What makes an image memorable?

Phillip Isola, Jianxiong Xiao, Antonio Torralba, Aude Oliva, MIT

Memory Game

Database 2222 photographs from SUN database (Xiao et al, 2015).

Measurability = probability of correctly detecting a repeat after a single view of an image in a long stream.

Rich features necessary

Wide range of memorabilities and high inter-subject consistency

What content makes an image memorable?

Objects

1) Simple image stats?
2) Global image features?
3) Object segmentation statistics?
4) Object and scene semantics?

Pixel Histograms
GIST
SIFT
HOG
SSIM
HOG2x2

Stable intrinsic memorability
Automatic predictions

People, close-ups, and human-scale objects predict memorability
Standardized database
Predictable from global features

Conclusions

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Intrinsic memorability?

What image content matters?

Database

Prediction algorithm

What classes of information predict memorability?

Prediction algorithm: SVM regression with non-linear kernels

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