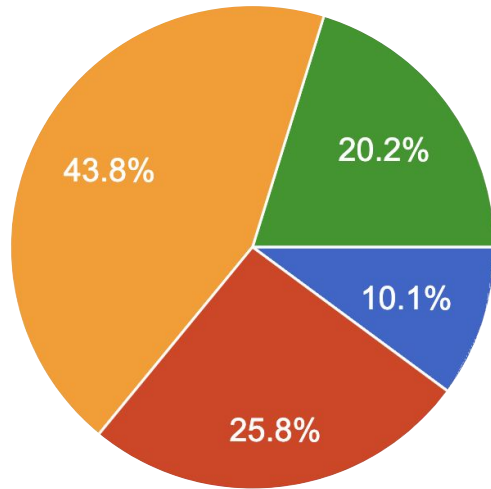


# Code the Universe

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?

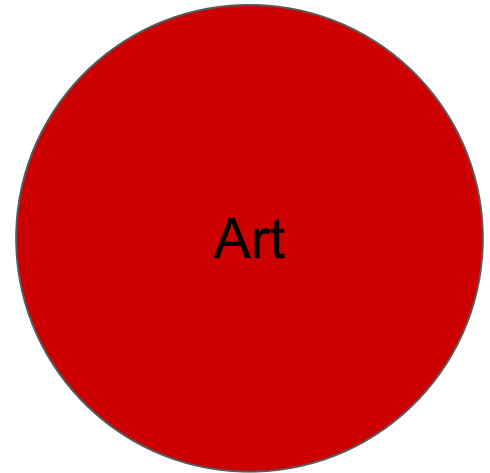
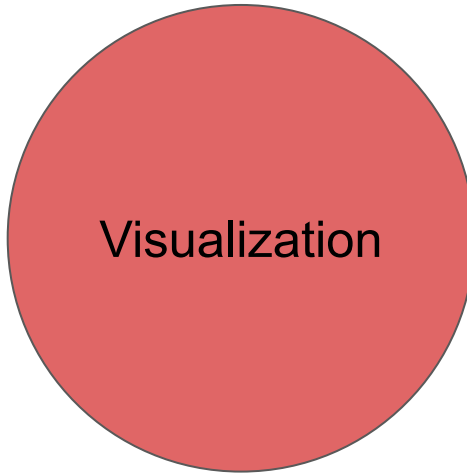
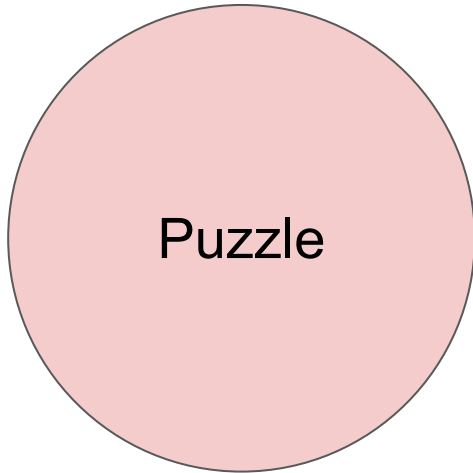
For our purposes,

- 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

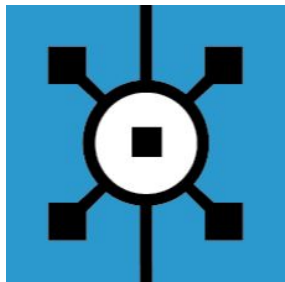
*Foundational  
Concepts*

*Automata +  
Life*

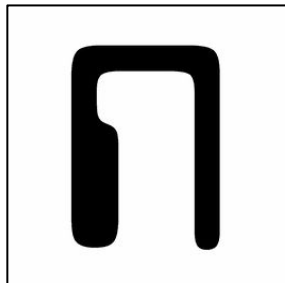
*Conclusion +  
Next Steps*



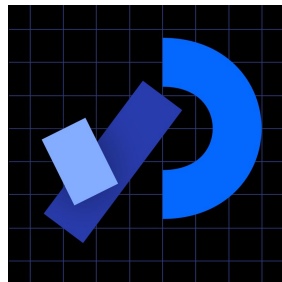
# Tools



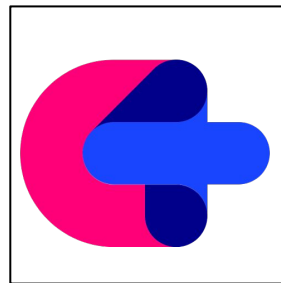
TouchDesigner



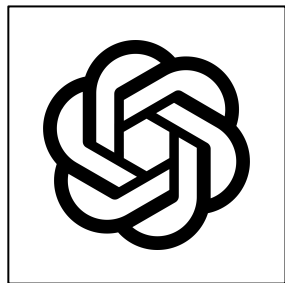
Nannou



Processing



C4

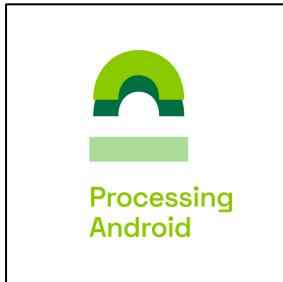
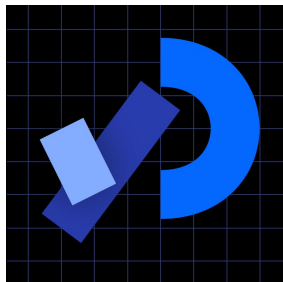


Dall·E



DeepDream

## Tools (Cont.)



... and more!



# Artists to Follow

[Etienne Jacob](#)

[Andreas Gysin](#)

[The Dot is Black](#)

[Patternseeing](#)