



Course Syllabus

(click on the home link to the left over there somewhere if you want to read details about the course... I say want, but really you should read it)

Required Text:

- [Tom Mitchell, Machine Learning. McGraw-Hill, 1997.](http://www.cs.cmu.edu/afs/cs.cmu.edu/user/mitchell/ftp/mlbook.html) 
(<http://www.cs.cmu.edu/afs/cs.cmu.edu/user/mitchell/ftp/mlbook.html>)






Optional Text:










- [Larry Wasserman, All of Statistics. Springer, 2010.](http://www.stat.cmu.edu/~larry/all-of-statistics/)  (<http://www.stat.cmu.edu/~larry/all-of-statistics/>) (Read Part 1 for an intro to Probability Theory)
- Richard Sutton and Andrew Barto, Reinforcement Learning: An introduction. (for Reinforcement Learning) ([Nov 5, 2017 version](http://incompleteideas.net/book/bookdraft2017nov5.pdf)  (<http://incompleteideas.net/book/bookdraft2017nov5.pdf>))

Files:












- Find other reading material we sorted out in the Files section.






Course Summary:

Date	Details	Due
Mon Jan 9, 2023	 Decision Trees (https://gatech.instructure.com/calendar?event_id=3926811&include_contexts=course_299858)	12am
	 ML is the ROX (https://gatech.instructure.com/calendar?event_id=3926797&include_contexts=course_299858)	12am
Mon Jan 16, 2023	 Neural Networks (https://gatech.instructure.com/calendar?event_id=3926783&include_contexts=course_299858)	12am
	 Regression and Classification (https://gatech.instructure.com/calendar?event_id=3926795&include_contexts=course_299858)	12am
Fri Jan 20, 2023	 Office Hours #1 (https://gatech.instructure.com/calendar?event_id=3926821&include_contexts=course_299858)	2pm to 3pm

Date	Details	Due
Mon Jan 23, 2023	 Ensemble Learning (https://gatech.instructure.com/calendar?event_id=3926815&include_contexts=course_299858)	12am
	 Instance-Based Learning (https://gatech.instructure.com/calendar?event_id=3926807&include_contexts=course_299858)	12am
Fri Jan 27, 2023	 Office Hours #2 (https://gatech.instructure.com/calendar?event_id=3926823&include_contexts=course_299858)	2pm to 3pm
Mon Jan 30, 2023	 Kernel Methods and SVMs (https://gatech.instructure.com/calendar?event_id=3926789&include_contexts=course_299858)	12am
Fri Feb 3, 2023	 Office Hours #3 (https://gatech.instructure.com/calendar?event_id=3926825&include_contexts=course_299858)	2pm to 3pm
Mon Feb 6, 2023	 Computational Learning Theory (https://gatech.instructure.com/calendar?event_id=3926803&include_contexts=course_299858)	12am
	 VC Dimensions (https://gatech.instructure.com/calendar?event_id=3926799&include_contexts=course_299858)	12am
Sun Feb 12, 2023	 Supervised Learning (https://gatech.instructure.com/courses/299858/assignments/1290536)	due by 11:59pm
Mon Feb 13, 2023	 Bayesian Learning and Inference (https://gatech.instructure.com/calendar?event_id=3926781&include_contexts=course_299858)	12am
Fri Feb 17, 2023	 Office Hours #5 (https://gatech.instructure.com/calendar?event_id=3926827&include_contexts=course_299858)	2pm to 3pm

Date	Details	Due
Mon Feb 20, 2023	 Information Theory (https://gatech.instructure.com/calendar?event_id=3926805&include_contexts=course_299858)	12am
	 Randomized Optimization (https://gatech.instructure.com/calendar?event_id=3926813&include_contexts=course_299858)	12am
Wed Feb 22, 2023	 Problem Set 1 (https://gatech.instructure.com/courses/299858/assignments/1290530)	due by 11:59pm
Thu Feb 23, 2023	 Office Hours #6 (https://gatech.instructure.com/calendar?event_id=3926769&include_contexts=course_299858)	2pm to 3pm
Tue Feb 28, 2023	 Midterm (https://gatech.instructure.com/courses/299858/assignments/1290472)	due by 9pm
Sun Mar 5, 2023	 Randomized Optimization (https://gatech.instructure.com/courses/299858/assignments/1290534)	due by 11:59pm
Wed Mar 8, 2023	 Clustering (https://gatech.instructure.com/calendar?event_id=3926791&include_contexts=course_299858)	12am
Fri Mar 10, 2023	 Office Hours #8 (https://gatech.instructure.com/calendar?event_id=3926775&include_contexts=course_299858)	2pm to 3pm
Mon Mar 13, 2023	 Feature Selection (https://gatech.instructure.com/calendar?event_id=3926787&include_contexts=course_299858)	12am
	 Feature Transformation (https://gatech.instructure.com/calendar?event_id=3926801&include_contexts=course_299858)	12am

Date	Details	Due
Fri Mar 17, 2023	 Office Hours #9 (https://gatech.instructure.com/calendar?event_id=3926773&include_contexts=course_299858)	2pm to 3pm
	 Withdrawal Deadline (https://gatech.instructure.com/calendar?event_id=3926771&include_contexts=course_299858)	3pm to 4pm
Mon Mar 20, 2023	 Markov Decision Processes (https://gatech.instructure.com/calendar?event_id=3926809&include_contexts=course_299858)	12am
Fri Mar 24, 2023	 Office Hours #10 (https://gatech.instructure.com/calendar?event_id=3926767&include_contexts=course_299858)	2pm to 3pm
Sun Mar 26, 2023	 Unsupervised Learning and Dimensionality Reduction (https://gatech.instructure.com/courses/299858/assignments/1290538)	due by 11:59pm
Mon Mar 27, 2023	 Reinforcement Learning (https://gatech.instructure.com/calendar?event_id=3926785&include_contexts=course_299858)	12am
Fri Mar 31, 2023	 Office Hours #11 (https://gatech.instructure.com/calendar?event_id=3926779&include_contexts=course_299858)	2pm to 3pm
Fri Apr 7, 2023	 Office Hours #12 (https://gatech.instructure.com/calendar?event_id=3926817&include_contexts=course_299858)	2pm to 3pm
Mon Apr 10, 2023	 Game Theory (https://gatech.instructure.com/calendar?event_id=3926793&include_contexts=course_299858)	12am
Wed Apr 12, 2023	 Cancelled: Office Hours #13 (https://gatech.instructure.com/calendar?event_id=3926777&include_contexts=course_299858)	2pm to 3pm
Thu Apr 13, 2023	 Problem Set 2 (https://gatech.instructure.com/courses/299858/assignments/1290532)	due by 9pm

Date	Details	Due
Sun Apr 16, 2023	 Markov Decision Processes (https://gatech.instructure.com/courses/299858/assignments/1290528)	due by 11:59pm
Fri Apr 21, 2023	 Office Hours #14 (https://gatech.instructure.com/calendar?event_id=3926819&include_contexts=course_299858)	2pm to 3pm
Tue May 2, 2023	 Finals (https://gatech.instructure.com/courses/299858/assignments/1290470)	due by 1:59am
	 CS 7641 Machine Learning (https://gatech.instructure.com/courses/299858/assignments/1290526)	
	 Midterm (Test your Setup) (https://gatech.instructure.com/courses/299858/assignments/1290458)	