Syllabus, Spring 2021
CSCI 4587/5587: Machine Learning I, Room: Internet

Lecture: MWF: 12 NOON to 12:50 PM.

Zoom Link and Passcode to attend the class –
Zoom ID: 872 0624 3142
Passcode: 822869

Instructor: Md Tamjidul Hoque
Email: thoque@uno.edu
Phone: 504-509-4440

Office Hours: Monday 12:50 – 2:05 PM and 7:45 PM to 9:00 PM.
Wednesday 12:50 – 2:05 PM and 7:45 PM to 9:00 PM.
Friday 12:50 PM – 1:50 PM.

Online Office Hours: https://uno.zoom.us/meeting/register/tZctcuGvqj8vHNzpa0hZoG4dh5NThvmbIroO

Prerequisites: Consent of department or CSCI 2125.

Textbooks: The slides, notes and exercises contain sufficient reading materials.

The following books are recommended for optional reading:
2. Natural Language Processing with TensorFlow, by Thushan Ganegedara.

Course Content: This course covers probabilistic as well as fundamental machine learning (ML) algorithms development using the latest ML programming frameworks such as Weka, Scikit-learn, Keras, TensorFlow, and Jupyter Notebook. It covers the following topics:
- Latest programming frameworks of machine learning applications,
- Descriptive statistics, Big/data preprocessing, exploration, mining, and visualization,
- Classification and regression,
- Principal Component Analysis
- Embedding Words and Types
- Processing Sequences Using RNNs
- Natural Language Processing with RNNs and Attention
Learning Outcomes: A programmer with the latest Machine Learning (ML) knowledge and programming frameworks will be able to ‘generate’ solution-code for a complex problem as well as utilizing the modern hardware architecture just by clicking a few buttons. Thus, the programmer with ML knowledge can have a significant advantage over a programmer without the ML knowledge, in terms of faster and better-performing program-code generation. The paradigm also helps a programmer focus on better solution development rather than focusing on coding syntax and code-management. In this course, the students will learn to apply tools to effectively and efficiently preprocess, visualize and analyze data for ML algorithms. They will learn the need and context of non-deterministic algorithms over the deterministic algorithms through programming projects and assignments. They will also learn machine learning applications for cognitive computing and Big Data.

Online Materials: Essential course material, assignments, announcements, etc. will be posted to this course page on Moodle, [http://www.uno.edu/moodle](http://www.uno.edu/moodle). Make sure to check your @uno.edu email frequently.

Attendance: Your attendance in class is needed and essential for you to meet course requirements. A 5% mark is allocated for your attendance.

Grading:

<table>
<thead>
<tr>
<th>Assignment</th>
<th>Percentage</th>
</tr>
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<tbody>
<tr>
<td>Class Test</td>
<td>33%</td>
</tr>
<tr>
<td>Best 6 out of 7</td>
<td>66%</td>
</tr>
<tr>
<td>Final Examination</td>
<td>29%</td>
</tr>
<tr>
<td>Attendance</td>
<td>5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>44%</strong></td>
</tr>
</tbody>
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Grading scale: A: 90+%, B: 80-89%, C: 70-79%, D: 60-69%, F: < 60%.

Bonus: A student who will be able to produce any publishable work (approved based on superior results, recognized by the instructor during the course period) related to any given assignment(s) or the topics covered in the class will be given 10% bonus marks.

Exams: Test 1, 2 and 3: tentatively on Feb 26th, March 26th, and April 26th, respectively.

Final Exam: Date/Time - Friday, May/14/2021, 12:30 PM to 2:30 PM, Location: Internet.

Due Dates: You are responsible for handing in your assignment on time. Late submissions will be assessed at the following rates: 80% for 1-48 hours late, 60% for 49-96 hours late, 40% for 97-144 hours late, 20% for 145-168 hours late. Assignments that are over a week late will receive no credit. For online submission, use Moodle. However, if Moodle is not working for some technical reason, email me (thoque@uno.edu) the assignment. If you are unable to act according to the deadlines due to exceptional circumstances, you must inform long before the deadline or, you must provide evidence.

Conducts:

1. All submitted works must be your own. Any academic dishonesty, including cheating, plagiarism, and conspiracy, will result in zero marks and will be reported to the appropriate authority in the university (http://www.studentaffairs.uno.edu/pdfs/StudentCodeofConduct.pdf).
2. Please be on time in the class. Late coming in the class is heavily discouraged.
3. Please avoid disruptive and noisy activities in the class and be respectful to others.
Syllabus Attachment
Spring 2021

Check Registrar’s website for items not listed below.

Spring Semester Important Dates*

- Last day to adjust schedule w/out fee...........................................01/28
- Semester Classes Begin ...............................................................01/29
- Last day to adjust schedule w/fee, or withdraw with 100% refund.................................02/08
- Last day to apply for Spring Commencement............................03/01
- Mid-Term grades due......................................................................03/24
- Final day to drop a course or resign .............................................04/05
- Last Day of Classes ......................................................................05/11
- Final examinations .......................................................................05/12-05/18
- Commencement ...........................................................................05/19-05/20

Winter Intersession 2021 Important Dates*

- Last day to apply for Spring Commencement............................03/01
- Last day to adjust schedule w/out fee...........................................03/03
- Semester Classes Begin ...............................................................03/04
- Last day to adjust schedule w/fee, or withdraw with 100% refund.................................03/06
- Final day to drop a course or resign .............................................03/15
- Martin Luther King, Jr.’s Birthday Holiday ..................................01/18
- Final examinations .......................................................................01/22

Session “B” Important Dates*

- Last day to apply for Spring Commencement............................03/01
- Last day to adjust schedule w/out fee...........................................03/22
- Semester Classes Begin ...............................................................03/23
- Last day to adjust schedule w/fee, or withdraw with 100% refund.................................03/26
- Mid-Term grades due......................................................................03/28
- Final day to drop a course or resign .............................................04/13
- Last Day of Classes ......................................................................05/11
- Final examinations .......................................................................05/12-05/18
- Commencement ...........................................................................05/19-05/20

Spring Semester Holidays

- Mardi Gras Holiday......................................................................02/15-02/16
- Good Friday Holiday....................................................................04/02-04/03

Use of Mask or Face Covering

The UNO Student Code of Conduct states, “Students will prioritize health and safety of the campus community. As a result of the COVID-19 pandemic (or other declared communicable disease outbreak or pandemics), when in shared, public spaces or where a minimum distance of six (6) feet (or a distance as recommended by latest safety guidelines) cannot be safely maintained, students are required to wear personal protective equipment in the form of a mask or face covering that covers their nose and mouth.”

Withdrawal Policy – Undergraduate only

Students are responsible for initiating action to resign from the University (withdraw from all courses) or from a course on or before dates indicated in the current Important Dates calendar. Students who fail to resign by the published final date for such action will be retained on the class rolls even though they may be absent for the remainder of the semester and be graded as if they were in attendance. Failure to attend classes does not constitute a resignation. Check the dates and charges associated on the Registrar’s website.

Incomplete Policy – Undergraduate only

A grade of I is assigned when, due to extenuating circumstances beyond their control, students engaged in passing course work are unable to complete class assignments within the time frame of the course’s session. Before agreeing to the use of an incomplete grade in any course, an Incomplete Grade Agreement Form must be completed. Details regarding deadlines for completing the I grade, when the incomplete converts to a grade of F, and a link to the form are on the Academic Affairs website.

Repeat Policy

When a student is permitted to repeat a course for credit, the last grade earned shall be the one which determines course acceptability for degree credit. A student who has earned a C or better in a course may not repeat that course unless, (1) the catalog description indicates that the course may be repeated for credit, or (2) the student’s Dean gives prior approval for documented extenuating circumstances.

Graduate Policies

Graduate policies often vary from undergraduate policies. To view the applicable policies for graduate students, see the Graduate Student Handbook.

Academic Dishonesty Policy

Policies for academic conduct are here.

Safety Awareness Facts and Education

Title IX makes it clear that violence and harassment based on sex and gender is a Civil Rights offense subject to the same kinds of accountability and the same kinds of support applied to offenses against other protected categories such as race, national origin, etc. If you or someone you know has been harassed or assaulted, you can find the appropriate resources here.

UNO Counseling Services and UNO Cares

UNO offers care and support for students in any type of distress. Counseling Services assist students in addressing mental health concerns through assessment, short-term counseling, and career testing and counseling. First-year students often have unique concerns, and UNO Cares is designed to address those students’ needs. Contact UNO Cares.

Emergency Procedures

Sign up for emergency notifications via text and/or email at E2Campus Notification. All emergency and safety procedures are explained at the Emergency Health and Safety Office.

Diversity at UNO

As the most diverse public university in the state, UNO maintains a Diversity Affairs division to support the university’s efforts towards creating an environment of healthy respect, tolerance, and appreciation for all people, and the expression of intellectual point of view and personal lifestyle. The Office of Diversity Affairs promotes these values through a wide range of programming and activities.

Learning and Support Services

Help is within reach in the form of learning support services, including tutoring in writing and math and other supplemental instruction. Visit the Learning Resource Center in LUB 126.
Affirmative Action and Equal Opportunity
UNO is an equal opportunity employer. The Human Resource Management department has more information on UNO’s compliance with federal and state regulations regarding EEOC in its Policies and Resources website.

COVID-19 Health-Related Absences
Students should evaluate their health status regularly, refrain from coming to campus if they are ill, and seek appropriate medical attention for treatment of illness. Students should notify (email) their instructors about their absence as soon as possible, so that accommodations can be made. In the event of COVID-19 illness, students should also complete the Campus Reporting Form. Please note that medical excuse may be required at the discretion of the department chair and/or college dean.