Algorithmically Generated Visual Designs

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Motivations

- Bring together artists and computer scientists to develop a better understanding of drawing processes.
- Explore how programming can be used as a tool for generating visual designs and artworks.
- Questions
 - What kinds of designs and artworks can algorithms generate?
 - Can generated artworks be appealing?
 - How can drawing processes be improved based on user feedback?

What We Did

- We investigated how computer algorithms can be used to generate visual designs and artworks.
- We designed and implemented nine algorithms that generate visual designs.
- Coded in JavaScript to build procedural processes that draw lines and basic shapes onto a digital canvas.
- These procedural processes are inspired by mathematical concepts, natural phenomena, and artistic trends.

Our Algorithms

- Wrapping Paper by Alyssa Zhang
- Geometric Patterns by Michael Wehar
- Overlapping Tiles by Michael Wehar
- Spiderwebs by Maya Newman-Toker
- <u>Vines</u> by Alyssa Zhang
- Fractals by Maya Newman-Toker
- <u>70's Funk</u> by Alyssa Zhang
- Game of Life by John Mancini and Michael Wehar
- <u>Trees</u> by Michael Wehar

(Start Artwork Video)

Drawing Program

- A framework for designing drawing algorithms in JS using HTML Canvas
- Algorithms run and display resulting images in real time
- Algorithms are designed with Initialize, Start, Pause, Reset, and DrawOneStep functions
- Public Repo (github.com/Algorithmically-Generated-Artwork)



(Start Tutorial)



How To Contribute

• Implement Your Own Drawing Algorithms

- Our drawing program with its web interface and examples is open source on GitHub (<u>github.com/Algorithmically-Generated-Artwork</u>)
- Sign Up As A Reviewer
 - Spend 10-minutes selecting your favorite images and share your feedback (<u>sign up form</u>)
 - Sharing your opinions greatly helps us to understand generated artworks
- Contribute To Our Open Source Repository
 - Clone the repo, make improvements, and submit a pull request
 - <u>Contact Us</u> to schedule a time to chat and learn more!





