weeks time, no deadline extension
    - Late submission, after the deadline, will result in 0 marks
    - Submission of the wrong files will result in 0 marks
    - Some students spend 80+ hours on these
      - Work smart
  - Submission of wrong files will result in 0 marks
    - Please check carefully
  - Release - Deadline (subject to change)
    - A0: ∞
    - A1: 23 Sep
    - A2: 15 Oct
    - A3: 4 Nov
    - A4: 1 Dec

Assessment - Final

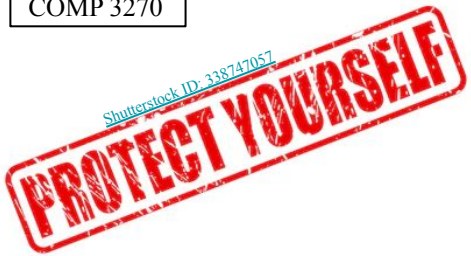
- 2 hours
- Closed book
  - Students may bring
    - A4 paper with printed or handwritten notes
    - Calculator
- Date: TBD
- Time: TBD
- Location: TBD

Assessment - Results

- In-class assessment (i.e., quiz & assignment) results will be frozen on the day of the final exam
- You must check for the correctness of your in-class assessment on Moodle
  - If you find any problem, send an email to the appropriate TA immediately but definitely before the final exam
  - We will not be able to make adjustments to your assessment results after the final exam

Plagiarism

- What is Plagiarism ?
  - https://tl.hku.hk/plagiarism/
- First attempt
  - Written warning
  - Zero marks
  - Referred to program director
- Second attempt
  - Referred to University Disciplinary Committee
  - Published reprimand
  - Suspension of study
  - Expulsion



Prevent Plagiarism

- Never copy/paste anything **without citing**
  - If you copy existing work you must clearly state and cite appropriately
  - Solutions to assignments may be found on the internet
    - To prevent plagiarism, don't search for them
- Never look at existing solutions
  - Work on the problem yourself
- Never ask your friend to see his/her solution
  - Note that the source will also be punished with 0 marks

Slides

- Available on Moodle on the day before the lecture
  - Usually at night
  - Google Slides
    - Install on mobile device to view materials
    - Safe paper and don’t print
- Use the provided materials responsibly
  - Don’t share with others without permission
  - Do not upload to internet without permission
    - I do not hold copyright for most materials, I am using them because I consider it fair use
    - You will be legally responsible to copyright holder if you share

Recording

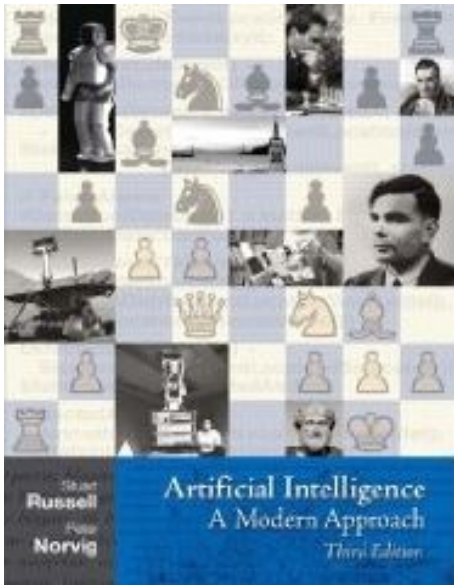
- Lecture video and audio recording will be uploaded
  - Please remind me to switch on the recorder
    - I apologize in advance shall I forget to switch it on
  - Do not rely on the recording, there could be a technical issue
- Don’t skip class and just listen to the recording at home
  - Attend the lecture
  - Ask/answer questions and present solutions
    - Crucial for your learning
  - Talk to me, our TA and your fellow students

Big Class Management

- **We will not answer emails** unless personal information is involved
- If you have questions about course materials, please **use the forum**
  - We will try to answer within 48 hours

Textbook

- Artificial Intelligence: A Modern Approach
  - http://aima.cs.berkeley.edu/



Assignment 0

- Released

COMP3270 - Assignment 0

19/20 Semester 1

This assignment is based on materials by http://ai.berkeley.edu. This is an optional assignment, **no need to submit anything**.

Introduction

This is an introductory assignment which you optionally can submit before the deadline published on Moodle. Assignment 0 will mainly cover the following:

- A basic command line tutorial
- A basic Python 3 tutorial
- Some tasks with an autograder that checks for technical correctness

Getting Help: You are not alone! If you find yourself stuck on something, please let us know in the forum. We want this assignment to be rewarding and instructional, not frustrating and demoralizing. But, we don't know when or how to help unless you ask.

This document assumes that you are using Linux. However, all the software used here is platform independent and should run on most other operating systems.

Command Line Basics

Here are basic commands that help you to navigate in Linux using the command line.

Note: In Windows like operating system, the equivalent command to `ls` is `dir`. The commands of `mkdir` and `cd` are the same.

Q & A