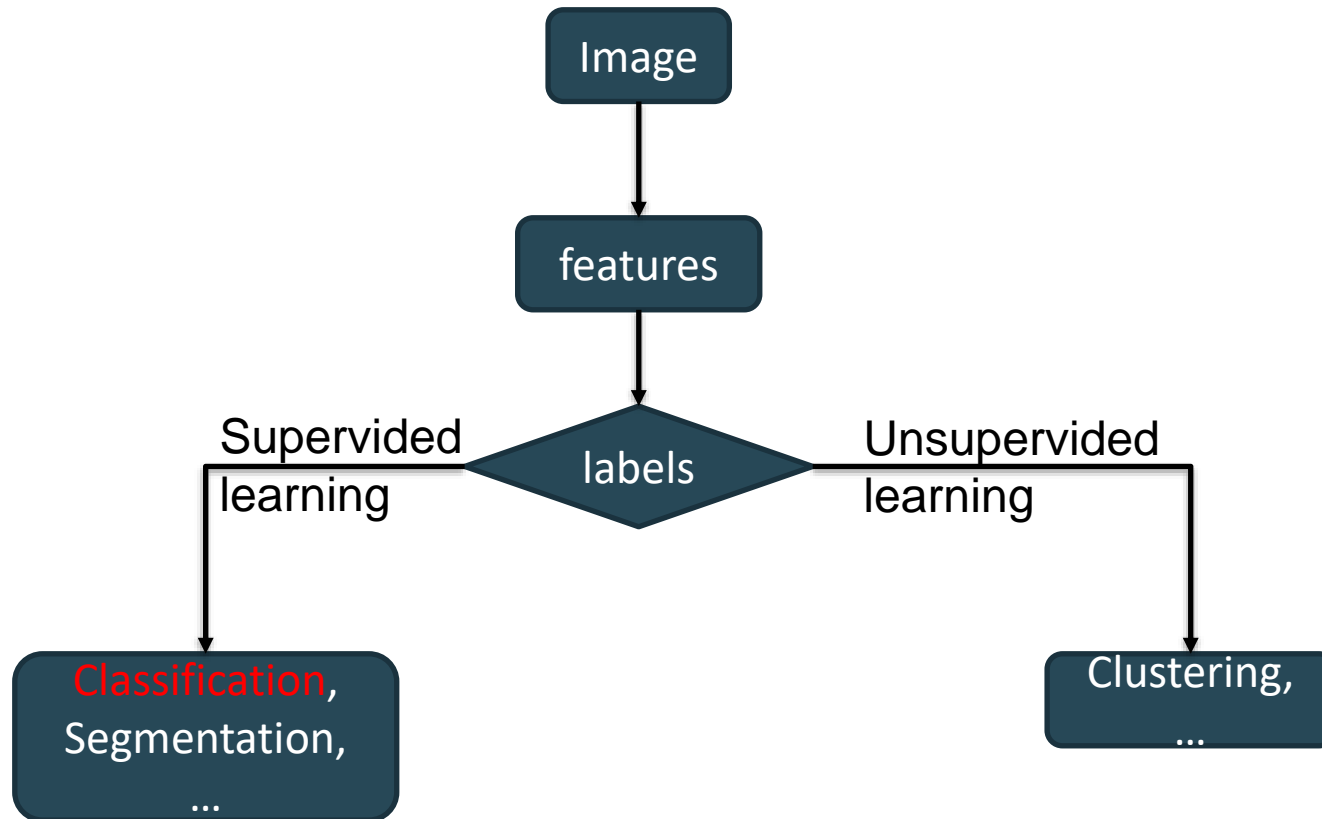**Master in Computer Vision Barcelona**

Module 3: Machine Learning for Computer Vision

Lecture 0: Introduction

Lecturer: Ramon Baldrich
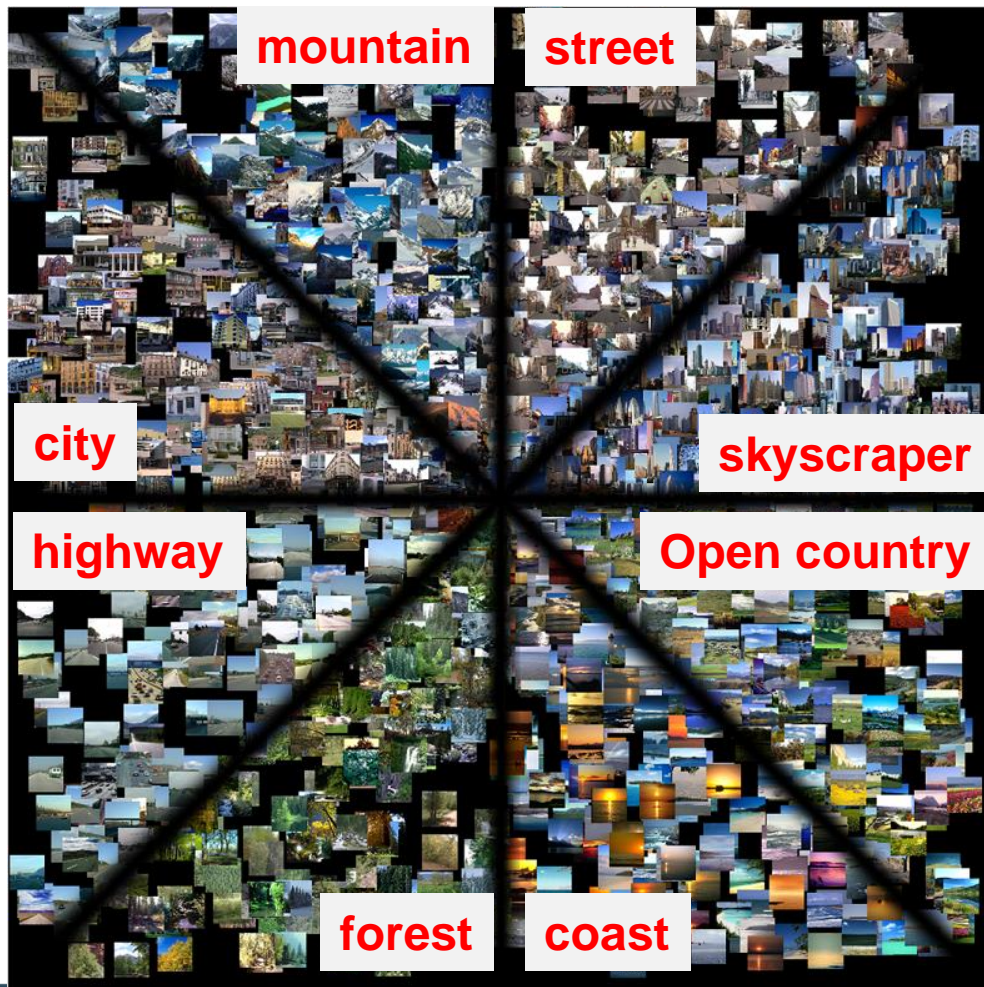
Artificial Intellingence in Computer Vision

Image

↓

features

↓

Supervided learning — labels — Unsupervided learning

Classification, Segmentation, …

Clustering, …

Module Goal

The aim of this module is to learn the techniques for category classification: handcrafted and learned.

Artificial Intellingence in Computer Vision

Machine learning for image classification:

- Handcrafted methods: Bag of Words
- Data driven methods: Deep Convolutional Networks

Syllabus

Monday: On-site (CVC)
Wednesday: On-line <link>

date	time	lecture	lecturer	university	building	room
Mon. Dec. 12th	16:00 -18:00	Introduction to machine learning	Dimos Karatzas	UAB	CVC	S. d'Actes
Mon. Dec. 12th	18:00 - 19:00	Project Introduction: basic image classification and BOW	Ramon Baldrich	UAB	CVC	S. d'Actes
Wed. Dec. 14th	16:00 -18:00	Introd ML cont / Experimental Setup	D. Karatzas / F. Vilariño	UAB	online	-
		Christmas Holidays (From Dec. 19th to Jan. 6th)				
Mon. Jan. 9th	16:00 -18:00	SVM / Ensembles	Fernando Vilariño	UAB	CVC	S. d'Actes
Mon. Jan. 9th	18:00 - 19:00	Project: basic image classification	Ramon Baldrich	UAB	CVC	S. d'Actes
Wed. Jan. 11th	16:00 -18:00	Introduction to Deep Learning 1	Dimos Karatzas	UAB	online	-
Mon. Jan. 16th	16:00 -18:00	Introduction to Deep Learning 2	Dimos Karatzas	UAB	CVC	S. d'Actes
Mon. Jan. 16th	18:00 - 19:30	Project introduction: Deep learning classifiers (KERAS)	Ramon Baldrich	UAB	CVC	S. d'Actes
Wed. Jan. 18th	16:00 -18:00	Convolutional Neural Networks	Fernando Vilariño	UAB	online	-
Mon. Jan. 23rd	16:00 -18:00	Image Classification	Pau Rodriguez	UAB	CVC	S. d'Actes
Mon. Jan. 23rd	18:00 - 19:30	Project follow-up.	Ramon Baldrich	UAB	CVC	S. d'Actes
Wed. Jan. 25th	16:00 -18:00	Training: data pre-processing, initialization, gradient optimisation	Lluis Gomez	UAB	online	-
Mon. Jan. 30th	16:00 -18:00	Understanding and visualizing CNNs	M. Vanrell / G. Arias	UAB	CVC	S. d'Actes
Mon. Jan. 30th	18:00 - 19:00	Project follow-up.	Ramon Baldrich	UAB	CVC	S. d'Actes
Wed. Feb. 1st	16:00 -18:00	Efficient methods for Deep Learning	Marco Pedersoli	UAB	online	
Mon. Feb. 6th		HOMEWORK				
Mon. Feb. 6th		HOMEWORK				
Mon. Feb. 13th	16:00 -18:00	Project Presentations	Ramon Baldrich	UAB	CVC	S. d'Actes
Mon. Feb. 20th		HOMEWORK				
Wed. Feb 22nd		HOMEWORK				
Mon. Feb. 27th	16:00 -19:00	EXAM	Ramon Baldrich	UAB	CVC	S. d'Actes

Module management

MS Teams class team