# CS584 MACHINE LEARNING

Fall 2018

SYLLABUS

## Course Description

Introduce fundamental problems in machine learning. Provide understanding of techniques, mathematical concepts, and algorithms used in machine learning. Provide understanding of the limitations of various machine learning algorithms and the way to evaluate performance of learning algorithms. Topics include: Introduction, Regression, Kernel methods, Generative learning, Discriminative learning, Neural networks, Support vector machines, Graphical models, Unsupervised learning, Dimensionality reduction.

## Prerequisites

CS430.

## Date and Location

Tuesday-Thursday: 1:50pm – 3:05pm
SB 104

## Instructor

Mustafa Bilgic
Office hours: Tuesdays 11am – 12pm
Office: Stuart Building 217C
Website: http://www.cs.iit.edu/~mbilgic/
Email address: mbilgic@iit.edu
Twitter: https://twitter.com/bilgicm

## Teaching Assistant

None at the moment. There will probably be two TAs.

## Textbook

Machine Learning by Tom Mitchell (not required but highly recommended)
http://www.cs.cmu.edu/afs/cs.cmu.edu/user/mitchell/ftp/mlbook.html

## Online Tools

For questions and answers, please use Piazza
Sign-up: https://piazza.com/iit/fall2018/cs584
Class link: https://piazza.com/iit/fall2018/cs584/home

Course slides, assignments, and projects will be handled through Blackboard: https://blackboard.iit.edu/

## Grading

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| Quizzes: | 10% |
| Assignments: | 10% |
| Project: | 15% |
| Midterm: | 30% |
| Final: | 35% |

## Programming Language and Packages

Python 3.6 64bit https://www.python.org/
Scikit-learn http://scikit-learn.org/stable/
TensorFlow https://www.tensorflow.org/
Keras https://keras.io/

## Late Submission Policy

Quizzes will be handled through Blackboard and submission will close automatically at deadline.

Assignments and project submission will be through Blackboard as well, though submission will not close at deadline. However, every late minute will cost you 1 point. No exceptions!

## Code of Academic Honesty

https://web.iit.edu/student-affairs/handbook/fine-print/code-academic-honesty

## Americans with Disabilities Act (ADA) Policy

Reasonable accommodations will be made for students with documented disabilities. In order to receive accommodations, students must obtain a letter of accommodation from the Center for Disability Resources. The Center for Disability Resources (CDR) is located in 3424 S. State St., room 1C3-2 (on the first floor), telephone: 312.567.5744 or disabilities@iit.edu.