

## CIS345/DAC346 Machine Learning

Tu Th 08:00 – 09:45 a.m., SCI D223

Instructor: Alexander Iliev  
Office: SCI B241

Email: ailiev@uwsp.edu  
Office hours: Tu Th 13:45 – 16:00  
W 09:45 – 13:45

### Course Description

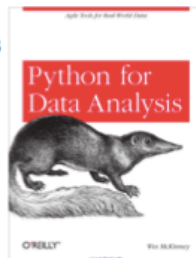
Introduction to the concepts of Machine Learning as an extension to the Data Mining class. Some of most fundamental methods and algorithms in the field will be revealed and used in class. Novel methods of machine learning will also be discussed in class.

### Objectives

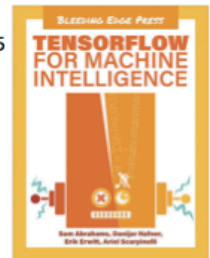
- Gain an understanding of the basic concepts of Supervised and Unsupervised machine learning techniques;
- Demonstrate competency classification, clustering and regression methodologies;
- Demonstrate basic understanding of data processing and handling.

### Required Text

Title: Python for Data Analysis  
ISBN-10: 1449319793 and ISBN-13: 978-1449319793  
Author(s): Wes McKinney  
Publisher: O'Reilly Media  
Edition Number: 1 edition  
Publication Date: November 1, 2012

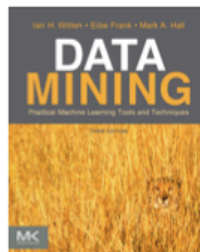


Title: Tensorflow for Machine Intelligence  
ISBN: 9781939902351, ISBN10: 1939902355  
Author(s): Sam Abrahams, Danijar Hafner  
Erik Erwit, Ariel Scarpinelli  
Publisher: Bleeding Edge Press  
Edition: 1 edition  
Publication Date: July 2016

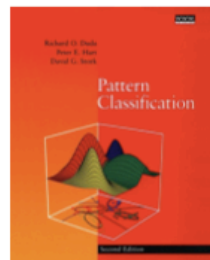


(optional reading)

Title: Data Mining  
ISBN: 978-0-12-374856-0  
Author(s): Ian H. Witten, Eibe Frank, Mark A. Hall  
Publisher: Elsevier  
Edition Number: 3rd edition  
Publication Date: 2011  
[Free Online copy](#)



Title: Pattern Classification  
ISBN: 111858600X, 9781118586006  
Author(s): Richard O. Duda  
Peter E. Hart, David G. Stork  
Publisher: John Wiley & Sons, 2012  
Edition: 2nd edition  
Publication Date: 2012



You are responsible for storing and backing up your assignments. The use of network space, or other storage (Google Drive, Dropbox, external media) are also reasonable. **Lost data is not an appropriate excuse for late work, and will not be accepted.**

## Assignments and Projects

Assignments will be announced in class and posted online. If you miss class, it is your responsibility to check online (or with a classmate) for any homework assignments and supporting material, which may have been given out during class.

For each assignment, you will write a 1-2 paragraph retrospective and turn it in to online with your completed assignment. Describe what worked well, what didn't work so well, and what you would do differently next time. Turn in any review sheets during class on the due date. **Projects with missing or incomplete retrospectives will not be graded, and considered late.**

In-class assignments may not be made up, or turned in after the end of class.

Your textbook is a valuable resource; you should bring it to every class.

I recommend that you start working on assignments as soon as possible after they have been announced. Web development almost always takes longer than originally anticipated; starting early greatly increases your odds of completing projects to your satisfaction. Please email or see me as soon as possible, **before the due date**, with any questions or concerns about an assignment. Except in extremely rare cases, **extensions** will not be given **AFTER** an assignment was due.

## Assignments

1. In-class participation: 10%
2. Homework: 20%
3. Quizzes: 20%
4. Midterm 20%
5. Final Project 30%

**Total            100%**

**Final Exam:** 12/19/2018, Wednesday, 12:30PM - 2:30PM, Science Building (SCI) D223

## Class Time and Preparation

We will use class time in a variety of ways, including but not limited to:

- Brief lectures, demonstrations and videos
- Tutorials
- Individual and group work time

Please always have a copy of your current project with you to facilitate work time that may be available to you.

## Due Date & Late Policy

Unless otherwise noted by the instructor, assignments are due before the **beginning of class** on the due

date. Grades for late assignments will be reduced by one letter grade per weekday. Assignments may only be made up if the absence was due to documented illness, approved university activity or family emergency.

If you miss class due to an approved university activity, illness or family emergency on the day a test is given or an assignment is due, it is your responsibility to contact the instructor **before the start of that day** in order to make arrangements.

### **Attendance Policy**

This class assumes perfect attendance. You must arrive on time and remain in class for the entire period, or will be counted as absent. Due to unforeseen circumstances, you may need to miss a class or two. Your attendance grade will be calculated as follows:

<u>Days Missed</u>	<u>Grade</u>
0-2	A
3	B
4	C
5	D
>5	F

### **Grading Scale**

Final grades will be determined according to the following scale:

		A	100 – 95%	A-	94 – 93%
B+	92 – 90%	B	89 – 88%	B-	87 – 86%
C+	85 – 83%	C	82 – 80%	C-	79 – 78%
D+	77 – 75%	D	74 – 72%	F	< 71%

I reserve the right to lower the grading scale (i.e. the course may require less than 95% to earn an A).

### **Academic Integrity**

The University of Wisconsin – Stevens Point is an academic community of individuals committed to the pursuit of learning, the acquisition of knowledge, and the education of all who seek it. This course expects that all work turned in for a grade is your own, or that of your group. A description of your rights and responsibilities as a member of the UWSP community can be found at:

<http://www.uwsp.edu/dos/Documents/CommunityRights.pdf>

A link to Student Academic Standards and Disciplinary Procedures (UWS/UWSP Chapter 14) is available on the same Web page (link above).

### **Smart Phone, IM and Recording Device Policy**

Please turn off smart phones before entering the classroom. Cell phones may not be used in the classroom without prior permission of the instructor. Instant messaging should also be turned off, unless you are communicating with a group member working remotely. If you would like to record (video or audio) any aspect of this course, please seek prior permission from the instructor.