

Final Project  
Math 280  
Fall 2018  
8% of Final Grade

“The Mathematics of Art, Coding, and Geometry”

The goals of the Math 280 course project are to:

- Allow students to choose a piece of art that is culturally or personally relevant to them and explore the geometry concepts in the art,
- Provide experience in translating art and geometry concepts using computational tools,
- Provide practice at writing and presenting mathematical concepts, and
- Provide an opportunity to demonstrate mathematical and computational thinking understanding.

Project components:

1. Individual - Write-up of your project (50% of the project grade.)
2. Group - Poster Presentation (Includes an exposition and an analysis of your selected art with a classmate.) (50% of the project grade.)

1. Individual - Write-up Requirements (**Proposal is due no later than: April, 23, 2019 at the start of class.**)
  - a. An image of the chosen piece of art (with proper citation) and art you created in SCRATCH along with a brief description of the art and its relevance to you
  - b. A brief description (1-2 paragraphs) of the mathematical representation of the project. (For instance, what mathematical concepts did you choose to explore and why?)
  - c. An explanation of why the chosen art piece is appropriate given your strengths, backgrounds, and interests.
  - d. A flowchart/algorithm of how to draw geometric shapes you are choosing to represent in the piece of art.
  - e. Interpret the image drawn and does “your” drawing correspond to algorithm/flowchart you described? Does it match “your” intended outcome or expectations?
  - f. Share your code via the following: 1) share the URL; 2) copy code into written assignment
  - g. Answer the following questions:
    1. How would you apply this to other disciplines?
    2. What other discipline could you incorporate into this project (besides art)?

3. Are there ways to connect this project to other courses you have taken or what you plan to take in the future?
4. How would you incorporate this project or ideas from this project in your future classroom? (you will include this response in the poster)

2. Group Project. (**Final Poster is due April 23, 2019.**)

You and your partner will put together a poster that showcases your individual work and your combined piece of art. You should follow the guidelines provided to you in *“How to Create a Poster for a Presentation.”* The poster should include sections as follows:

- A. Title, Class and Authors
- B. Images of each individual piece of art and newly created art using SCRATCH
- C. Summary of each Individual Write-Up focusing on Geometric and CT Concepts addressed/explored;
- C. Image of created art when you merged the two together using SCRATCH
- D. Summary of geometric and CT concepts that were addressed/explored when you merged the two pieces together
- E. Submit merged code via URL (does not go on the poster)
- F. Summary of what you learned from each other and the project and how you would incorporate this project or ideas from this project in your future classroom.



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