Module: M1
Project: Museum painting retrieval
Coordinator: Ramon Morros, Verónica Vilaplana

W1 - Homework

QST1-W1

Team	Method	map@1 Dev	map@1 Test	map@5 Test	Technique
Team3	method1	0,73	0,73	0,73	3D Lab+Hellinger
Team7	method1	0,60	0,70	0,70	3D YCrCb+Hellinger
Team7	method2	??	0,70	0,70	??
Team1	method1	0,73	0,67	0,67	RGB 1D + Hellionger, block
Team5	method1	0,73	0,63	0,63	Lab+Hellinger
Team1	method2	0,44	0,60	0,60	??
Team6	method2	??	0,60	0,60	??
Team5	method2	??	0,57	0,57	??
Team6	method1	??	0,57	0,57	??
Team3	method2	0,53	0,53	0,53	3D RDB+Hellinger??
Team4	method1	0,50	0,53	0,53	YCbCr + Chi sq
Team2	method1	0,43	0,50	0,50	Lab+Hellinger
Team2	method2	0,33	0,37	0,37	RGB+L1
Team4	method2	0,54	0,37	0,37	HSV+intersect
Team8	method1	0,37	0,30	0,30	RGB+cosine

W1 - Homework

QST2-W1 - MAP@k

Team	Method	map@1 Dev	map@1 Test	map@5 Test
Team1	method2	0,57	0,53	0,53
Team4	method1	0,57	0,47	0,47
Team3	method1	0,33	0,40	0,40
Team1	method1	0,70	0,37	0,37
Team3	method2	0,50	0,37	0,37
Team6	method1	??	0,37	0,37
Team6	method2	??	0,33	0,33
Team4	method2	0,57	0,27	0,27
Team2	method1	0,37	0,23	0,23
Team2	method2	0,37	0,13	0,13
Team5	method1	??	0,13	0,13
Team5	method2	??	0,13	0,13
Team7	method1	??	0,07	0,07
Team7	method2	??	0,07	0,07
Team8	method1	0,43	0,00	0,00
Team8	method2	0,30	0,00	0,00

W1 - Homework

QST2-W1 - Segmentation

Team	Method	Precision	Recall	F1
Team1	method1	0.99	0.99	0.99
Team2	method1	0.95	0.82	0.88
Team3	method1	0.98	0.98	0.98
Team4	method1	1.00	0.98	0.99
Team5	method1	0.91	0.90	0.90
Team6	method1	0.91	0.99	0.95
Team7	method1	0.97	0.99	0.98
Team7	method2	0.98	0.99	0.98
Team8	method1	0.95	0.97	0.96
Team8	method2	0.97	0.81	0.88

Week2 Datasets

Museum datasets

- **Can Framis Museum**
- **Figueres 120 years expo**
- **Kode Bergen**
  original and paintings with superimposed text on a semitransparent box
 (different fonts, sizes and positions)
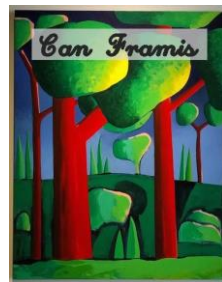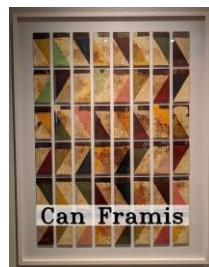
Query datasets (development with GT and test without GT)

- QSD2-W1: 30 (with background) pictures (same as previous week to see if multiresolution histograms improve results; only best MR method)
- QSD1-W2: 30 (cropped) pictures with overlapping text (name of painter), one painting per image
- QSD2-W2: 30 pictures with background and text and in some cases more than one picture per image

W2 - Task1

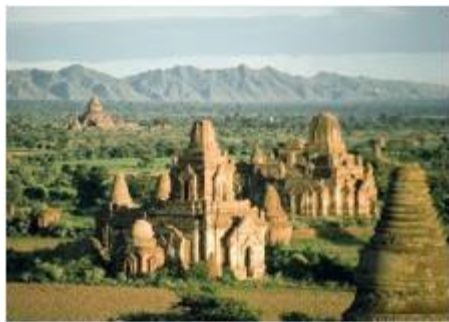- Implement 3D / 2D and block and multiresolution histograms

Block-based Histograms: divide image in non-overlapping blocks; compute histograms per block; concatenate histograms.
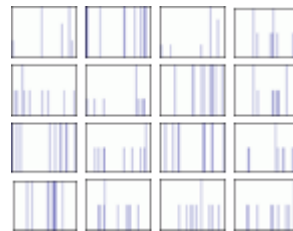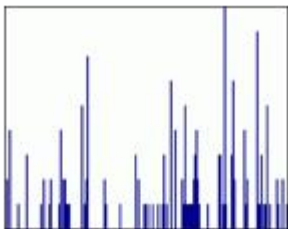
W2 - Task1

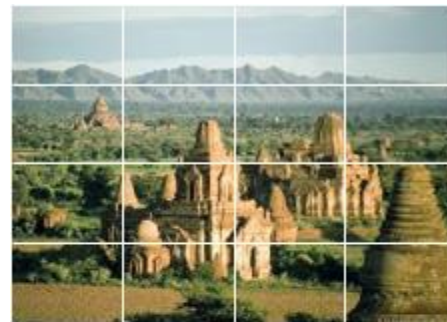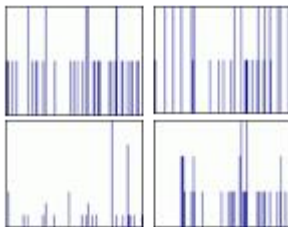- Implement 3D / 2D and block and multiresolution histograms

Spatial pyramid representation: compute block histograms at different levels, concatenate representations
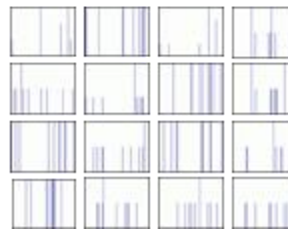

level1 level2 level3

W2 - Task2

- Test query system using QSD2-W1 (from week1) with Task1 descriptors and evaluate results
  - use any of the similarity measures from week1
  - you can use morphology to improve foreground (if necessary)
  - compare with previous week results
  - no submission (no test set for this task)
  - include results in report slides

W2 - Task3

- Detect and remove text from images in QSD1-W2:
    - Detect text bounding box
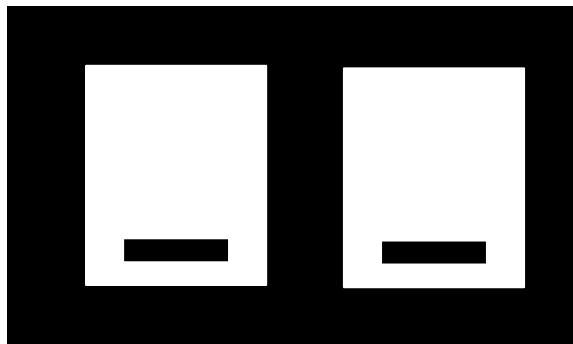   - Provide bounding box coordinates for evaluation

Text on a semi-transparent box superimposed in the image, with different sizes, fonts and locations.

Bright (dark) text on dark (bright) background-
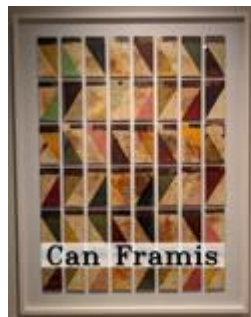
W2 - Task4

- Evaluate text detection using bounding box
- Metric: mean IoU
- For each image, return the list of bboxes of the text positions

$[[[tlx_1, tly_1, brx_1, bry_1]],...]$

$\rightarrow [[tlx_1, tly_1, brx_1, bry_1],[tlx_2, tly_2, brx_2, bry_2]]$

Order: left to right or top to bottom

W2 - Task5

- Test query system using query set QSD1-W2 development, evaluate retrieval results (use your best performing descriptor)
    - ignore pixels in the text area (inside detected bounding box)

W2 - Task6

- For QSD2-W2 : detect all the paintings (max 2 per image), remove background and text, apply retrieval system, return correspondences for each painting. Only retrieval is evaluated.

- Add extra list level to allow for the possibility of more than one painting per image

Integers!

[[[7,25,...],[44,81,...]], ...

[7,25,...]   [44,81,...]

W2 - Submissions

- For each query test (QST1-W2, QST2-W2) a list of the K best results (K=10).
    - Create a python list of lists
- For QST2-W2, return the masks
- For QST1-W2 and QST2_w2 return the bbox of the text position

$$[[[tlx_1, tly_1, brx_1, bry_1]],...]$$

Note: Deliver pkl files to:
/home/dlcv0X/m1-results/week2/QST1/**method1**/result.pkl
/home/dlcv0X/m1-results/week2/QST1/**method1**/text_boxes.pkl
...
/home/dlcv0X/m1-results/week2/QST2/**method2**/*.png

- Test query set will be published Sunday, 24 Oct 2021 at 10h
- Submit progress slides
    - Deadline slides: Sunday 24 Oct 2021 at 14:00
    - Deadline results: Sunday 24 Oct 2021 14:00
    - Deadline questions to teams: Monday 25 Oct 2021 at 14:00