



DR2S: Deep Regression with Region Selection for Camera Quality Evaluation

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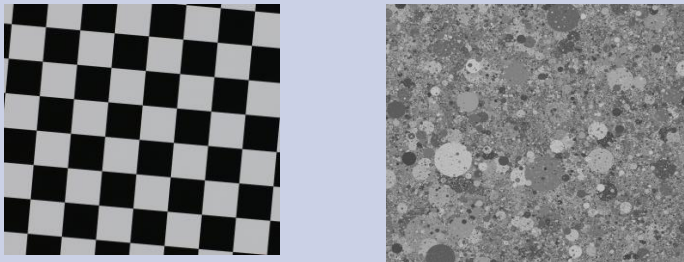



Texture/Details preservation

-> Ability to render fine details



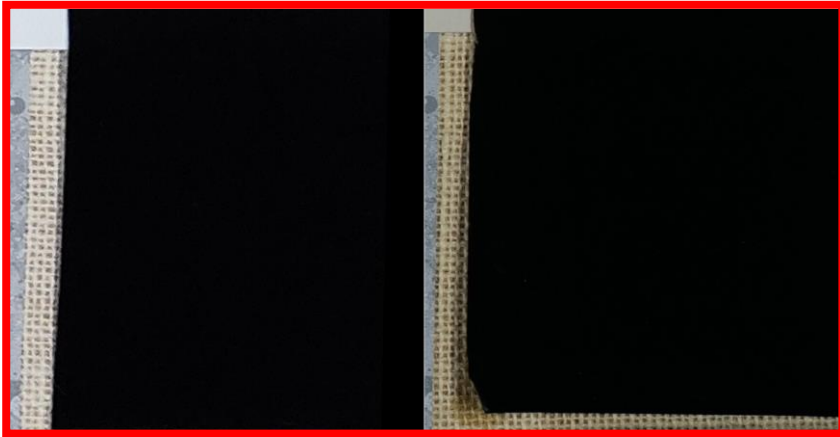
Texture measurements

	State of the art	Ours
Chart		
Method	MTF-based	Learning- based
Measure	Acutance	Perceptual quality

Discriminant Regions problem

Low quality

High quality



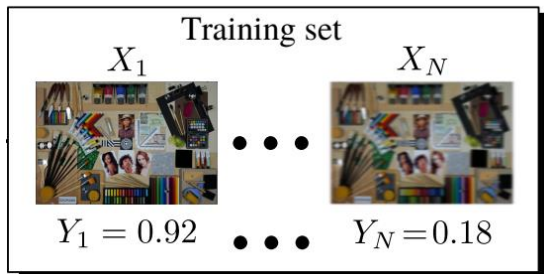
Low quality

High quality

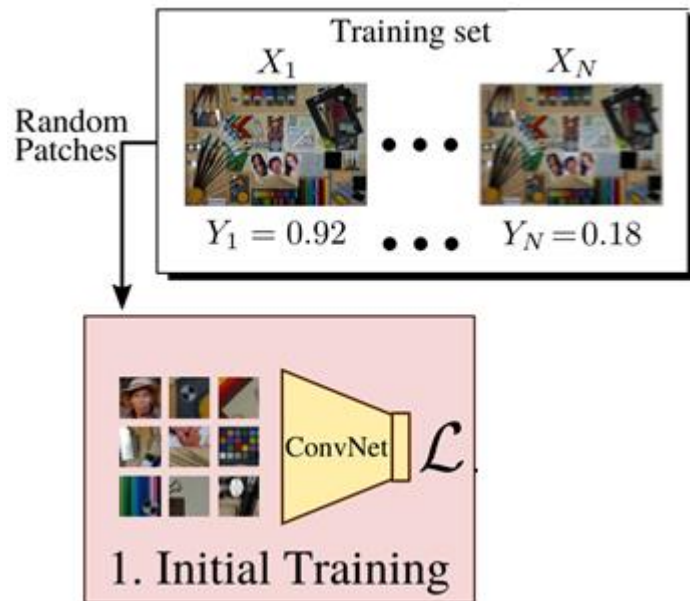


->Which regions of the chart are the most useful for details preservation evaluation ?

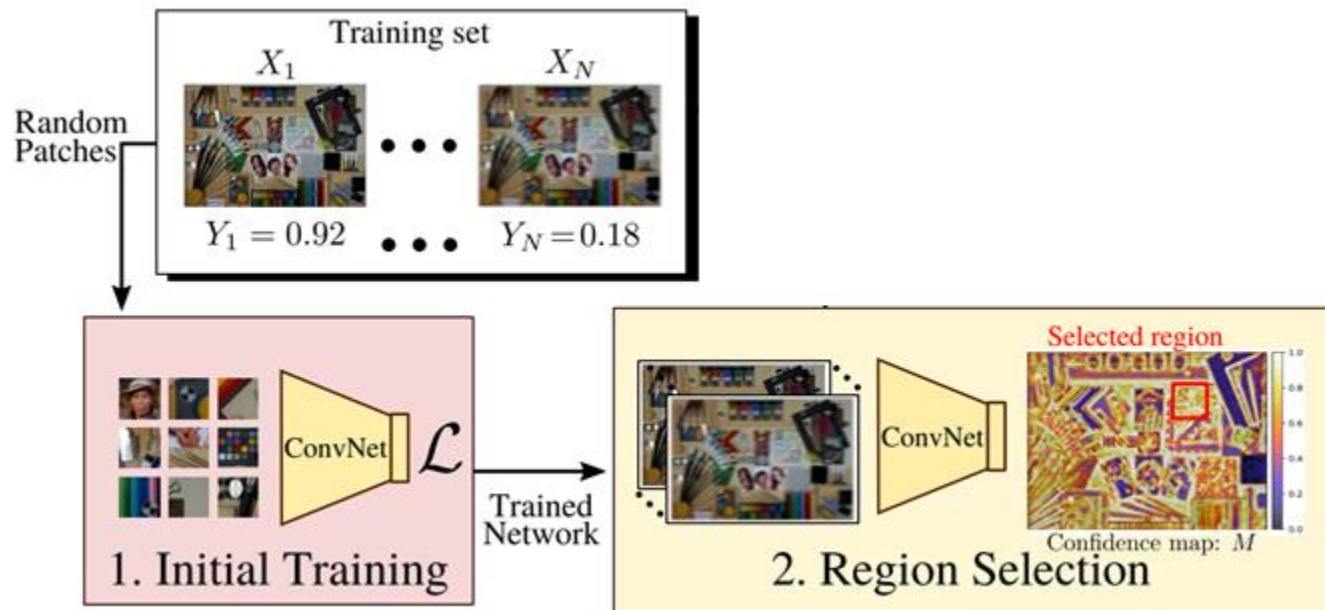
Method



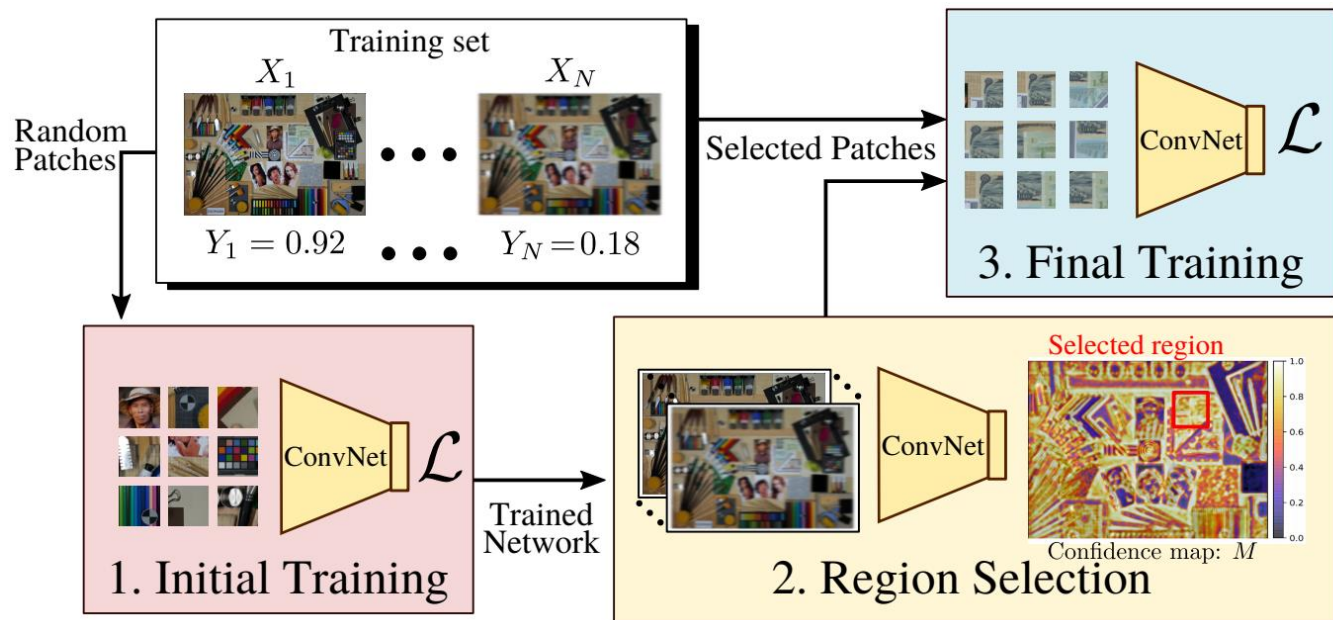
Method

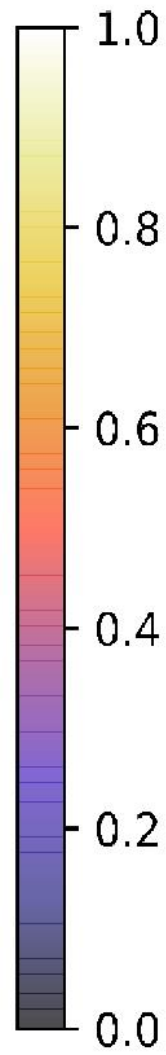
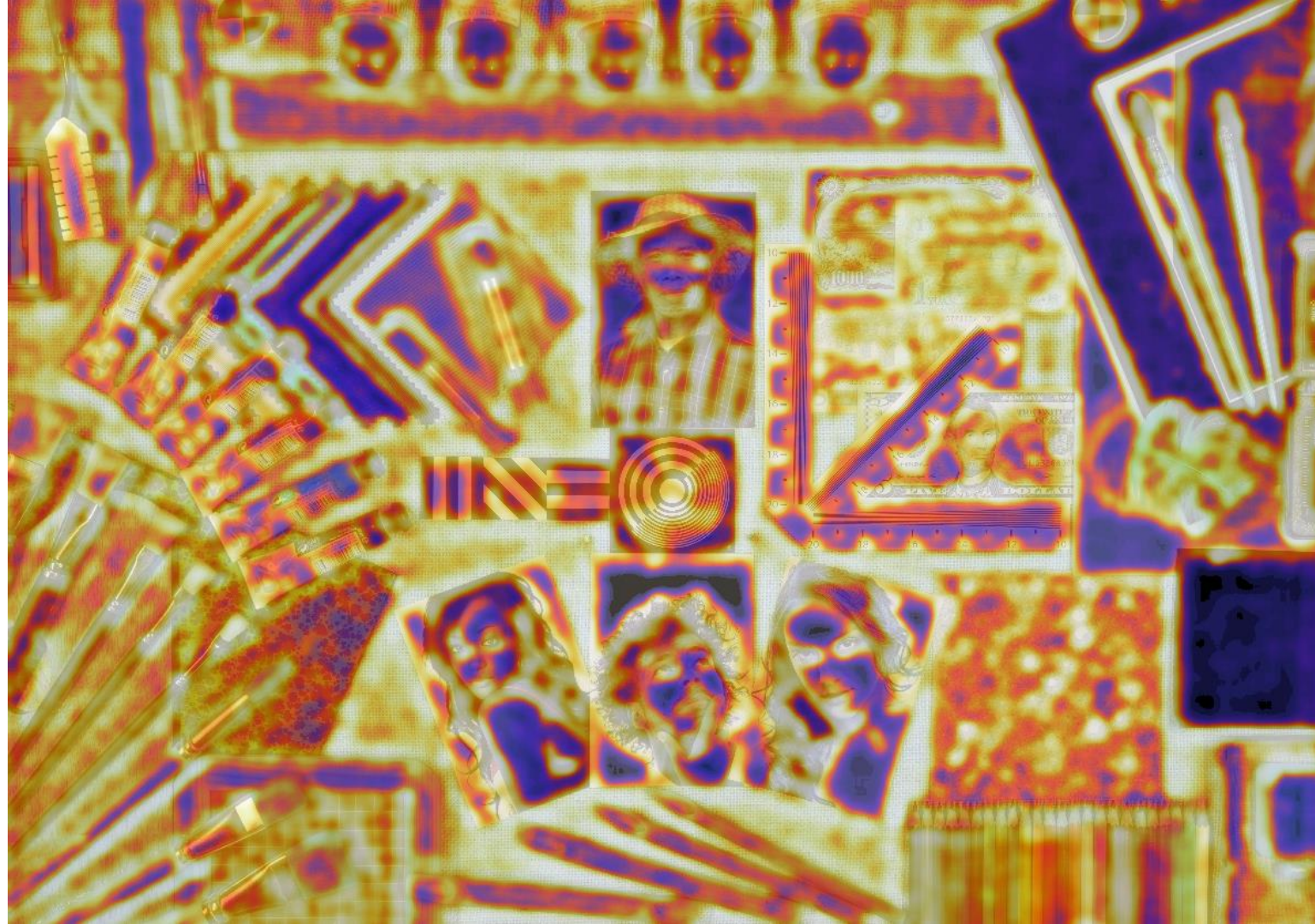


Method

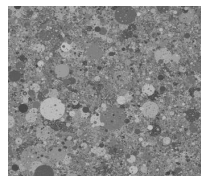


Method

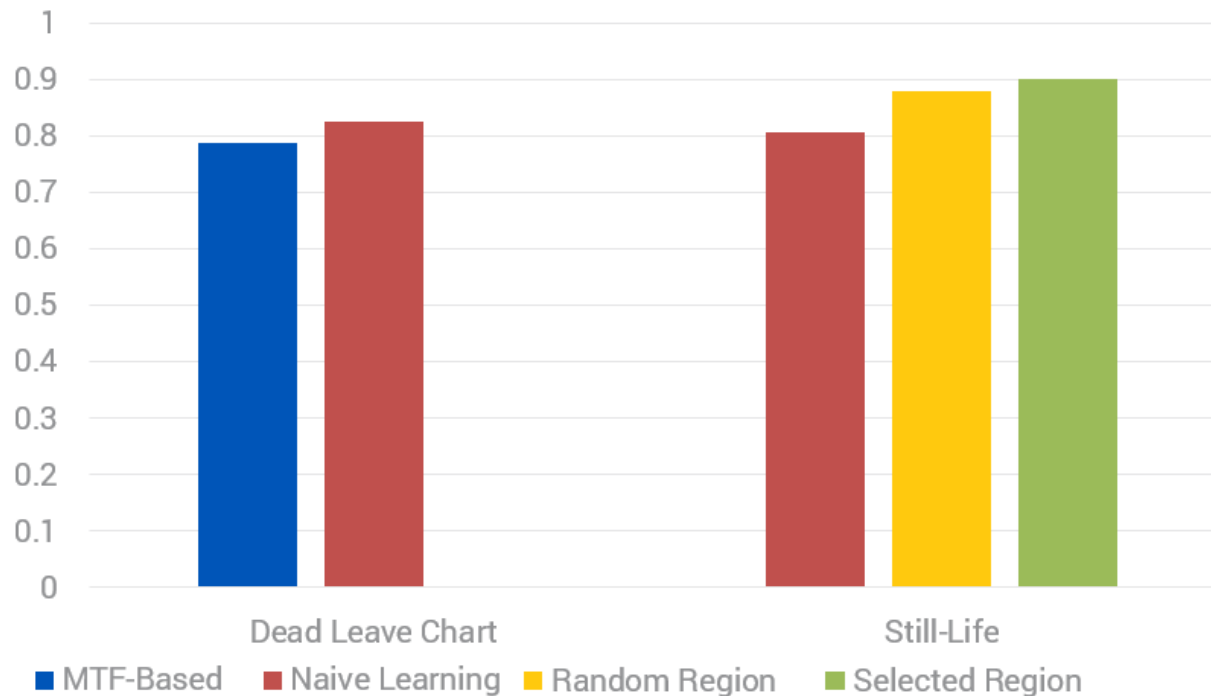




Results



Spearman Rank-
Order
Correlation
Coefficient



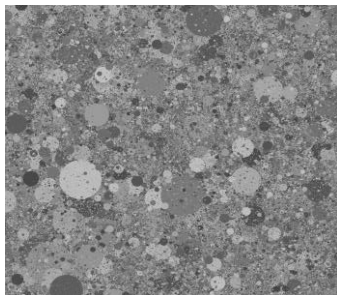
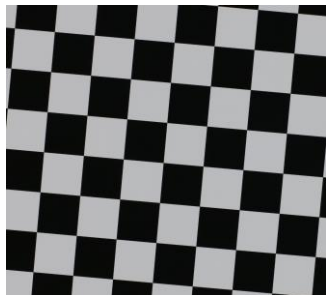
Thank you!

Any question ?



Traditional texture measures

Traditional method to automatically evaluate camera quality : Photograph fixed content in controlled lighting conditions



Computation method : Modulation transfer function (Relation between content photographed and resulting image) and Acutance (Sharpness measure derived from the MTF)

Issues :

- Too simplistic,
- Highly unnatural details,
- Does not explicitly measure perception.



More natural looking charts are used for perceptual evaluation