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@CS4NJ

#CSPDWeek2026

#CompSciNJ

@csteachersorg



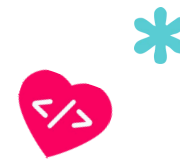
New Jersey CSPDWeek

This material is based upon work supported by the National Science Foundation under Award No. 2607763.

Art + AI: Favorite Colors



Hi...I'm Lisa Hauser



- Born and raised in Caracas, live and work in Miami
- Chief Executive Officer at Code/Art
- Mathematics and Computer Science Teacher with 23+ years of experience
- Creative Coding Course › AP CSP



Agenda

1:00 pm – Code/Art Matters

1:15 pm – Art + AI

1:30 pm – Creating Art with AI (Favorite Colors)

2:45 pm – Elevating Student Work Through Competition

2:50 om – Q & A, Wrap Up, Evaluation

Targets

At the end of today's session, you will...

1. Become familiar with the Favorite Colors with Machine Learning lesson plan.
2. Explore embedding artificial intelligence and machine learning concepts in creative coding lessons
3. Know how to elevate student projects through National All-Girls Competition.

Norms

Be present (e.g actively contribute to discussions while ensuring equitable opportunities for all colleagues to share their perspectives)

Be a learner (e.g ask questions, allow for “baby steps” for the newbies, no judgement, try your best)

Work like a team (e.g. help each other, exercise patience)

Take Care of Yourself (e.g. take what you need, pause to get water and snacks, ask for help)



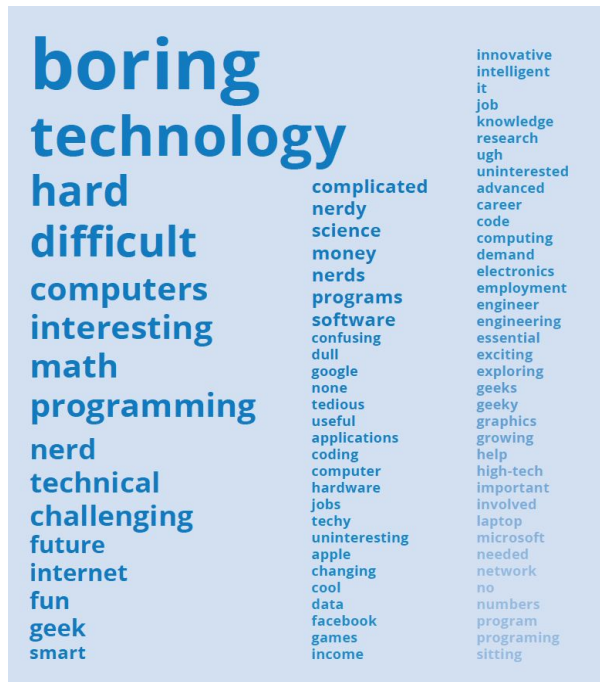
Why Code/Art Matters



Our mission is to increase the number of girls in computer science by delighting and inspiring them with the creative possibilities of technology.



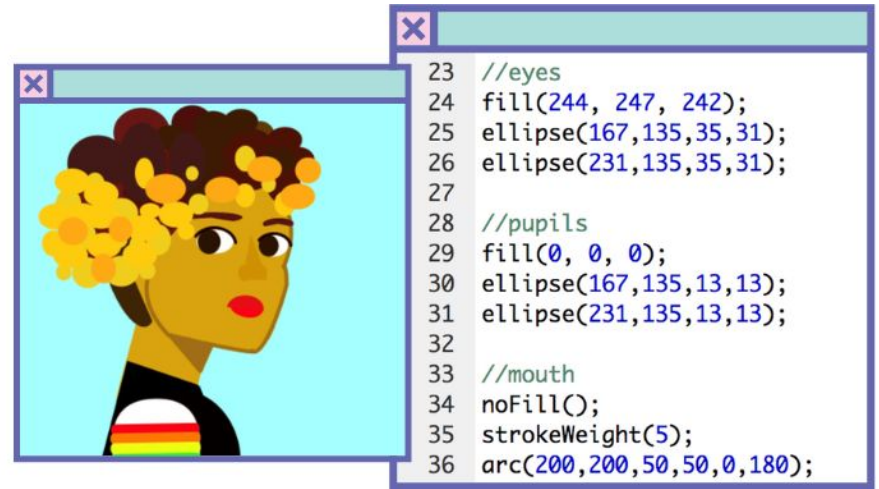
CODE + ART



The Promise of Creative Coding?

"You can create things like websites and images through sentences and strings of numbers. The prospect of knowing how to do that is amazing!"

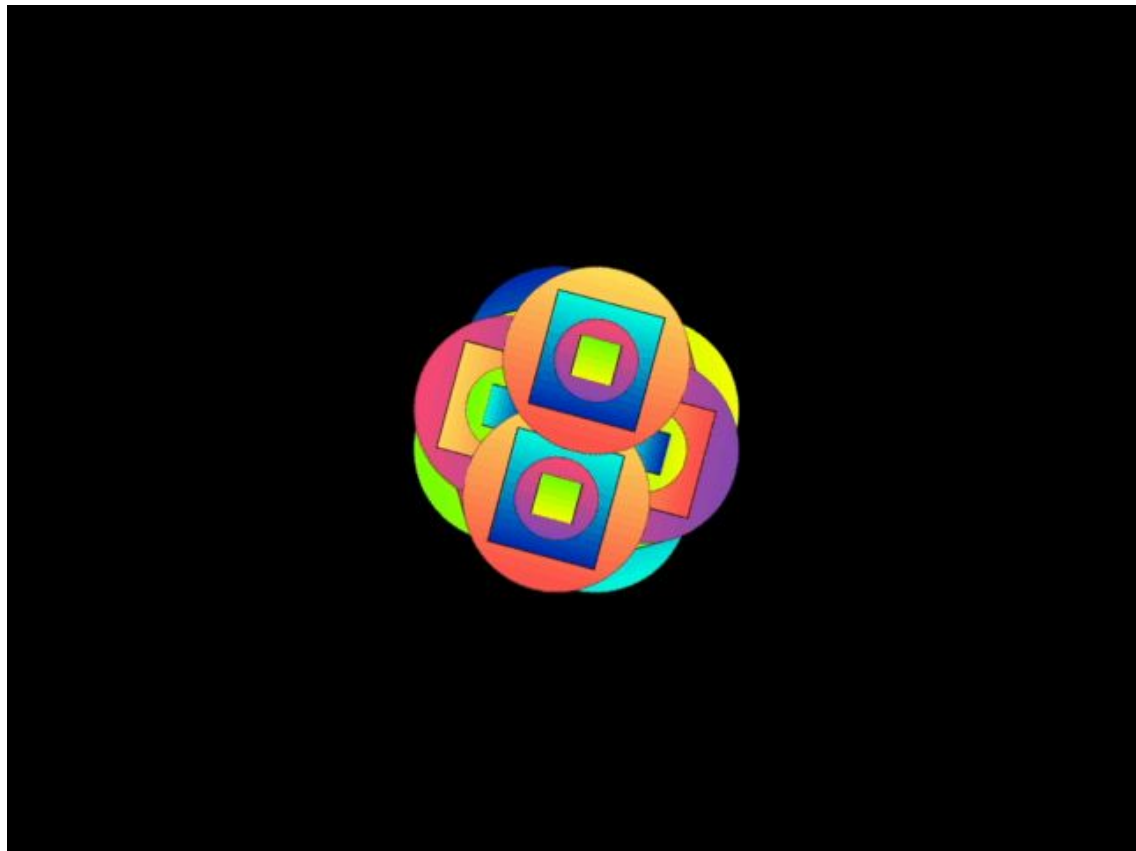
–Sahana S., Code/Art Alumni



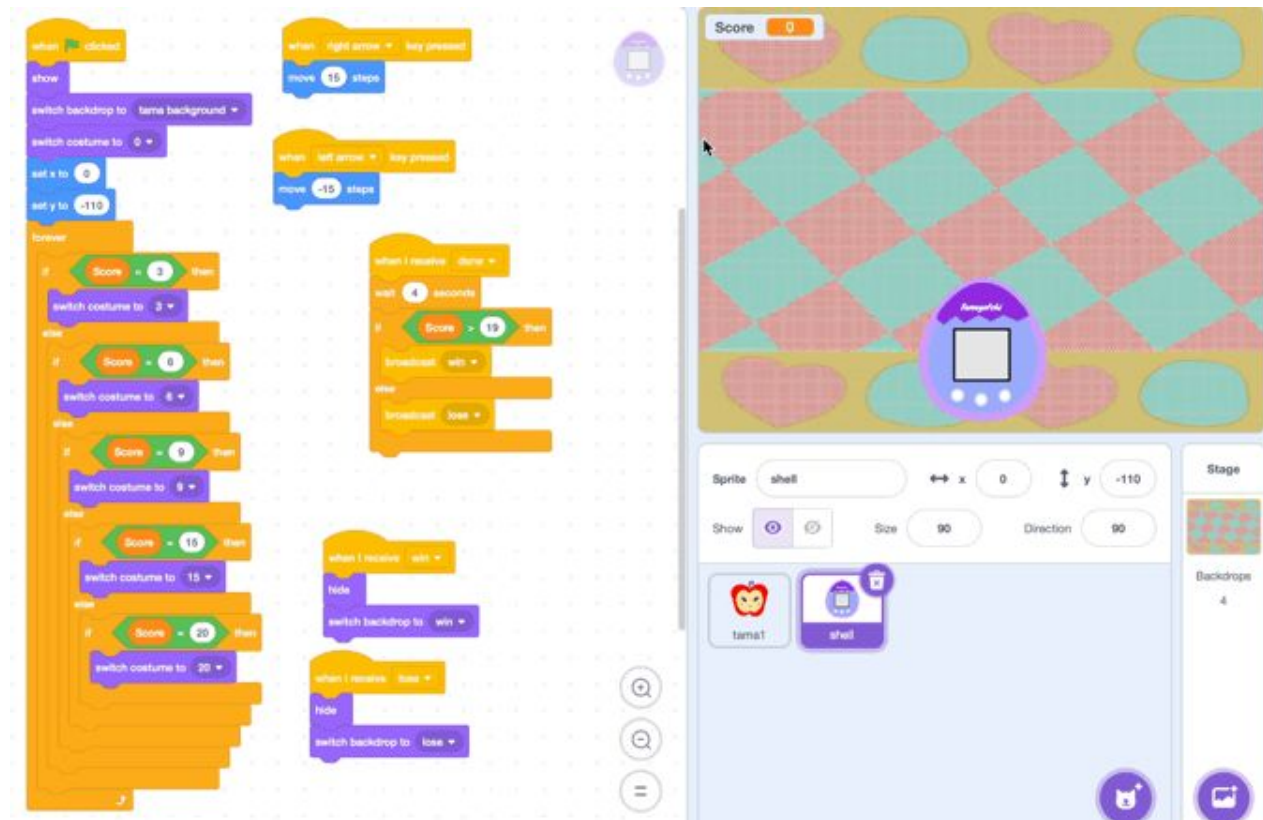
Lessons: Kaleidoscope

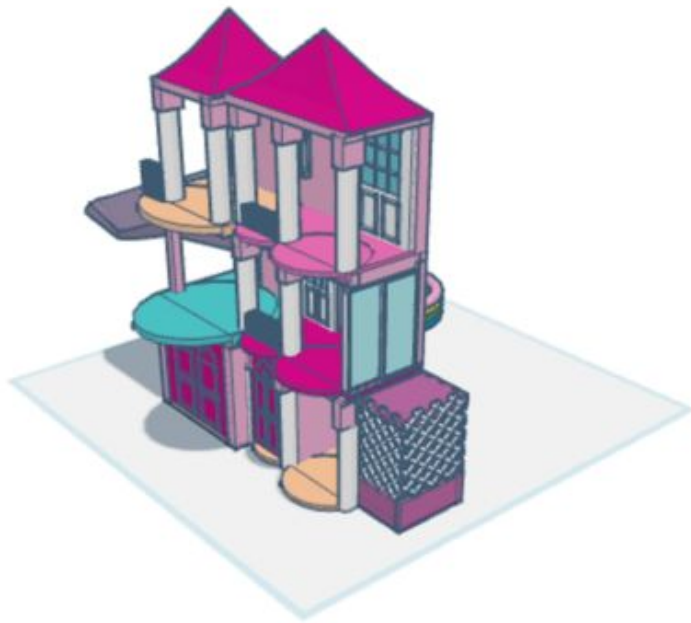


Source: Natacha Tomchin's Youtube Channel



Lessons: Game Design





Lessons: 3D Modeling



Lessons: Self Portrait

```
1 rectMode(CENTER);
2 noStroke();
3 //frameRate(100);
4
5 //background(168, 203, 255);
6 background(0, 0, 0);
7
8
9 var supow = function (y) {
10
11   //HAIR BEHIND HEAD
12   fill(51, 26, 0);
13   ellipse(158, 148, 44, 57);
14   ellipse(176, 140, 73, 57);
15   ellipse(235, 204, 59, 78);
16   ellipse(188, 233, 46, 78);
17   ellipse(161, 219, 22, 78);
18
19
20
21   //HEAD AND NECK
```





Changing the Face of Tech!





Artificial Intelligence & Machine Learning

Why Teach AI?



**Enhanced
Problem-Solving &
Critical Thinking Skills**



**Ethical
Understanding**



**Readiness for
Future Careers**

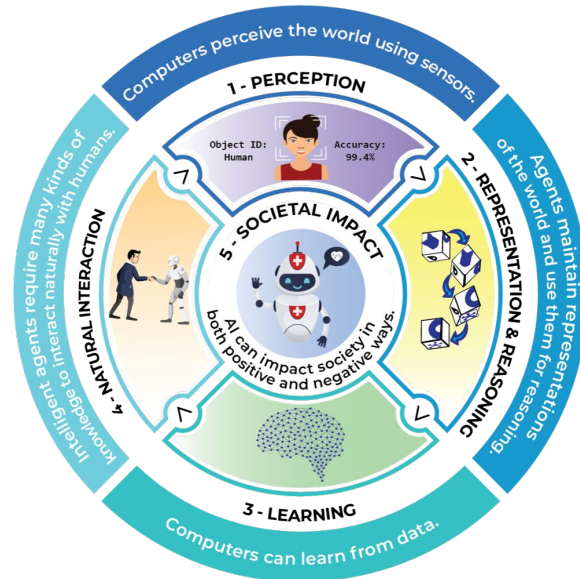
Icons created using CanvaAI

Existing Guidelines and Models



Organizations working on standards and guidelines for teaching AI:

- AI for K12 Initiative (AI4K12)
- CSTA
- ISTE
- UNESCO
- TeachAI
- State Departments of Education



AI4K12 "5 Big Ideas in AI"

Key Concepts to Cover When Teaching AI



Ethics and Societal Impacts of AI

- Fairness
- Bias
- Privacy
- Representation
- Responsible Use

Technology of AI

- Data
- Machine Learning
- Neural Networks
- Model Training
- Algorithms

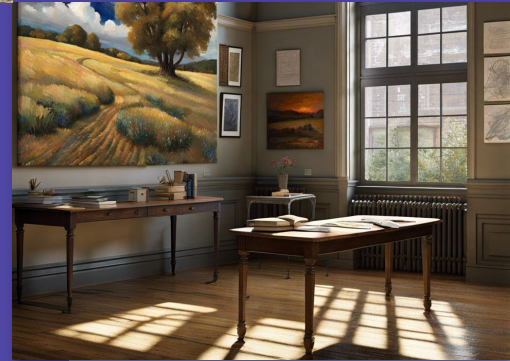
Using AI to Learn and Do

- Practical tools like ChatGPT and CanvaAI
- Human-AI Collaboration
- Personalized Learning
- Creativity



Self-portrait in the style of Michelangelo created with Dall-e, and image of teacher creating art with AI by Midjourney

AI in Creative Subjects Like Art



Think of a time you **created** something meaningful and reflect on what it felt like. How might working with AI change this process?



Several Circles, Vasily Kandinsky



Mary Todd Lincoln, Attribution: Mathew Brady Studio

Char Stiles

YouTube Search



```
// .coarse(8)
.lpf(200)
.lpfenv(sine.range(2, 4).slow(17))
.lpd(0.5)
.ftype(0)
.pan(sine.fast(4))
.delay(0.3)
// .hush()

const bass = stack(
  tear,
  // sawbass

let bass2 = "<< c#1>/2"
// .add(36)
.note()
.sound("jstab:13")
.release(5)
// .clip(1)
.gain(0.8)
.cut(4)

stack(
  drums.ch "3:4"
```

Livecode sampling

 Char Stiles
1.58K subscribers

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31

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...

Mario Klingemann



Source: [instagram.com/quasimondo/](https://www.instagram.com/quasimondo/)

Refik Anadol



Source: [instagram.com/refikanadol](https://www.instagram.com/refikanadol)

Sougwen Chung



Drawing Operations by Sougwen Chung, 2018

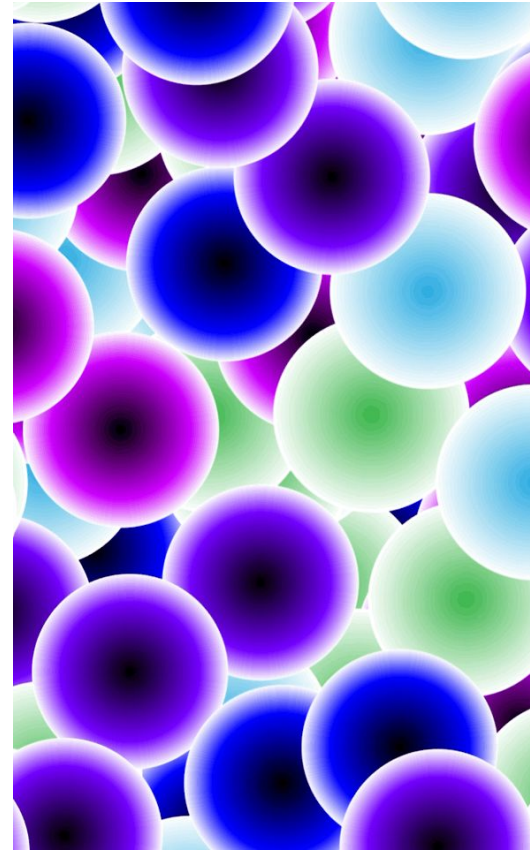


Source: [instagram.com/sougwen](https://www.instagram.com/sougwen)

Rafaël Rozendaal



Source: newrafael.com/info/

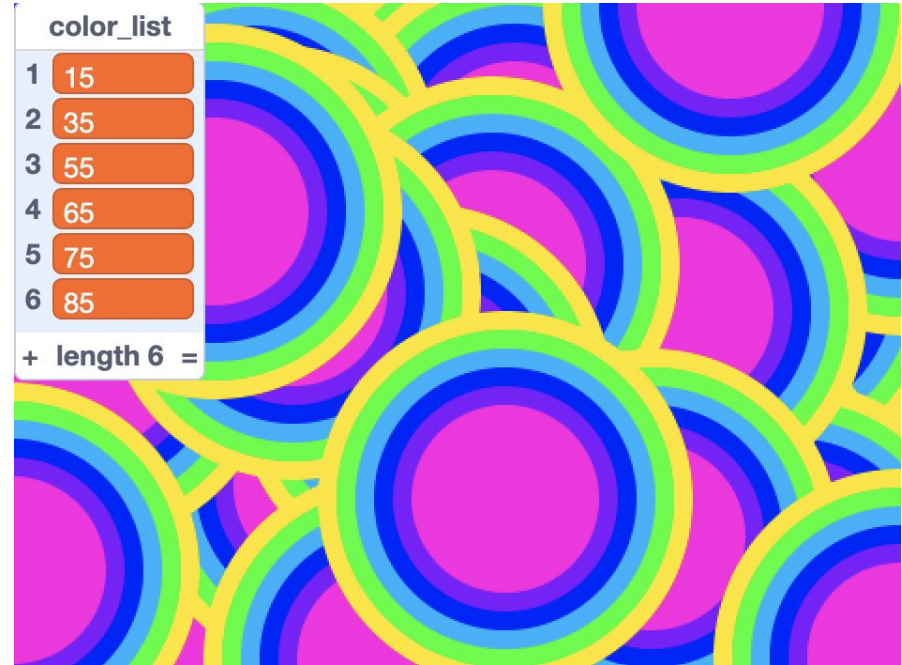


Non-either by Rafaël Rozendaal, 2018

Exploring AI and ML Concepts in Art

Favorite Colors Lesson

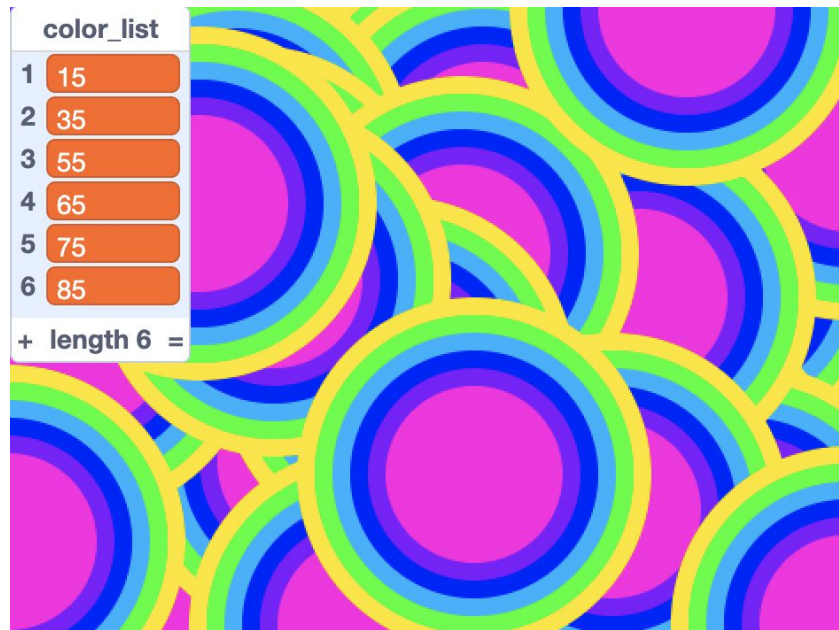
- Connections to AI
 - Machine Learning
 - Data driven algorithms
- CS concepts students learn
 - Variables
 - List
 - Loops
 - If-else statements



[Favorite Colors by Code/Art](#)

Beyond the Program

- The final product is a beautiful art generator made with the users favorite colors
- Low floor, high ceiling lesson that allows students to push their creativity and coding skills
- Focus is on the creative AND the coding process
- Allows for self-expression
- Harnesses self-actualization



The Favorite Colors Lesson

Project Based Learning:

- Challenging problem which is meaningful to students
- Sustained inquiry
- Authenticity
- Student voice and choice
- Reflection
- Critique and revision
- Public Product

Universal Design for Learning in CS:

- Multiple forms of engagement
- Multiple forms of representation
- Multiple forms of action and expression

Computer Science Pedagogical Practice:

- Use-Modify-Create



Favorite Colors with Machine Learning



Favorite Colors: Anticipated Challenges

- Requires some prior Scratch experience
- Logic errors (e.g. incorrect parameters, adding code outside/inside of the loop)
- Length of the lesson. Think of where to stop, and reinforce the end result



Making Projects Unique

Delight users by...

- Adding more dots by changing the number of times the repeat loop runs
- Adding set pen blocks using saturation, brightness, and transparency
- Making a different backdrop
- Including more colors to choose from
- Experimenting with different abstract art styles
- Using art images from the web that feature the favorite colors
- Seeing what art other users similar favorite colors enjoy



Lesson

Q & A



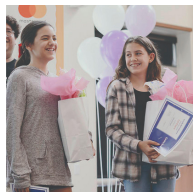
Gallery Walk!



Elevating Student Work through Competition

Coding Competitions

- CodeYourSelf™ competition for girls in grades 3–12. Students can win cash prizes, swag & more.
- Deadline: Feb. 16, 2027





Access the Code/Art Hub

Anatomy of a Lesson Plan

- Detailed lesson plans with:
 - Standards
 - Step-by-step procedures
 - Reflection and analysis questions
 - Technical vocabulary
- Instructions for submission to Code/Art
- Introduction slides with inspiring projects
- Instructional video
- Wrap up slides with reflection



hub.code-art.com

Welcome to the hub!

To access coding lessons or submit to coding competition, you must log in to your Code/Art account. If you don't have a Code/Art account, click below on "Sign up now" to create one.

Username or E-mail

Password

☐ Remember Me

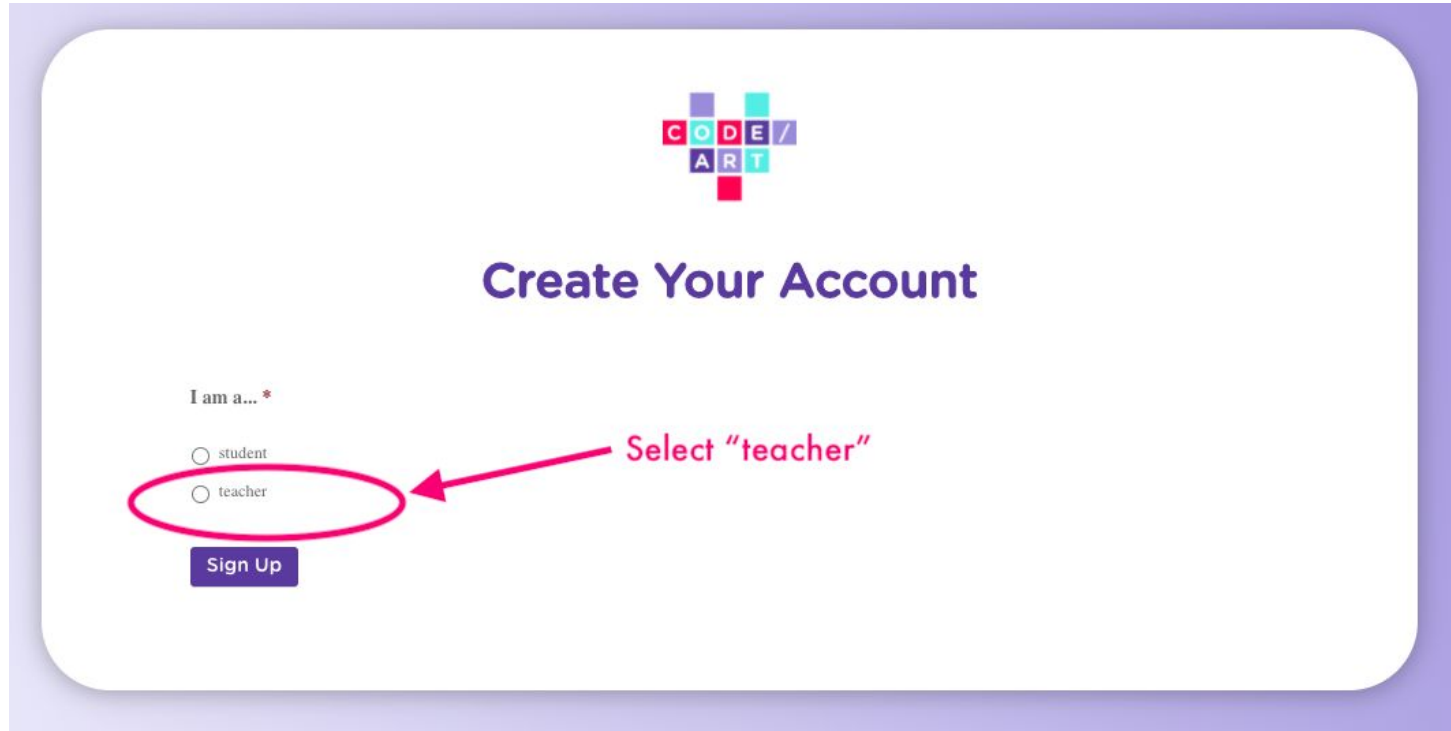
LOG IN

[Forgot Password](#)

Don't have an account? [Sign up now.](#)



hub.code-art.com





Create Your Account

I am a... *

☐ student

☐ teacher

Sign Up

Select "teacher"

hub.code-art.com

Dashboard

Welcome to your Code/Art
Teacher Dashboard.

From student and teacher
resources to submitting your
students' projects to Code/Art's All
Girls Coding Competition, we've
got you covered!



Resources



FREE Intro Videos

Instructional videos for your students to start programming.



Code/Art Courses

Access Code/Art lesson plans, slide decks, and student handouts.



Competition Toolkit

Access entry CSV, rubrics, starter codes and flyers for competitions.



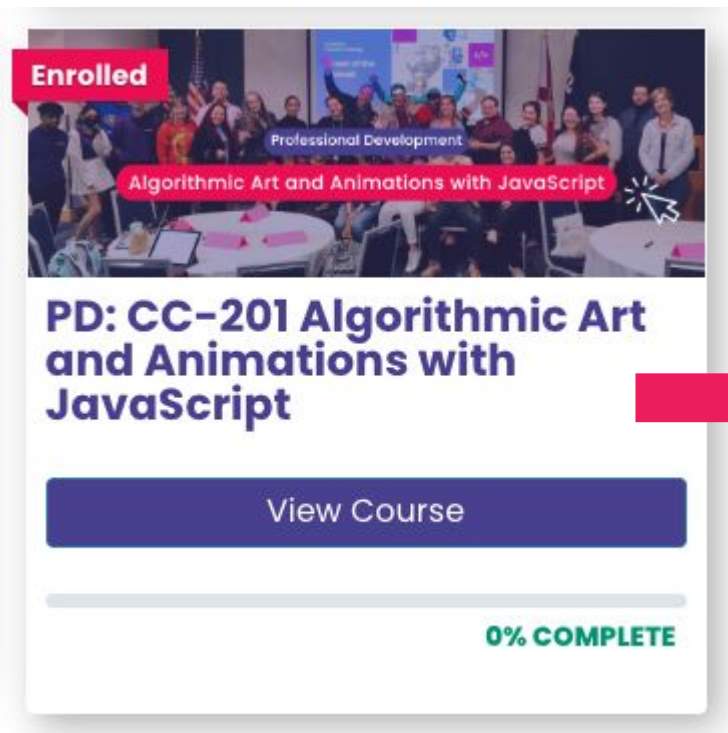
Submit Your Impact Data

Help us keep track of your Code/Art impact by submitting this report.

[Add new impact data](#)

[View your impact data](#)





Enrolled

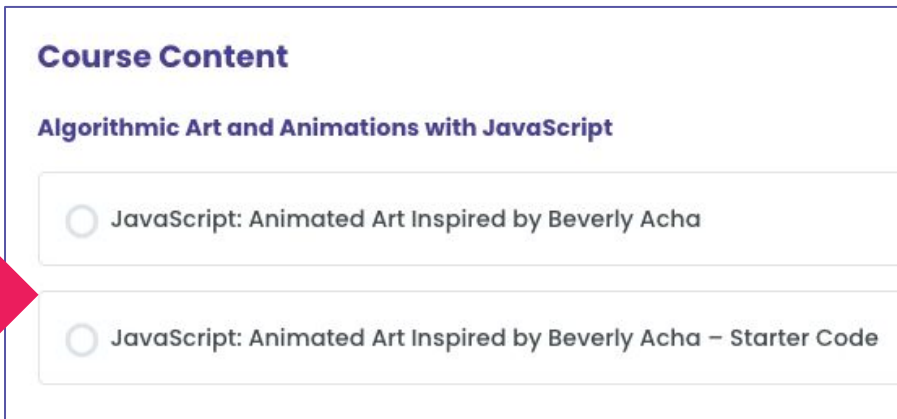
Professional Development

Algorithmic Art and Animations with JavaScript

PD: CC-201 Algorithmic Art and Animations with JavaScript

[View Course](#)

0% COMPLETE

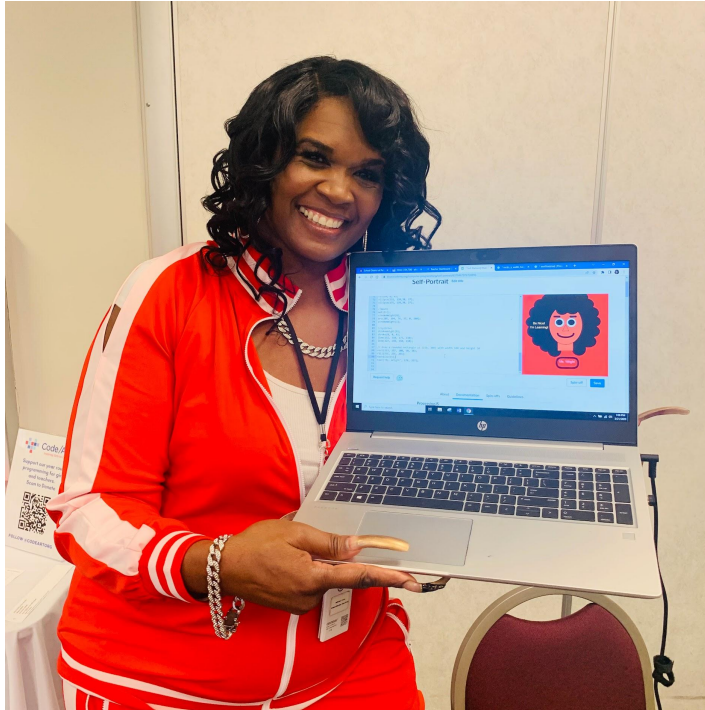


Course Content

Algorithmic Art and Animations with JavaScript

- ☐ JavaScript: Animated Art Inspired by Beverly Acha
- ☐ JavaScript: Animated Art Inspired by Beverly Acha – Starter Code

Further Engage with Code/Art



Get the Lesson:

<https://hub.code-art.com/>

<https://www.code-art.com/hourofcode/>

Professional Development Page:

<https://www.code-art.com/pd/>

PD Interest Form:

<https://www.code-art.com/pd-interest/>

Start a Club Form:

<https://www.code-art.com/newclub/>

Competition Page:

<https://www.code-art.com/compete/>

Code/Art Session Evaluation



[https://forms.gle/qkZ2sJ
Urj6NAasgG9](https://forms.gle/qkZ2sJUrj6NAasgG9)

Thank You! – Any Questions?

- Follow us on social
@codeartorg
- Check out our website:
code-art.com
- Email us at
info@code-art.com





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lisa@code-art.com

Let's Keep in Touch!



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