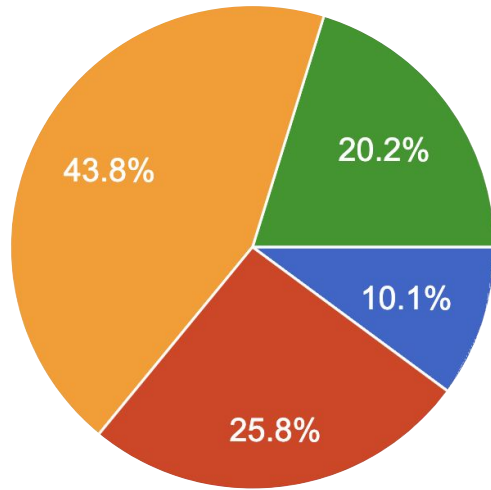# Code the Universe Lecture #1

Sudhan Chitgopkar
January @ Harvard GSAS

Who Is This Course For?

🔵 I've never written a line of code before

🔴 I've written some code and understand the basics

🟠 I've done a few projects and have a good grasp on at least one programming language

🟢 I have a degree in Computer Science and/or am a professional in tech
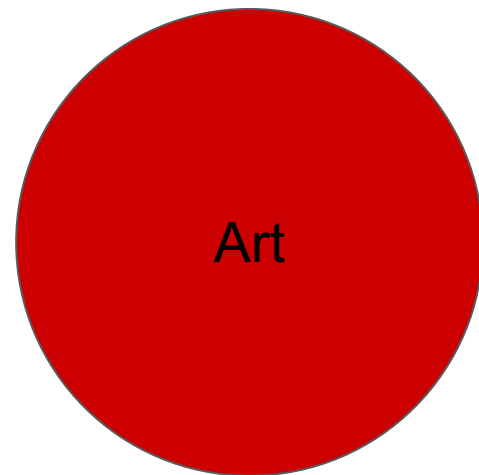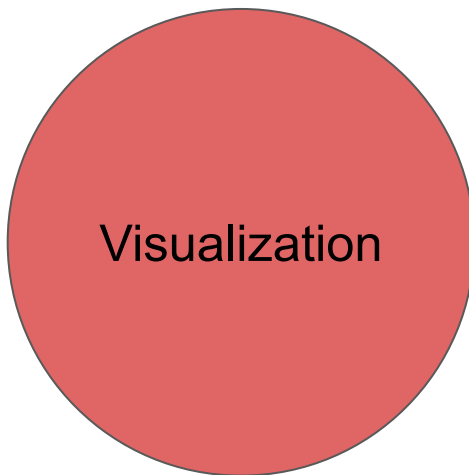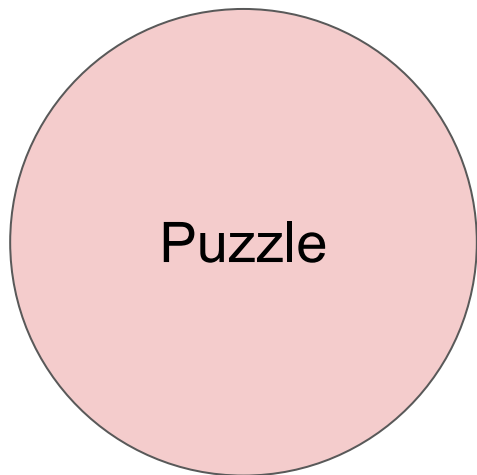
What is Generative Art?

For our purposes,

- The use of code to develop creative audiovisual pieces
- May have deterministic and stochastic elements
  - *Randomness will play a big role today!*
- May be interactive (or not!)

Why Visualize Nature?

- It's pretty
- To get a better understanding of our world
- To make engaging with math/physics/nature fun
- To evoke questions
  - What if?
  - Is math invented or discovered?

How Does This Course Work?

Timeline

Intro + Motivation

Chaos + Fractals

Mazes + Maze Solvers

01/10

01/15

01/19

01/08
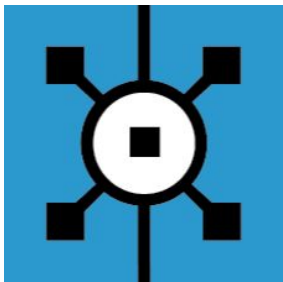
01/12

01/17

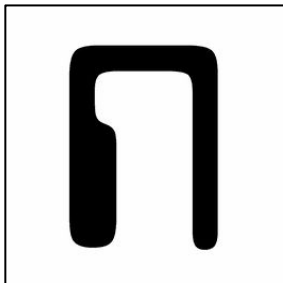*Foundational Concepts*

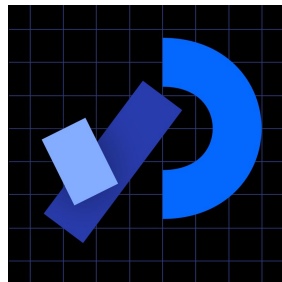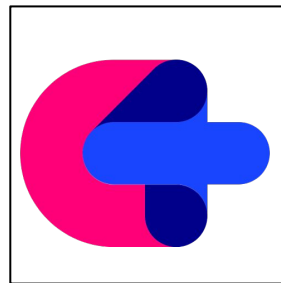*Automata + Life*
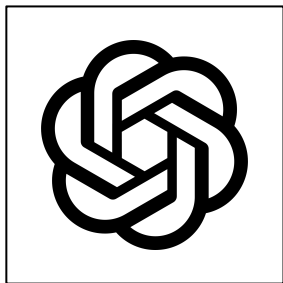
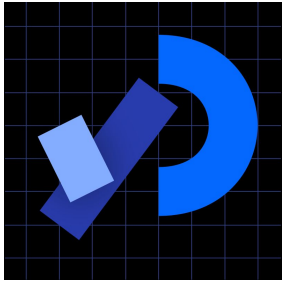*Conclusion + Next Steps*

Tools

TouchDesigner

Nannou

Processing

C4

Dall•E

DeepDream

Tools (Cont.)

… and more!

Artists to Follow

[Etienne Jacob](#)

[Andreas Gysin](#)

[The Dot is Black](#)

[Patternseeing](#)