CSC 4850/6850 Machine Learning
Fall 2019
Syllabus

Course Name: CSC 4850/6850 Machine Learning
Classroom: Classroom South 306
Date/Time: Tuesday/Thursday, 2:45 pm - 4:30 pm
Audience: Graduate & Undergraduate Students
Course Materials: - All the slides, assignments, and announcements are in iCollege.
- QA's are managed by piazza.

Instructor: AKM Kamrul Islam (Russell)
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Teaching Assistant: Jinkun Han
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Prerequisite: Prerequisite: CSC 4520 or 6520 Design and Analysis of Algorithm
(Discrete Mathematics, Linear algebra, Statistics, Calculus)

Text: Machine Learning, Tom Mitchell, McGraw Hill.
Reference:

1. Abu-Mostafa, Yaser S. and Magdon-Ismail, Malik and Lin, Hsuan-Tien, Learning from Data, AMLBook.
2. The elements of statistical learning. Data mining, inference, and prediction T. Hastie, R. Tibshirani, J. Friedman.
3. Christopher Bishop. Pattern Recognition and Machine Learning.
4. Richard O. Duda, Peter E. Hart, David G. Stork. Pattern Classification. Wiley.

Course Overview:
This course is intended to provide a general introduction to machine learning. This course will cover the fundamental concepts and principles of supervised learning, unsupervised learning, semi-supervised learning and reinforcement learning. Students will understand the basic knowledge of machine learning, be familiar with classic machine learning algorithms, and gain experience of designing and implementing methods in real scenario.

Grading:
The TA is responsible for grading all assignments. While the professor will provide the grader with guidelines (for example, that a question is worth 10 points), it is the TA's job to determine correctness of your answer. The TA is authorized to adjust grades if there has been a mistake in the grading (for example, if the grades were added incorrectly). Therefore, if you have questions regarding how your work was graded (such as "why were 3 points taken off for this problem?"), it is your responsibility to ask the **TA**. Any questions regarding graded work must

be brought to the TA's attention **within 1 week** of the date in which the work was first returned to the class.

Course grades will be derived from a combination of

- Attendance (5%)
- Assignments (10%)
- Midterm Exam (30%) (October 10, 2019, in class)
- Final Exam (30%) (December 05, 2019, in class)
- Final Project (25%)

A+ [97, 100]	A [93, 97)	A- [90, 93)
B+ [87, 90)	B [83, 87)	B- [80, 83)
C+ [77, 80)	C [70, 77)	
D+ [67, 70)	D [63, 67)	D- [60, 63)
F [0, 60)		

Attendance

Attendance is vital to success in this class. Spot attendance checks will be performed during class, and a late student will be counted as absent. Anyone missing approximately 10% of the classes without notifying the professor in advance and obtaining the professor's concurrence may be withdrawn from the course or receive a lower (possibly failing, e.g. WF or F) course grade at the discretion of the professor. Students are responsible for all material covered or assigned in class whether it's in the text or not. Any handouts missed will be the sole responsibility of the student. If a student is not present when an assignment is given back, or when a handout is given to the class, then he/she is responsible for obtaining this item by visiting during office hours. If you miss a class, be sure to get a copy of the notes from a fellow classmate.

Assignments:

Assignments are due at the START of class on their due dates. An assignment turned in after the start of class on its due date may be considered by the professor to be late and 50% penalty may be applied to that assignment. Late submission will NOT be accepted after the due date. A missing assignment will receive a grade of 0. Regular completion of all assignments, especially outside reading and the accomplishment of assignments, is critical to succeed in this course.

Withdrawals: October 10 is the last day to withdraw and possibly receive a W.

Tools:

The use of Jupiter Notebook, Spider, Anaconda, PyCharm for all programming assignments is required. You must ensure the uniqueness of your assignment to avoid credit deduction penalty.

Lateness policy

Homework deadline (date and exact time) will be mentioned at the beginning of the assignment. Homework submitted after that time will be considered late and will not be accepted.

Academic Integrity

Plagiarism will result in a score of zero on any test, assignment, or code. The instructor has the right to evaluate if students are cheating and will take a decision.

Exam

Exams will cover all the lectures and reading materials from the text. Exams must be taken on the hour they are scheduled. They will not be given early and can be made up only if documented evidence of medical emergency.

Key Schedule

Midterm: October 10, 2019
Last & Overview Class: November 19, 2019
Undergraduate Project Presentation: November 21, 2019
Graduate Project Presentation: December 03, 2019
Final Exam: December 05, 2019
Final Project Report Submission: December 10, 2019