

Painterly Rendering

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Related Work

Painterly Rendering with Curved Brush Strokes of Multiple Sizes

By Aaron Hertzmann

Painterly Rendering from the Paper

532 x 335

Original



Rendered



Opencv Oilpainting function

Original



Rendered



Painterly Rendering Algorithm



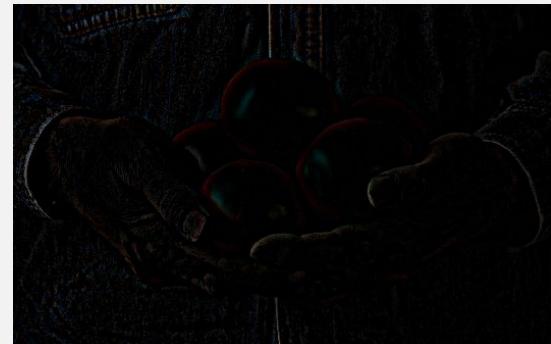
Painterly Rendering Algorithm



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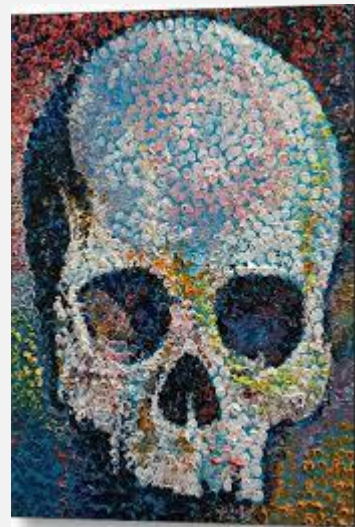
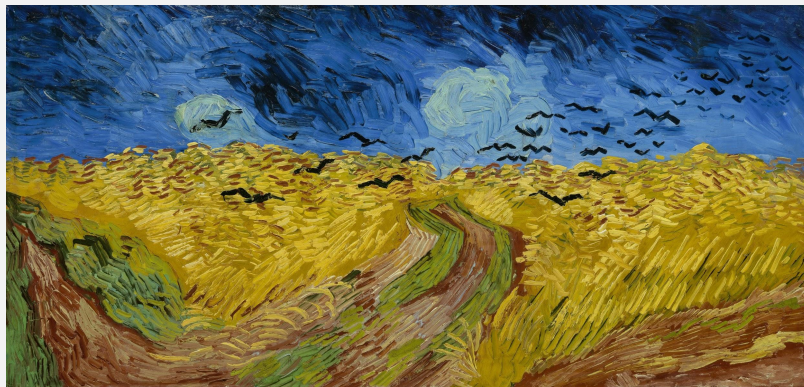
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Painterly Rendering Algorithm



My Approach



Implementation Approach

1. Create Brush size queue
2. For each Brush size create Gaussian blurred image (reference)
3. Create difference map of Original and Reference
4. Traverse the difference map with brush size and if the RGB value is above a limit, draw that x-y coordinate onto canvas with reference's x-y coordinate color
5. Rinse and repeat throughout all the brush size. Largest to smallest.

Result: Example

Paper



Oilpainting



Implementation



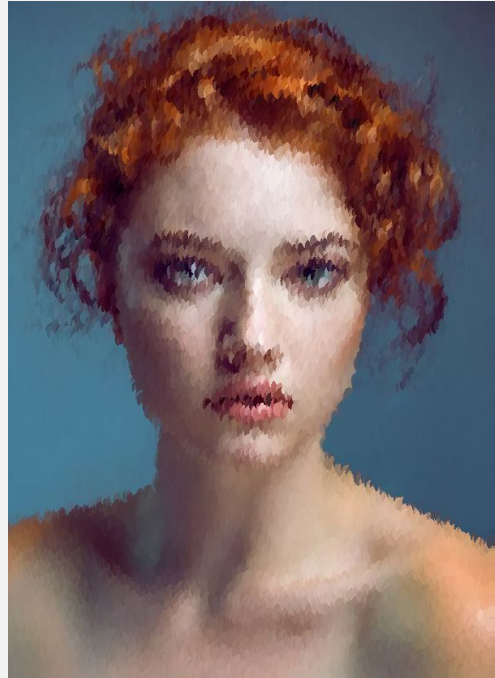
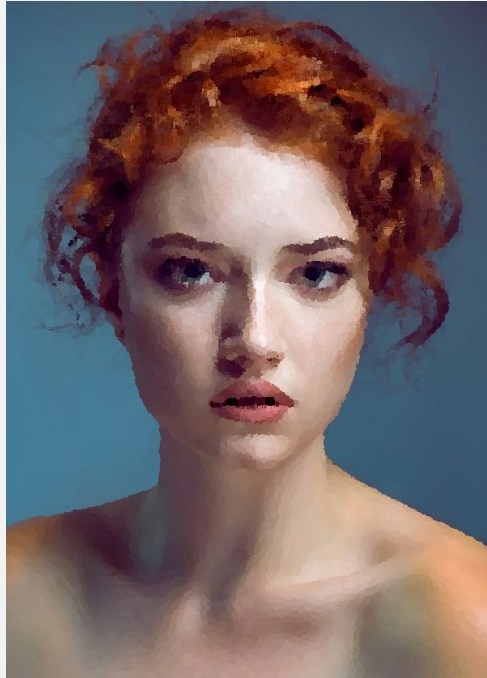
Results: Real Portraits

500 x 333



Results: Real Portraits

600 × 836



Result: Painterly of Paintings

900 x 1288



Result: Painterly of Paintings

750 x 914



Things to Improve

- Brush size and iteration calculation
- Difference detection
- Detail focusing
- Random brush stroke implementation

Questions?

Thank you