

CS534, Fall 2018

Course logistics

Course Information

- Instructor: Dr. Xiaoli Fern
Kelley 3073, xfern@oregonstate.edu
- TAs:
 - Hamed Shahbazi and Rasha Obeidat
- Office hour (held in Kelly unless otherwise stated)
Instructor: Tu Th after class 1:20 -2:00 (in class, then transiting to kec 3073)
Hamed Shahbazi: TBD
Rasha Obeidat: WF 4:30-5:30
- Class Web Page – canvas
- Class email list
cs534-f18@engr.orst.edu

Course materials

- Materials (links available on canvas syllabus page)
 - A Course in Machine Learning by Hal Daume III, online recourse, easy to follow
 - Machine learning by Tom Mitchell, somewhat outdated but nice reference for basic concepts
 - *Pattern recognition and machine learning* (PRML) by Chris Bishop, much denser, not recommended for beginners
- Slides and readings will be provided on course webpage
- Online resources on machine learning
 - Check class website for links

Prerequisites

- **Basic probability theory and statistics concepts:** Distributions, Densities, Conditional probabilities, product rule and chain rule of probability, Expectation, Variance ...
- **Basic calculus, multivariate calculus:** take derivative by hand (univariate and multivariate functions) ...
- **Linear algebra:** vector space, matrices, norm, dot product ...
- Knowledge of basic CS concepts such as data structure, search strategies, complexity

Please spend some time review these!
It will be tremendously helpful!

Homework and late policy

- Assignments: written and implementation
- Written Assignments (10% of the grade):
 - Individual assignments, analytical and conceptual questions
 - Help toward the exams
 - Due to the size of the class, each assignment only a subset of problems will be graded based on correctness. Others will be based on completeness.
- Implementation assignments. Group assignment of up to 3 students
 - Implement learned algorithms on simulated or real data
 - Perform experiments and report and analyze results
 - Answer questions regarding experiments as well as conceptual questions.
- Late policy: Late submissions are allowed up to 48 hours past the deadline. Submitted with 24h, get 90%, submitted with 48, get 75%.

Final Grade composition

- Final grades breakdown:
 - Midterm 25%;
 - Final 25%;
 - Written Homeworks 10%;
 - Implementation 30%;
 - Participation 10%; (in class)

The schedule about assignments and exams will be posted by the end of this week