Towards *Aesthetics*: a Photo Quality Assessment and Photo Selection System

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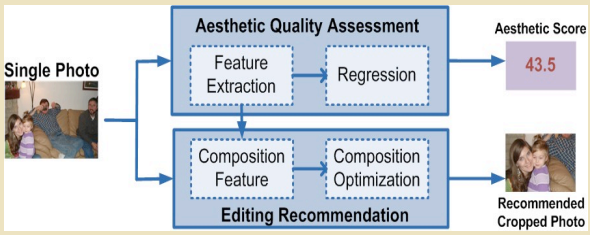
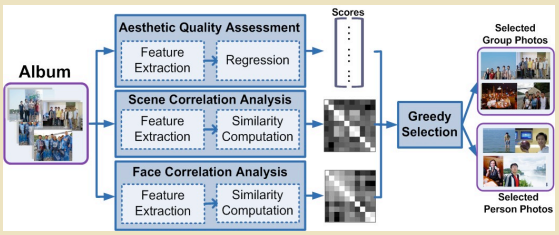
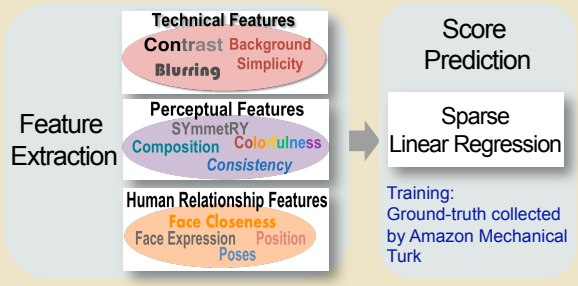
Goal: • Photo Evaluation • Composition Enhancement • Photo Selection





Algorithm

Aesthetic Quality Assessment

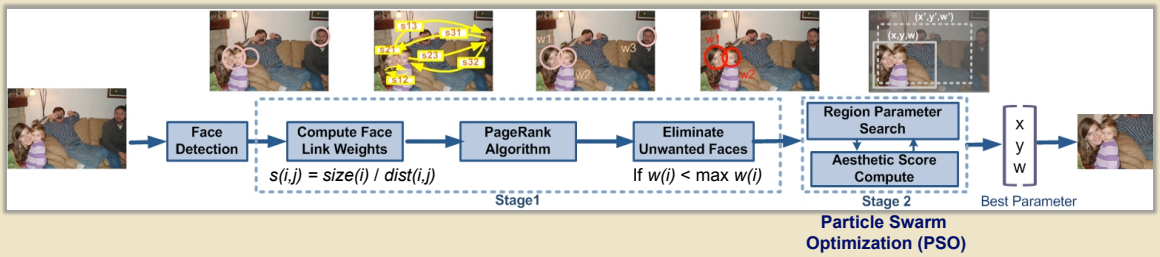


Aesthetics-based Photo Selection

- *Initialization:* Pick the image with the highest aesthetic score
- *Iteration:* Select a photo that has the best combination of a high aesthetic score and low scene correlation and low face correlation with those in the previous selected photos

$$\max_{i\in(\Gamma-\mathrm{E})}\left[a_i+\min_{j\in\mathrm{E}}\left[1-\mathrm{SIM}(\vec{\mathbf{s}}_i,\vec{\mathbf{s}}_j)\right]+\min_{k\in\mathrm{E}}\left[1-\mathrm{SIM}(\vec{\mathbf{f}}_i,\vec{\mathbf{f}}_k)\right]\right]$$

Composition Aesthetics–based Photo Editing



Experimental Results

Photo Assessment & Editing

Assessment Methods	RES
Random	317
Ours	228

Cropping methods	User Votes
No Crop	12%
Picasa	37%
Ours	51%

Photo Selection

Cornell

Web Interface:
http://chenlab.ece.cornell.edu/projects/aesthetics/

Kodak