social sensor

Finding Diverse Images at MediaEval 2013

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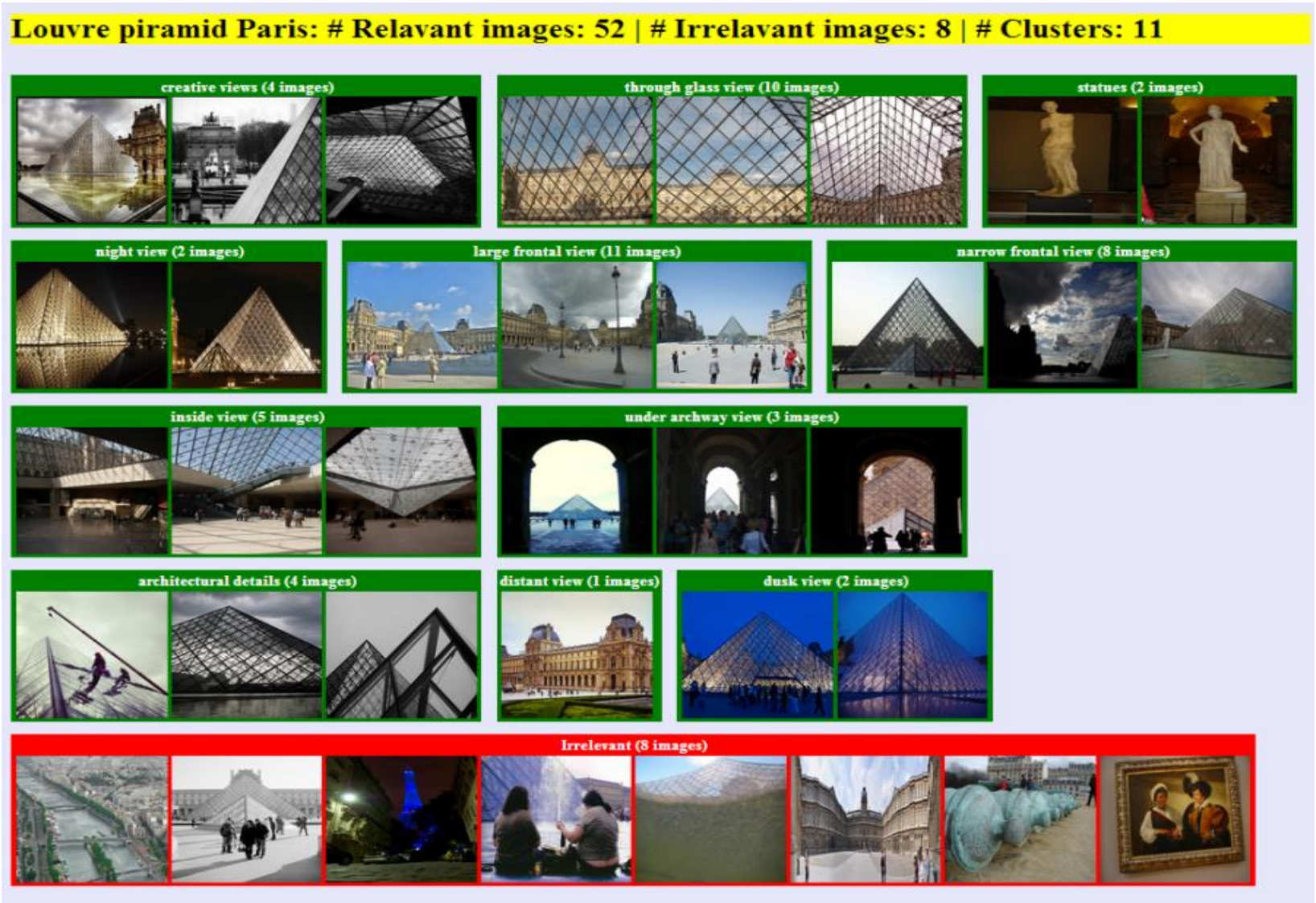
SEVENTH FRAMEWORK PROGRAMME

Summary of our participation

- We took part in all 5 runs
- A different algorithm was used for each feature type: visual/text/internet features (including local weather data)
- A common criterion for model selection: CR@10 calculated using leave-one(-location)-out cross-validation
- A simple visualization tool!

Summary of our participation



Sneak Peek on our Approach

- 1st run (visual): feed optimized VLAD+SURF features to an algorithm, an adaptation of (Deselaers et al., 2009), that tries to jointly optimize Relevance (predicted with linear SVMs) and Diversity.
- 2nd run (text): Random Forest to predict relevance, hierarchical clustering for diversity (tf-idf, #comments, #views etc.)
- 3rd run (visual+text): a simple late fusion of the above
- 4th run : human-machine hybrid, 2 participants refined short-lists generated by the textual run
- 5th run: combines device and local weather data to get diverse images with respect to: a) distance from landmark, b) angle of shot, c) weather conditions and d) day-time

Some Results

Method	CR@10	P@10	F@10
Run1	**0.429**	0.733	**0.521**
Run2	0.390	0.732	0.491
Run3	0.405	**0.785**	0.510
Run4	0.408	0.750	0.508
Run5	0.406	0.733	0.504

- Best performance in terms of CR@10 and F1@10 for our visual run (run1)
- Human-machine hybrid (run 4) run improves the textual run (run 2)

The end

More details at the poster session!

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