

Lab 4

(50 points, Due 2/07 Sunday)

INFO 3225
Web Multimedia

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Image processing & Digital compositing



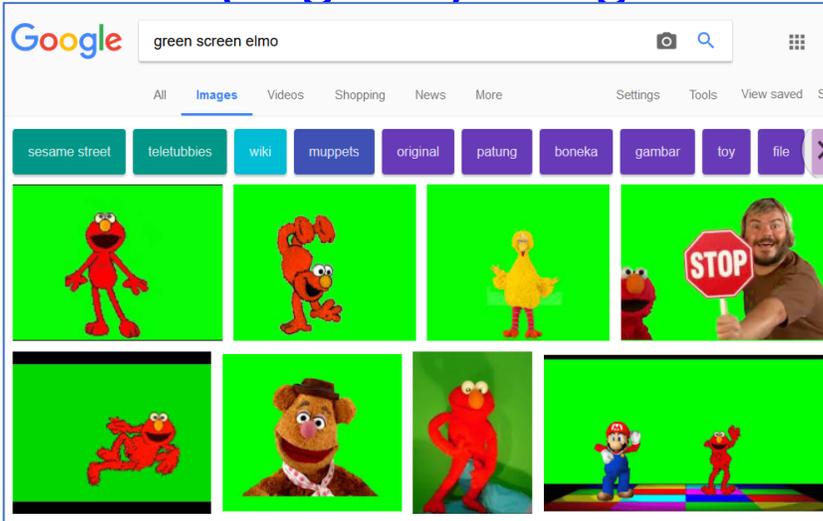
<http://www.fxguide.com/featured/mazing-scorched-effects/>

Compositing Rule		
Source-over (SRC_OVER)		If
Source-in (SRC_IN)		If
Source-out (SRC_OUT)		If
Destination-over (DST_OVER)		If
Destination-in (DST_IN)		If ar
Destination-out (DST_OUT)		If ar
Clear (CLEAR)		If
Clear		

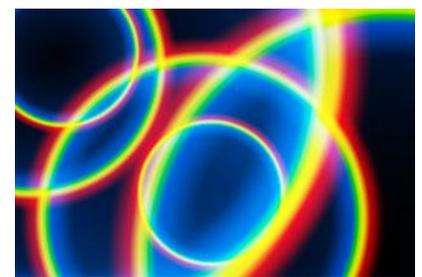
Lab 4.1 Digital Compositing (15 points)

(image extraction & segmentation):
Extract blue (or green) background color!

- 1) Create a new Processing file, and save it as **Lab41ChromaKey_yourLastNameFirstnameInitial.pde**.
- 2) Find two images (e.g. Google > *green screen elmo* > Choose *image*):
 - a) One image with either blue or green background filmed. You might even consider to photograph/film yourself. Could use Google to find these images, or just create it using Photoshop; add one layer with blue (or green) fill.
 - b) The other image could contain an unique visual appealing (visual effects) used as background plate. If you are familiar with Photoshop, feel free to use any Photoshop filter effects. Or use your custom filter from Lab01 (to save your work as an image file, use [save\(\)](#) in Processing.



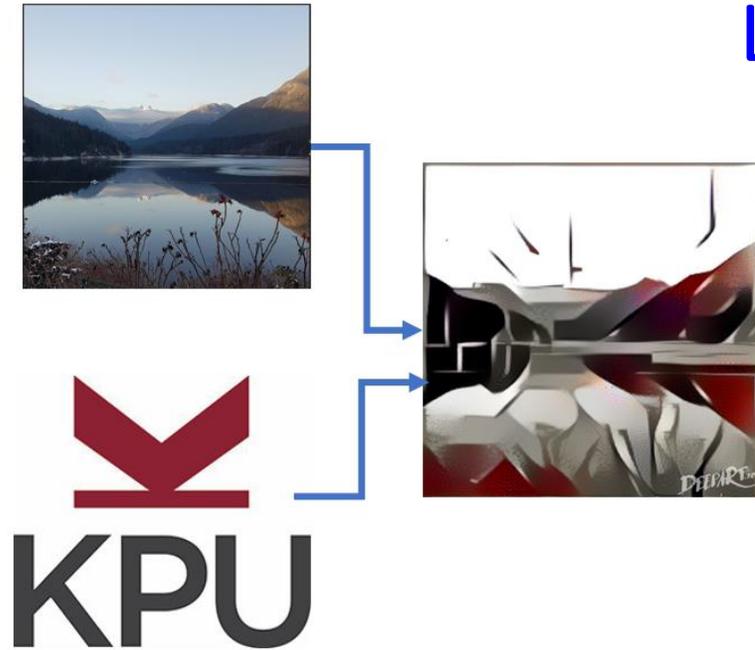
- 3) Review the code in previous slide, and design an algorithm (if-else conditional statements or loops to segment certain regions) to extract/modify blue (or green depending on your background plate). Then, combine with the other image as a foreground object. Review some example from Pixel operation in Processing



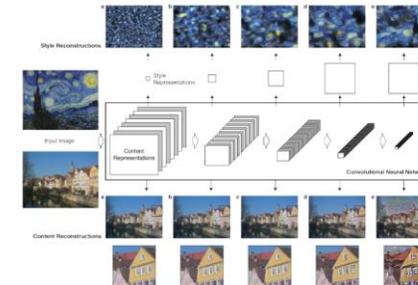
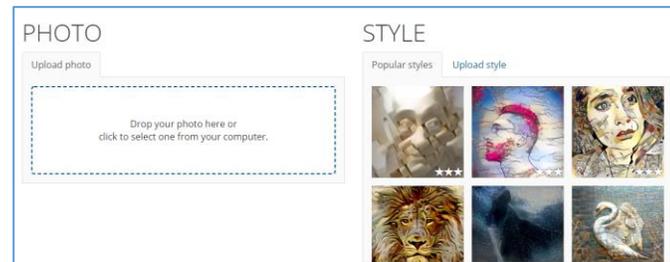
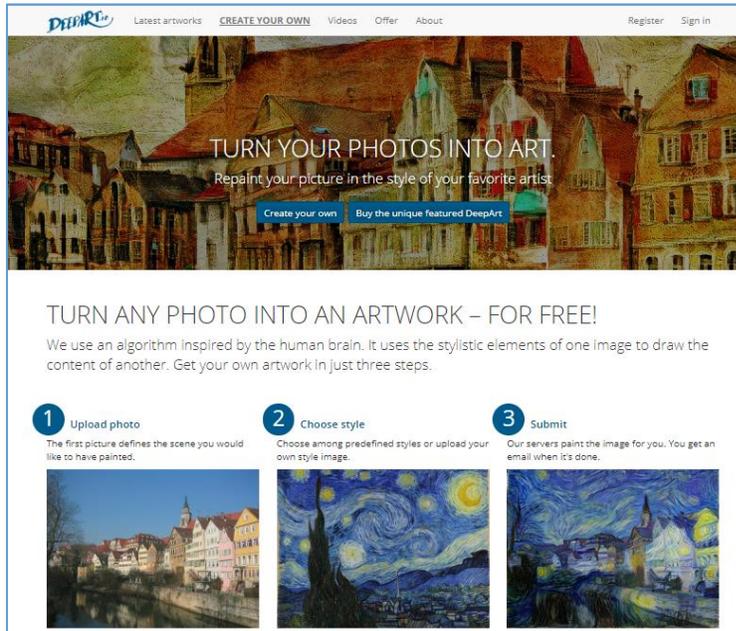
[Example: Pixel neighbor differences \(edges\)](#)



Lab 4.2. Computer can be creative? (5 points)



1. Go to <https://deepart.io/> to generate creative image style.
2. To generate a combined style image, click **Try it now** button to start.
 - a) Load one image file into **PHOTO** section, and choose (or load) another image in **STYLE** section. One of the images must be your original (e.g., your sketch, a photo taken from your phone, etc.). If using other's work, please reference it (e.g., famous painting from Picasso etc.).
 - b) To complete the simulation, enter your email, and press **submit** button. Repeat previous process for the other set.
 - c) For the submission, zip three files (2 source images + 1 new image; e.g., [lab42_yourLastnameInitial.jpg](#))



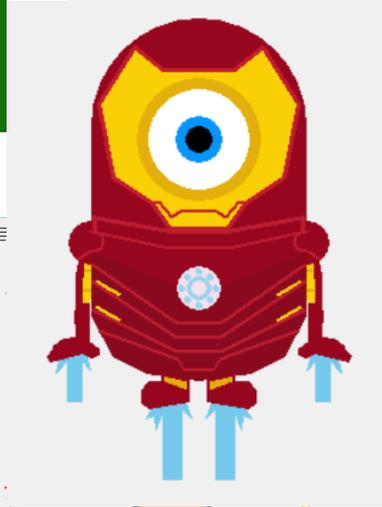
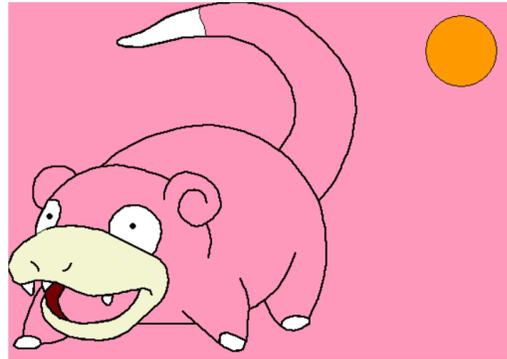
Lab 4.3: Painting Automation (or Algorithmic painting)

Fun & Realistic Face-body Painting (30 points)

Name you file as **Lab43faceBody_yourLastnameFirstnameInitial.pde**.

Also, submit a reference image file.

- Previous student examples



Lab 4.3 specification

1. Draw an outline of a face & body shapes based on a reference photo (i.e., your face, famous actor, singer, animal, alien, animation character etc.).
 - a) Research: You must submit a digital copy of reference image with reference.
 - b) Your face & body design should include important facial and body features such as
 - i. Hair style
 - ii. Eyes, nose, mouth, ear, lips, eyebrows
 - iii. body shape including arms, legs, and etc (be creative! Tail? Wing?)
 - c) Minimum two objects for background (mountain, building, tree, etc.)
2. Use colors to paint important facial & body features.
3. Define **separate object-oriented classes** and **functions** with comments for facial & body features.
4. Must include **for, while, if, and else** statements to define face & body parts.
5. To improve the realism (or style) of your face design,
 - Add detail (e.g., skin tone or pimple by generating at least 50 random points, pattern of blue jean). Also stylize it (i.e., a random function to draw pattern or texture (e.g., random points, random colors)).
6. You must incorporate movement (e.g., hand waving or kicking a ball).
7. Drawing should be generated through algorithm, no painting using mouse interaction.
8. Your work will be evaluated based on the quality and creativity.

Motion example in Processing

- [Objects](#)
- [Multiple Constructors](#)
- [Composite Objects](#)
- [Inheritance](#)



- [Translate](#)
- [Scale](#)
- [Rotate](#)
- [Arm](#)

<https://processing.org/examples/>

