

Computer Science Department

University of Verona

A.A. 2016-17

Pattern Recognition

Preliminaries

The teacher

- Prof. Marco Cristani
- Computer Science Dept
Ca' Vignal 2, 1st floor, room n. 52 (east branch)
email: marco.cristani@univr.it
WWW: <http://www.sci.univr.it/~cristanm>
Phone: 045 802 7841
- Office hours:
 - Monday, 10.30 - 11.30AM (better to fix an appointment)

General info

- Theoretical and practical lessons (MATLAB, gamma)
- Material:
 - course slides (italiano/inglese),
 - books
 - Richard O. Duda, Peter E. Hart, and David G. Stork. 2000. Pattern Classification (2nd Edition). Wiley-Interscience.
 - Christopher M. Bishop. 2006. Pattern Recognition and Machine Learning (Information Science and Statistics). Springer-Verlag New York, Inc., Secaucus, NJ, USA.

General info

- Lab: VIPS (Vision, Image Processing & Sound), CV2, floor -2.

Info: <http://vips.sci.univr.it>



Exam details

- oral exam

Goals



Course content

Statistical pattern recognition on heterogeneous data

- Introduction
- Bayes decision theory
- Fisher Discriminant Analysis, Principal Component Analysis
- Linear and non linear classifiers
- Model learning (parameter estimation, non parametric models)
- Mixtures of Gaussians, EM

Course content

- Generative and discriminative classification
- Kernel methods and Support Vector Machines
- Hidden Markov Models
- Clustering