

Pattern Classification

Class Hours: 15:00-16:15, Tues. & Thurs.

Class Units: 3

Lecture Room: TBA

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Textbook

Pattern Classification, Richard O. Duda, Peter E. Hart, David G. Stork, Wiley-Interscience, Second Edition, 2002

Lecture Methods: lecture, discussion, homework, and handout

Class Schedule

Week 1: Basic concepts in pattern recognition
Week 2: Approaches to pattern recognition
Week 3: Distribution-free classification: Classifier design
Week 4: Distribution-free classification: Training algorithms
Week 5: Random vectors and their properties
Week 6: Statistical classification: Bayes decision theory
Week 7: Statistical classification: Bayes classifier
Week 8: Statistical classification: Parameter estimation
Week 9: Midterm Exam
Week 10: Statistical classification: Nonparametric techniques
Week 11: Statistical classification: Supervised learning
Week 12: Unsupervised classification: Similarity measures
Week 13: Unsupervised classification: Clustering
Week 14: Unsupervised classification: Component analysis
Week 15: Neural networks
Week 16: Final Exam

Homework: homework assignment/chapter

Grading system: attendance (10%), homework (20%), midterm (30%), and final (40%)