

(Coding) Collage Abstracted from Observed Art Nianyi Wang '18 ★ Jingxian Wu '18 ★ Samantha Braver '18 ★ Lillian Pentecost '16 Faculty Mentor: Elodie Fourquet

Few students are responding to artworks owned by Colgate University writing computer graphics code. The resulting images will be showcased in an art exhibit demonstrating how the Picker Gallery collection is used in the curricula.

Each art work transforming process commonly starts with only colored paper and scissors used to compose an abstract image with simple shapes and a limited color palette. The physical collage serves as a template for the graphics code. This poster presents the concept: background, inspiration, process and its limit.

BACKGROUND



The process described in *Picture This: How Pictures Work* by Molly Bang instructs design concepts. The sequence of pictures represents an iteration, contrasting alternative, to achieve the atmosphere for the Little Red Riding Hood.

INSPIRATION

Thu Truong image: her first-ever programming assignment.

Mount Holyoke College, CS100, Spring 2014





Nighthawks (1942) by Edward Hopper



Line

Color palette

backgd. Composition





Collages made by students before coding based on the artwork of Alex Katz: Late July 2, 1971 & Moose, 1983.

FORMAL ANALYSIS

Pierre-Auguste Renoir (French, 1841–1919) Dance at Bougival, 1883

Size $181.9 \times 98.1 \text{ cm}$

oil on canvas Material

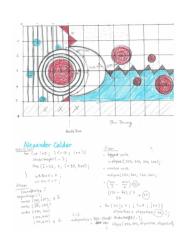
Example from a book by Jesse Day Line Color Form: The language of Art & Design

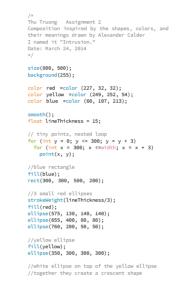
Form	FUNCTION
soft, broad brushstrokes	memory; experience
blended, blurred	\approx motion & mood
black/navy blue suit	balance male & female energy
cream/tea rose dress	nature and human emotion
+ golden vs. red scarlet hats	excitement around heads
unsaturated ochre, baby blue	couple is part of environment
 couple dominates frame 	couple = undeniable focus
figures gaze to each other	viewer = voyeur

PAPER COLLAGE











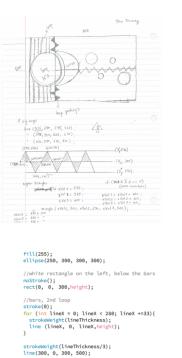
Through this process of deciding what simple shapes to use to demonstrate these complex paintings, students learn how to abstract complicated problems not only for programming but also for other subjects.

We are exploring this exercise as a potential method to teach CS0 in the liberal arts. This creative and interdisciplinary process may appeal to a wide range of students.

We would like to thanks Melissa Davies and Sarah Horowitz from the Picker for all their support.



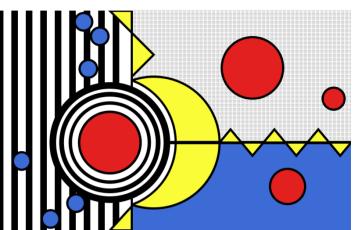
IN PROGRESS: TURNING INTO CODE



//horizontal line
strokeWeight(lineThickness
line(250, 300,width, 300) /random small blue circl /3rd loop, random functi trokeWeight(lineThicknes ill(blue); loat circleX = 0; loat circleY = 0; nt circleSize = 40;

or (int i = 0; i < 8; i++) {
 circleX =random (270);
 circleY =random (height);
 ellipse(circleX, circleY, c</pre>

4th loop, if conditi t ellipseX = 250; t ellipseY = 300;



}
lineThickness = 15;
<pre>// yellow triangles along vertical line fill(yellow); strokeweight(lineThickness/3); triangle(256, 0, 300, 0, 300, 50); triangle(250, 50, 350, 100, 300, 150); triangle(250, 500, 300, 500, 300, 445);</pre>
<pre>// borizontal yellow triangles // Sth loop, if conditional int upperX1 = 500; int upperX2 = 525; int upperX2 = 559; int lowerX1 = 559; int lowerX2 = 575; int lowerX3 = 600;</pre>
<pre>int upperY = 270; int baseY = 300; int lowerY = 330; int triangleBase = 50;</pre>
<pre>for(int i = 0: i <= 5: i++) {</pre>

LIMITATION

Such collage & diagrams process using simple shapes can be unsatisfactory for a tangled & organic artwork.

> Adolph Gottlieb (American, 1903–1974)

Orange Glow, 1970 Acrylic on paper $60.6 \times 47.9 \text{ cm}$ Nongeometric textures, shapes with irregular boundaries.

CONCLUSIONS