

Project goal


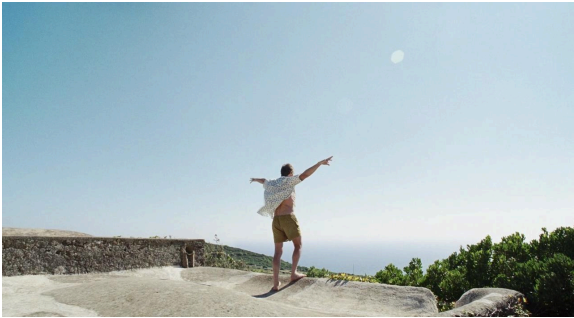
The objective is to build a movie shot type classifier and image composition evaluator without using any deep learning methods, possibly by clever use of the Viola-Jones model. For the movie shot type classification part we focus on the simpler partition in CLOSE-UP SHOT, MEDIUM SHOT and WIDE SHOT.

	CLOSE-UP SHOT
	MEDIUM SHOT
	WIDE SHOT

The system should take an input image and do the following:

1. Return the predicted shot type, a classification perplexity score can also be considered for edge-case scenarios;
2. Return a “good composition” score for medium shots and close-ups based on the actor’s positions and standard composition rules like the [rule of thirds](#).

Example predictions:

	<p>Predicated class: MEDIUM SHOT</p> <p>Scores: CLOSE-UP = 0% MEDIUM SHOT = 70% WIDE SHOT = 30%</p>
	<p>Predicated class: WIDE SHOT</p> <p>Scores: CLOSE-UP 0% MEDIUM SHOT = 0% WIDE SHOT = 100%</p>

Possible applications

Such an automatic classification system would allow the following applications:

1. Fast and automatic extraction of shot type statistics from movies for further data analysis on aesthetics trends over time, genres and directors (e.g. does Italian Neorealism favor wide shots or close-ups?);
2. Real-time automatic direction of video cameras for live events;
3. Composition assistance for photography and filmmaking.

Performance metrics

The project should be evaluated on the test dataset using standard metrics: Accuracy, Precision, Recall, F1 score.