CARLETON UNIVERSITY
SCHOOL OF COMPUTER SCIENCE
COMP 4106 (Winter 2019)
ARTIFICIAL INTELLIGENCE
NEWS

January 7, 2019

1. Classes start.
2. TA timings are included in the Course outline.
3. Hope you all enjoy the course!

January 21, 2019

1. The PMC needs a Volunteer "Notes-taker". Will someone please help?
2. Assignment 1 has been posted.
3. Since I have given you a WHOLE MONTH, please do not expect an extension.
4. Hope you all enjoy doing it!

January 25, 2019

1. The link for the time slots for Assignment 1 is: https://docs.google.com/spreadsheets/d/1CITRoJ3X9xe6qgVKHaWJw-iTejHzXTuyVTBTlpTqsQc/edit?usp=sharing
2. It should be publicly visible to all, but not editable to anyone but the TAs.
3. Please email Saranya (SaranyaR@cmail.carleton.ca) for the slots you want - as your three preferences. She will *not* respond to the emails directly as that would be very time consuming. Rather, she will just add them to the sheet. The student will then be able to view this update and ensure they do have a confirmed slot.

January 31, 2019

1. One student has solved Assignment 1. So the competition has been won. Congratulations!

February 5, 2019

1. You will have a Guest Lecturer, my ex-PhD student, Dr. Spencer Polk, who will give an overview on Natural Language Processing (NLP).
2. This will be on *Monday, March 25, 2019.*

February 10, 2019

1. The link for the time slots for Project Proposal (between March 5-8, 2019) is: https://docs.google.com/spreadsheets/d/1LvIZ2R0hyOg5LyA-FD3YeJ251WvEHIl6QogbuCIRP4A/edit?usp=sharing
2. It should be publicly visible to all, but not editable to anyone but the TAs.
3. Please email Geetika Sharma (GeetikaSharma@cmail.carleton.ca) for the slots you want - as your three preferences. She will *not* respond to the emails directly as that would be very time consuming. Rather, she will just add them to the sheet. The student will then be able to view this update and ensure they do have a confirmed slot.
4. Assignment 2 has been posted.

February 12, 2019

1. Tahira Ghani will be cancelling her office hours today (February 12) because of the snow storm. Instead, she will hold them next Tuesday (February 19) from 2:00 PM to 4:00 PM.

February 14, 2019

Here are some clarifications for Assignment 1:

1. **One student asked**: If the spider can not get the ant in time (no solution is found) can I just keep the spider in the same spot and not move it, while the ant moves across the screen?
   Here is my response: You can just make the ant stay at the end of the grid till it is eaten. That may make it easier.
2. **He also asked**: It says in the two page report, we should talk about the state space. Does this mean we should talk about our production system we implemented? And for when we talk about our heuristics, can we simply state our heuristics and why we picked them?
   Here is my response: Yes. Briefly, speak about the representation of the state space and the production system. Also, briefly about the heuristics you used and why one is better than the other. I just need a few lines about each. And you must answer questions about them (to make sure that it is your own work).

Have a good break, Everyone!

February 27, 2019

1. The document for the Final Project and the Project Proposal has been posted. The slots for the proposal have been set up.
2. The tentative date for the Final Project has also been stated in the document.
3. As decided in class today, the dates and slots for Assignment 2 are set up so as to start on March 12, 2019. The link for the time slots for Assignment 2 is: https://docs.google.com/spreadsheets/d/1xgQzI36RVPcwNNl_AqTRRVMFZL4Pwh0yBi08V9fcQ78/edit#gid=0.
4. It should be publicly visible to all, but not editable to anyone but the TAs.
5. Please email Karim Hersi (KarimHersi@cmail.carleton.ca) for the slots you want - as your three preferences. He will *not* respond to the emails directly as that would be very time consuming. Rather, he will just add them to the sheet. The student will then be able to view this update and ensure they do have a confirmed slot

March 6, 2019

1. The marks for Assignment 1 have been posted.

March 11, 2019

1. I notice that that I did not add details of the write-up for Assignment 2. It has now been included, in blue.
2. Prof. Tony White will teach a lecture on *Particle Swarm Optimization (PSO)* on Wednesday, March 20, 2019.

March 19, 2019

1. The marks for Assignment 2 have been posted.
2. The Guest Lecture on NLP by Dr. Spencer Polk will be April 3, 2019.
3. The Final Exam was initially erroneously described as an in-class *Quiz*. It is, rather, as described in class, a Final *Exam*. It is scheduled by the University and not by me.
4. The last due date for the demonstration of the Final Project will be the last day of the Final Exam period. I understand that there were some questions about this. Hope this clarifies everything.

March 24, 2019

1. Assignment 3 has been posted.

March 26, 2019

1. The link for the time slots for Assignment 3 (for the times that we decided on in class) is: https://drive.google.com/open?id=1CT7DL1d_VMFl89lrasQ3mwtgPUfSljVTasdcT1XzE3U.
2. It should be publicly visible to all, but not editable to anyone but the TAs.
3. Please email Tahira (TahiraGhani@cmail.carleton.ca) for the slots you want - as your three preferences. She will *not* respond to the emails directly as that would be very time consuming. Rather, she will just add them to the sheet. The student will then be able to view this update and ensure they do have a confirmed slot.

March 28, 2019

1. The link for the time slots for the Final Project is: https://docs.google.com/spreadsheets/d/1NI8jY_Ax_qfPvqSJhAAOe-f8vwtn-FYtpmWE4KsDBUs/edit?usp=sharing.
2. It should be publicly visible to all, but not editable to anyone but the TAs.
   Please email Vas (VasileiosLioutas@cmail.carleton.ca) for the slots you want - as your three preferences. He will *not* respond to the emails directly as that would be very time consuming. Rather, he will just add them to the sheet. The student will then be able to view this update and ensure they do have a confirmed slot.
3. It is best if you can get the same TA who saw your initial proposal. But if you can't get the same one, it doesn't matter. If you get another, s/he will understand what you proposed when you present the final project.
4. Important: There has been some confusion about Assignment 3. I have now added some statements (in blue) that should clarify everything. I will explain issues that are not clear in class on Monday.
5. The Guest Lecture on NLP by Dr. Spencer Polk has to be postponed again. We apologize. It will be Monday, April 8, 2019.

April 2, 2019

1. The TA, Tahira, is unwell today. She will hold her Office Hours this coming Friday, between 4:30-6:30 PM.

April 4, 2019

To make things simple for the assignment and for displaying the trees, please *only* consider the simplified scenarios:

1. You need to only "draw" (display) the Decision Trees. This can be done by hand or by using a simple "drawing" program.
2. You don't need to draw/display the Dependence Trees.
3. You don't need to do Dependence Tree classification for the real-life glass data.
4. For Part 2 of the assignment, you need to draw only *one* Decision Tree each for a few class pairs (say $<\omega_1, \omega_2>$, $<\omega_1, \omega_3>$, $<\omega_2, \omega_3>$ and $<\omega_3, \omega_4>$).
5. You need to draw these Decision Trees only to a height of 4.

April 7, 2019

There are some questions about learning the best dependence tree. This should explain things:

1. You generate the dependent data using a tree say τ^*.
2. Using the data, you learn a Dependence tree, say τ^+.
3. τ^+ is the same as τ^* with a high probability, but it *need not be exactly* τ^*. It converges to τ^* as the number of samples becomes infinite. You will get "the most likely one" from among all the possible spanning trees based, on the data generated.
4. There is no way to "check" the accuracy of the Dependence Tree in this way, but to check the pairwise dependence of the variables. But you don't need to do that.
5. You must do the classification using τ^+ as I taught you in class.
6. The accuracy of the classification is based on the number of samples that come out accurately using a k-fold cross validation.

Hope this is clear. Do it in this way and you will not be penalized.

April 8, 2019

If anyone is interested in a job in the company in which my ex-student, Dr. Spencer Polk, works, please contact him at: spencer@mindbridge.ai.

April 10, 2019

1. I went through the content of the Exam in today's lecture. There will be questions on Blind Search, Intelligent Search, Two-Player and Multi-Player Game Playing, Classification (including Decision and Dependence trees). There will also be some simple questions on Genetic Algorithms and PSO. *It is not a difficult exam.*
2. Some students have reserved slots for the Project Demo without having their Proposal approved. *If you are one of these students, please send your Project Proposal to the respective TA before the Demo*.