

Syllabus

1 Course Objective

This course is a prerequisite course for many advanced AI courses. It aims at providing students basic concepts and popular algorithms in AI.

2 Basic Information

- Instructor: Professor Bo Liu (boliu@auburn.edu)
- Time: 2:00-3:15 on Tuesday/Thursday
- Classroom: Shelby 1122
- Email: boliu@auburn.edu
- TA: Chengyu Tang (czt0026@tigermail.auburn.edu)
- Lecturer Office Hour: Tuesday 3:30 - 4:30pm (starting from the 2nd week) Shelby 3101P
- TA Office Hour: 10:00 - 11:30am on Tuesday and Thursday (starting from the 2nd week) Shelby 3139

3 Textbook

- Artificial Intelligence: A Modern Approach (**3rd edition**), Stuart Russell and Peter Norvig
- Machine Learning: a Probabilistic Perspective, Kevin Patrick Murphy (**Optional**)

4 Topics

- Search (Uninformed search, Informed search A* algorithm, Game theory)
- Machine learning (Clustering, Classification, Decision tree)
- Reasoning under uncertainty (Bayesian networks)
- Planning and learning (MDP, POMDP, Reinforcement learning)
- Deep learning

5 Grading Scheme

Grading Scheme:

- A: ≥ 90 or above top 15%
- B: ≥ 80 or above top 40%
- C: ≥ 70 or above top 70%
- D: ≥ 60 or above top 90%
- F: < 60

6 Late Penalties

All assignments are due at the beginning of class on the due date. One (1) day late, defined as a 24-hour period from the deadline (weekday or weekend), will result in 30% of the total points for the assignment deducted. So, for example, if an 120-point assignment is due on a Wednesday at 8am but it is handed in between Wednesday 8:01am and Thursday 8am, 36 points will be deducted from the point you received from this homework or project. A total of two (2) free late days may be used throughout the semester without penalty. You can choose to use zero, one, or two free late days toward any one late homework, depending on availability. You must specify on the first page of your late homework how many free late days to use.

7 Pre-requisite

8 Academic Honesty Policy

Auburn University academic honesty policy applies to all assignments and exams for this class. The full-text of the academic honesty policy can be found at: [honesty](#) In addition to the general guidelines mentioned in the above policy, for this course I require that: In examinations, you must work individually with no communication with 2 others and use only materials/tools that have been explicitly allowed. For homework, you may discuss problems with your colleagues but final solutions need to be worked out, written and submitted individually. Any external material used should be clearly cited. In your own writings (example term papers, homework solutions, proposals etc), no more than one or two sentences may be used verbatim from any source. **READ THESE INSTRUCTIONS CAREFULLY!** If any aspect of the academic honesty policy and guidelines for this course are unclear, please ask me for clarifications. Lack of awareness or understanding of this policy will not be an acceptable excuse or defense against disciplinary action.