

CS 6613

ARTIFICIAL INTELLIGENCE

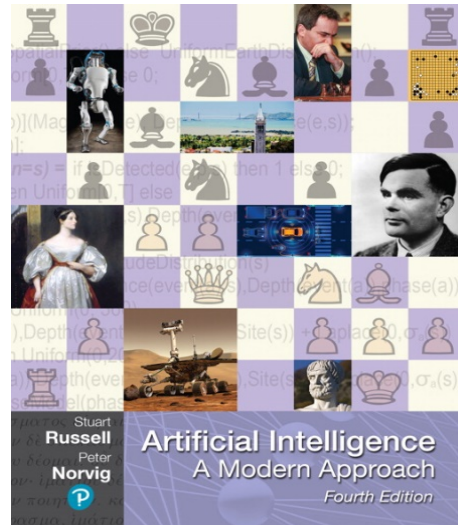
Professor Edward K Wong
NYU Tandon School of Engineering

CS 6613 Artificial Intelligence

- **Description:** Artificial Intelligence (AI) is an important topic in computer science that has many diversified applications. It addresses one of the ultimate puzzles human are trying to solve – How is it possible for a slow, tiny brain, whether biological or electronic, to perceive, understand, predict, and manipulate a world far larger and more complicated than itself? And, how do we go about creating a machine (or computer) with those properties? To this end, researchers in the AI field have been trying to understand how seeing, learning, remembering, and reasoning could, or should be done. This course introduces students to the basic concepts and techniques in artificial intelligence.
- **Prerequisites:** Proficiency in programming. Basic knowledge of data structures. Calculus.

Textbook (Required)

- S. Russell and P. Norvig, *Artificial Intelligence: A Modern Approach*, Prentice Hall, 4th edition, 2020.



Instructor and Teaching Assistants

- **Instructor:** Professor Edward K. Wong
- **E-mail:** ewong@nyu.edu (or emw334@nyu.edu)
(Do not send emails to ekw278@nyu.edu. The email belongs to an NYU alumnus who has the same name as mine.)
- **Office hours:** Weds 3:00 to 4:30 pm via Zoom; other times -- by appointment
- **Zoom link for office hours:** <https://nyu.zoom.us/j/2232840196>
- **Teaching Assistants:** See the *Teaching Assistants* section on Brightspace.

Course Loads

- There will be six to seven handwritten (or typed) homework assignments, plus two AI programming projects. You can use C/C++, Python or Java to do the projects. You can also use other programming languages but you need to talk to me first. You can work on the projects alone or form a team of two students to work on the projects.
- Late homework (up to 7 days late) and projects will be accepted but will be subject to 2% grade penalty (of the total points of the assignment) each day it is late (weekends included). Solutions to homework are posted approximately one week after the homework is due.

Exams & Grade Distribution:

- There will be two exams. The second exam will be held during the final exam week and will only cover materials not covered in the first exam.
 - Homework ~16%
 - Projects ~ 20%
 - Exam I: ~ 32%
 - Exam II: ~ 32%
- A weighted course average will be computed and a curve will be plotted in determining your final course grade.

Weekly Syllabus (tentative):

- | <u>Week</u> | <u>Topics</u> |
|-------------|----------------------------------|
| • 1 | Introduction, Intelligent agents |
| • 2-4 | Solving problems by searching |
| • 5-6 | Adversarial search |
| • 6-7 | Constraint satisfaction problems |
| • 8 | Exam 1 |
| • 9-10 | Logical agents & inference |
| • 11-13 | Machine learning |
| • 14 | Advanced AI topic |
| • 15 | Exam II (during final exam week) |

- **Policy on Academic Dishonesty:** The School of Engineering encourages academic excellence in an environment that promotes honesty, integrity, and fairness. Please see the School's policy on academic dishonesty in the Student Code of Conduct:
<https://engineering.nyu.edu/sites/default/files/2018-06/code-conduct2-2-16.pdf>
- **Moses Center Statement of Disability:** If you are a student with disability and is requesting accommodations, please contact the NYU Moses Center for Students with Disabilities (CSD) at 212-998-4980 or mosescsd@nyu.edu. You must be registered with CSD to receive accommodations. Further information can be found at <http://www.nyu.edu/students/communities-and-groups/students-with-disabilities>