Jordan University of Science and Technology
Faculty of Computer & Information Technology
Computer Science Department

CS 362 Artificial Intelligence

Summer 2020 (online)

Course Catalog

3 Credit hours (3 hrs lectures). Artificial intelligence (AI) is a research field that studies how to realize the intelligent human behaviors on a computer. The ultimate goal of AI is to make a computer that can learn, plan, and solve problems autonomously. The main research topics in AI include: problem solving, reasoning, planning, natural language understanding, computer vision, automatic programming, machine learning, and so on. Of course, these topics are closely related with each other. In this course, we will study the most fundamental knowledge for understanding AI. We will introduce some basic search algorithms for problem solving; knowledge representation and reasoning; pattern recognition; fuzzy logic; and neural networks.

Instructor

Instructors	Dr. Malak Abdullah
Office Hours and Location	Sun-Tue-Thu 21:00 – 22:00 online I will be at my office on Monday and Wednesday (email me before you come)
Office Phone	-
E-mail	mabdullah@just.edu.jo dr.malak.abdelghani@gmail.com
Facebook group	https://web.facebook.com/groups/MLKStudentsSummer2020/

TextBooks and References

We will have more than one book:

Text book1	Artificial Intelligence: A Modern Approach, / Stuart Russell, Peter Norvig.
Text book2	Hands-on Machine Learning with Scikit-Learn & TensorFlow: Concepts, Tools, and Techniques to Build Intelligent Systems by Aurelien Geron
Text book3	To be announced later
Text book4	To be announced later

Software
Programming experience in Python is strongly recommended for this course. Please work through the following tutorial if you do not have programming experience: 1. https://docs.python.org/3/tutorial/ 2. Python Tutorial

Prerequisites	
Prerequisites	CS284 Algorithms

Teaching Assistant	
Alaa' Bani Ismael	ambaniismaeel@just.edu.jo

Topics	Week number
Topic0 : Introduction to AI	1
Topic1: Search	2
Topic2: Knowledge	3
Topic3: Uncertainty	4
Topic4: Optimization	5
Topic5: Learning	6
Topic6: Neural Network	7
Topic7: Language	8
Final Exam	9

Evaluation		
Assessment Tool	**Expected Due Date**	**Weight**
Quizzes	Weekly	20 %
Attendance	Each lecture	5 %
Participation	A presentation for 10 min	5 %
Assignments and HomeWorks	Weekly	20 %
Final Exam	According to the University final examination schedule	50 %

Policy	
Honesty	**Taken from Harvard AI Course:** This course's philosophy on academic honesty is best stated as "be reasonable." The course recognizes that interactions with classmates and others can facilitate mastery of the course's material. However, there remains a line between enlisting the help of another and submitting the work of another. This policy characterizes both sides of that line. The essence of all work that you submit to this course must be your own. Collaboration on assigned projects is not permitted except to the extent that you may ask classmates and others for help so long as that help does not reduce to another doing your work for you. Below are rules of thumb that (in exhaustively) characterize acts that the course considers reasonable and not reasonable. **Reasonable** 1- Communicating with classmates about projects 2- Discussing the course's material with others in order to understand it better. 3- Helping a classmate identify a bug in his or her code at office hours, elsewhere, or even online, as by viewing, compiling, or running his or her code, even on your own computer. 4- Incorporating a few lines of code that you find online or elsewhere into your own code, provided that those lines are not themselves solutions to projects and that you cite the lines' origins. 5- Sending or showing code that you've written to someone, possibly a classmate, so that he or she might help you identify and fix a bug. 6- Sharing a few lines of your own code online so that others might help you identify and fix a bug. 7- Turning to the web or elsewhere for instruction beyond the course's own, for references, and for solutions to technical difficulties, but not for outright solutions to projects. 8- Working with (and even paying) a tutor to help you with the course, provided the tutor does not do your work for you. **Not Reasonable** 1- Accessing a solution to some project to (re-)submitting your own. 2- Asking a classmate to see his or her solution to a project before (re-)submitting your own. 3- Decompiling, deobfuscating, or disassembling the staff's solutions to projects. 4- Giving or showing to a classmate a solution to a project when it is he or she, and not you, who is struggling to solve it. 5- Paying or offering to pay an individual for work that you may submit as (part of) your own. 6- Searching for or soliciting outright solutions to projects online or elsewhere. 7- Splitting an assigned project's workload with another individual and combining your work. 8- Submitting (after possibly modifying) the work of another individual beyond the few lines allowed herein. 9- Submitting the same or similar work to this course that you have submitted or will submit to another
Exams	All exams will be CLOSE-BOOK; necessary algorithms/equations/relations will be supplied as convenient.
Grading	The University's grading policy