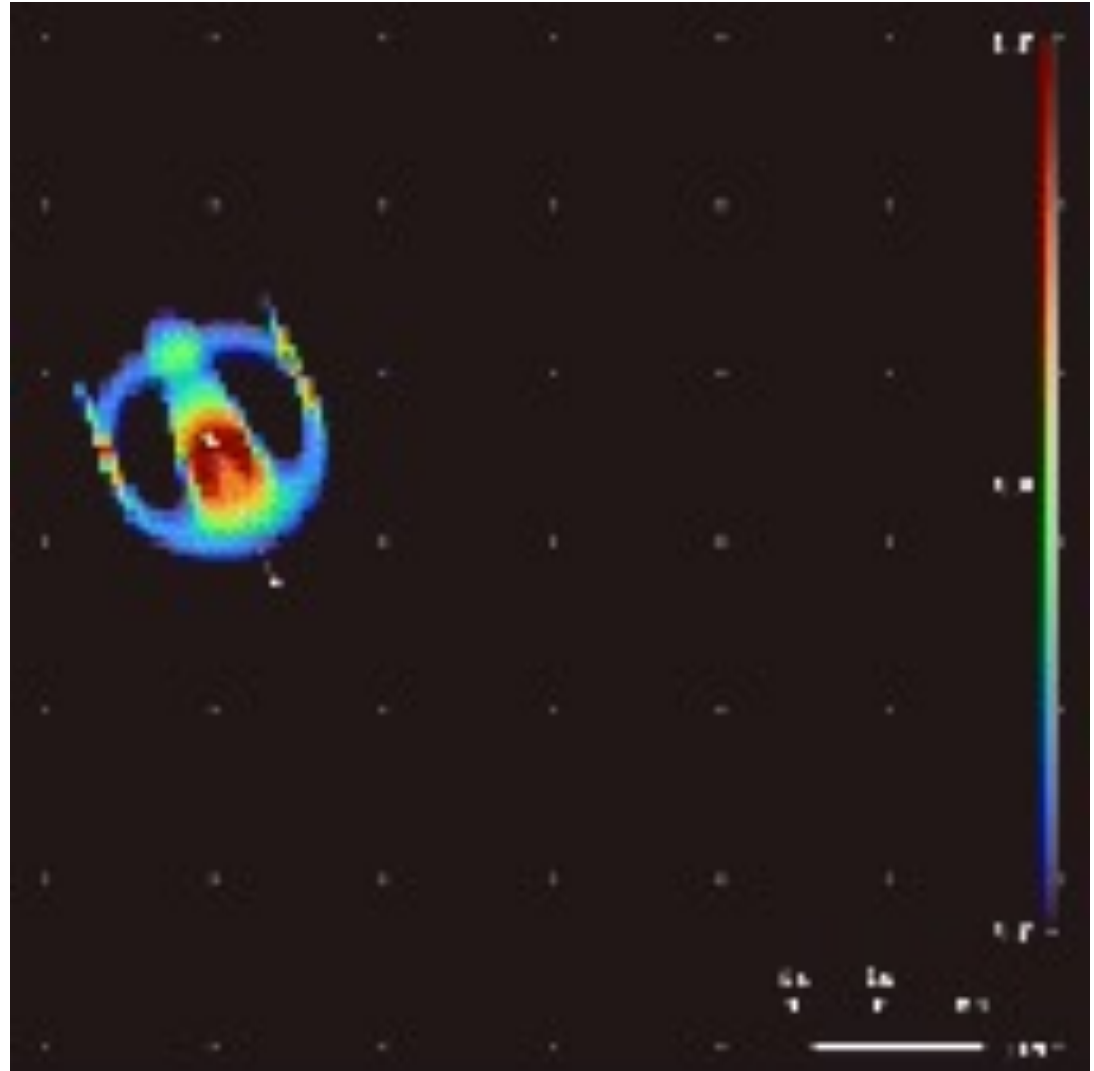# Research Progress
Lenia with Boids

10/30

Lenia: Continuous Cellular Automaton

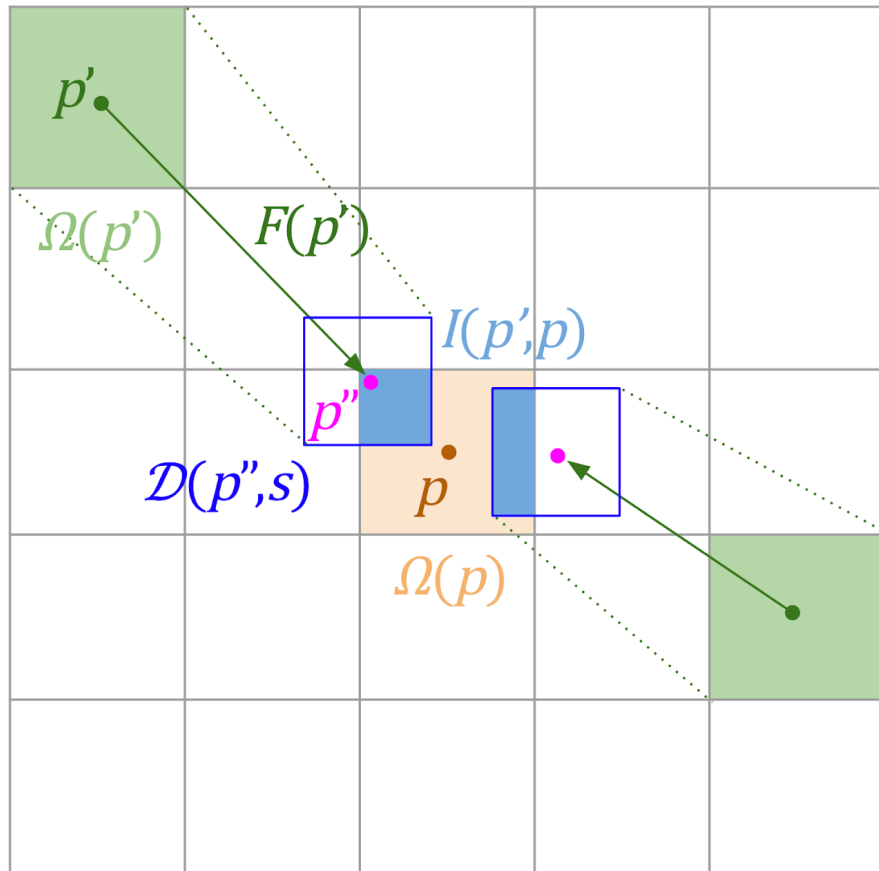Continuous states
version of Game of Life

My Goal

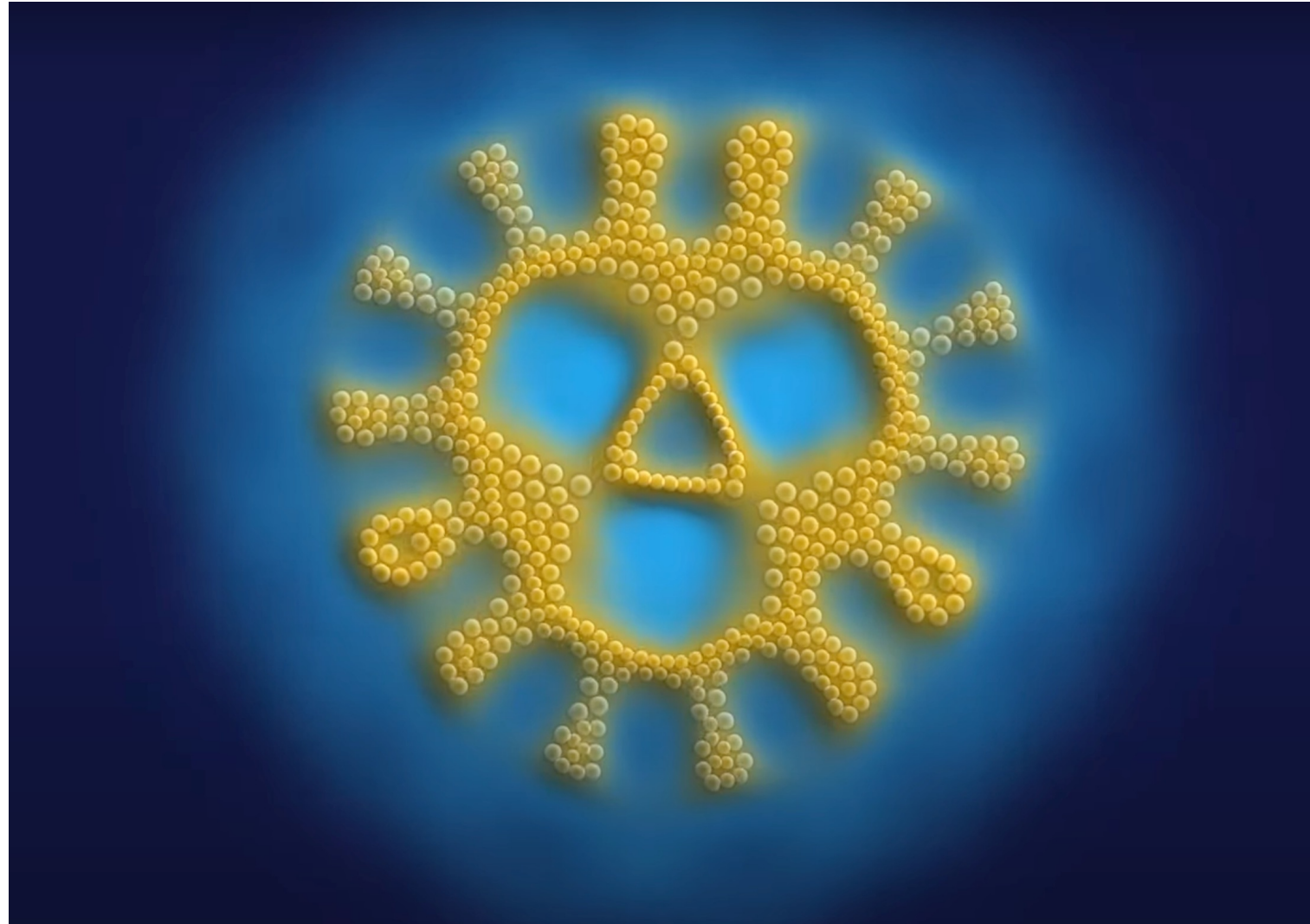- Implement dynamic, mass-conservative Lenia

Approach 1: Flow Lenia

Mass conservative

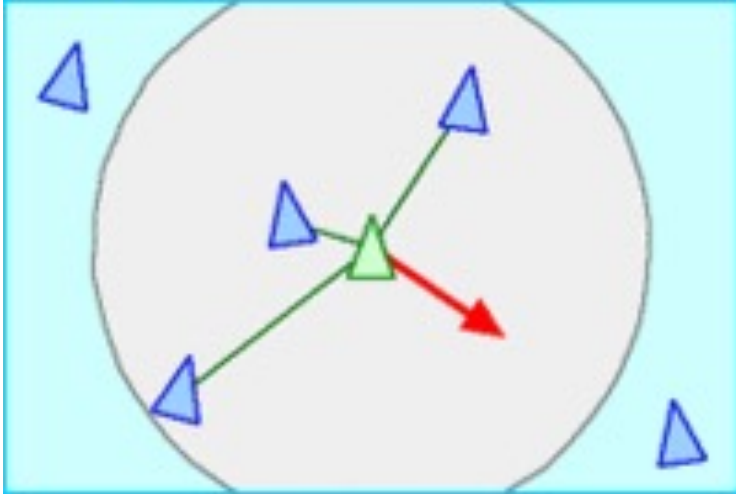# Approach 2: Particle Lenia

Particle-based Lenia

Make gradient
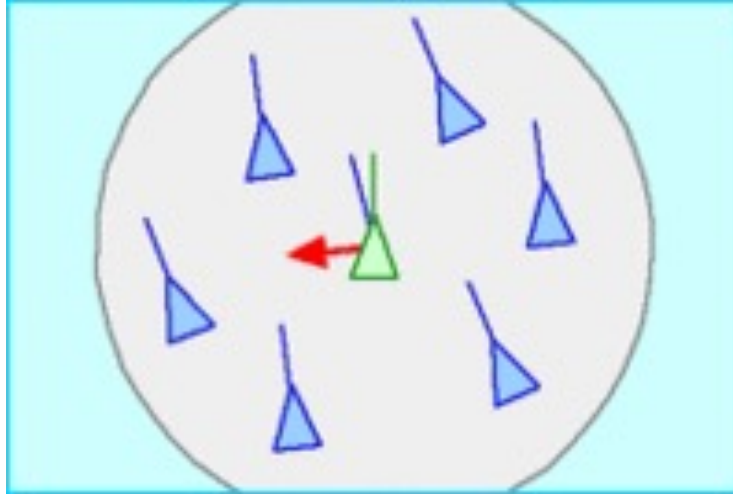with lenia rules

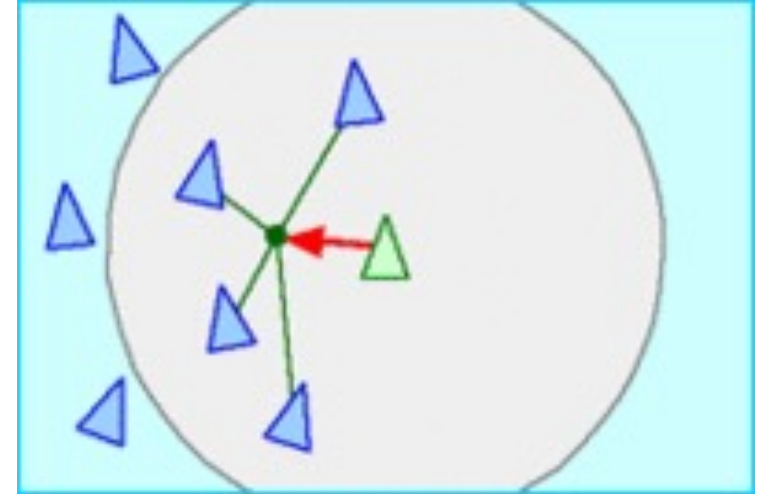# Boid Model: Flocking Behavior

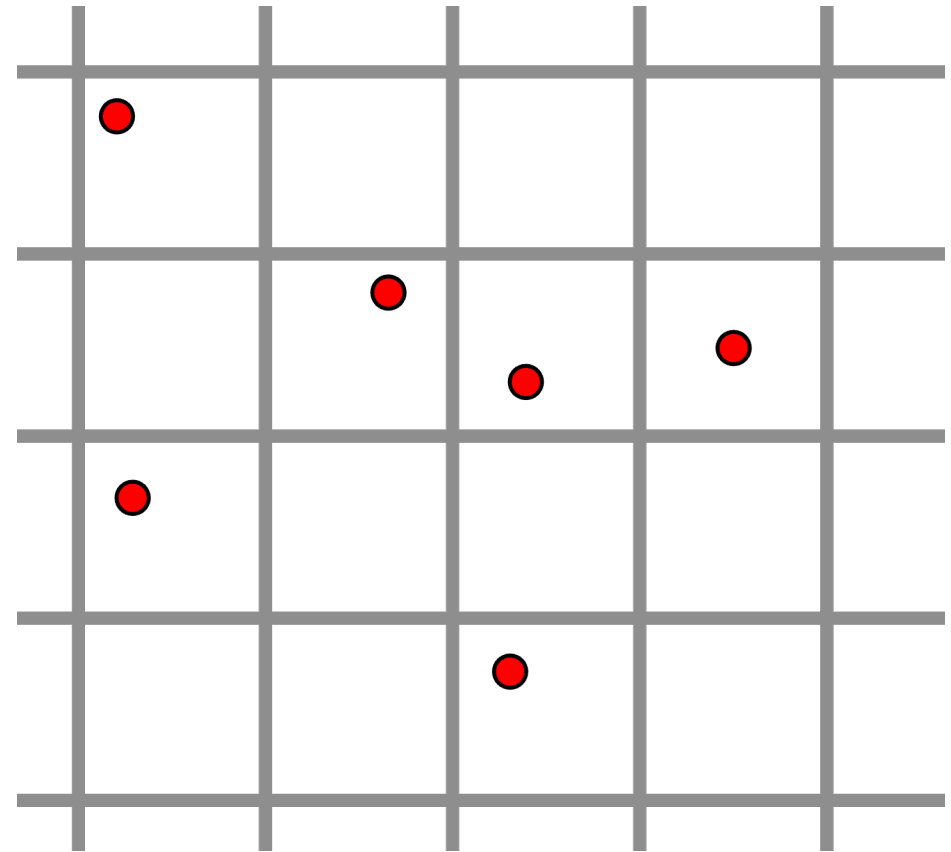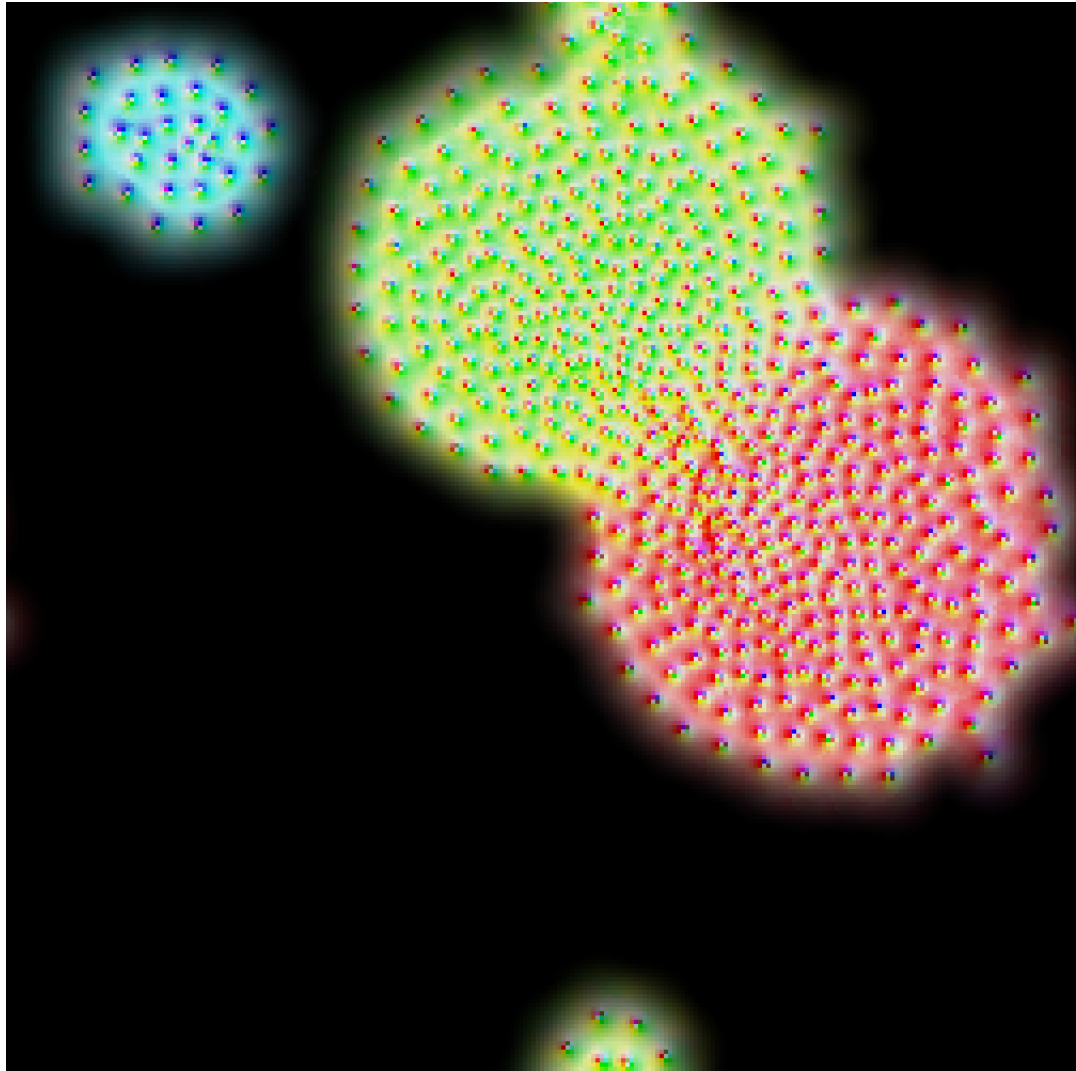Separation   Alignment   Cohesion

Method

- Growth determine force, instead of cell value velocity as input

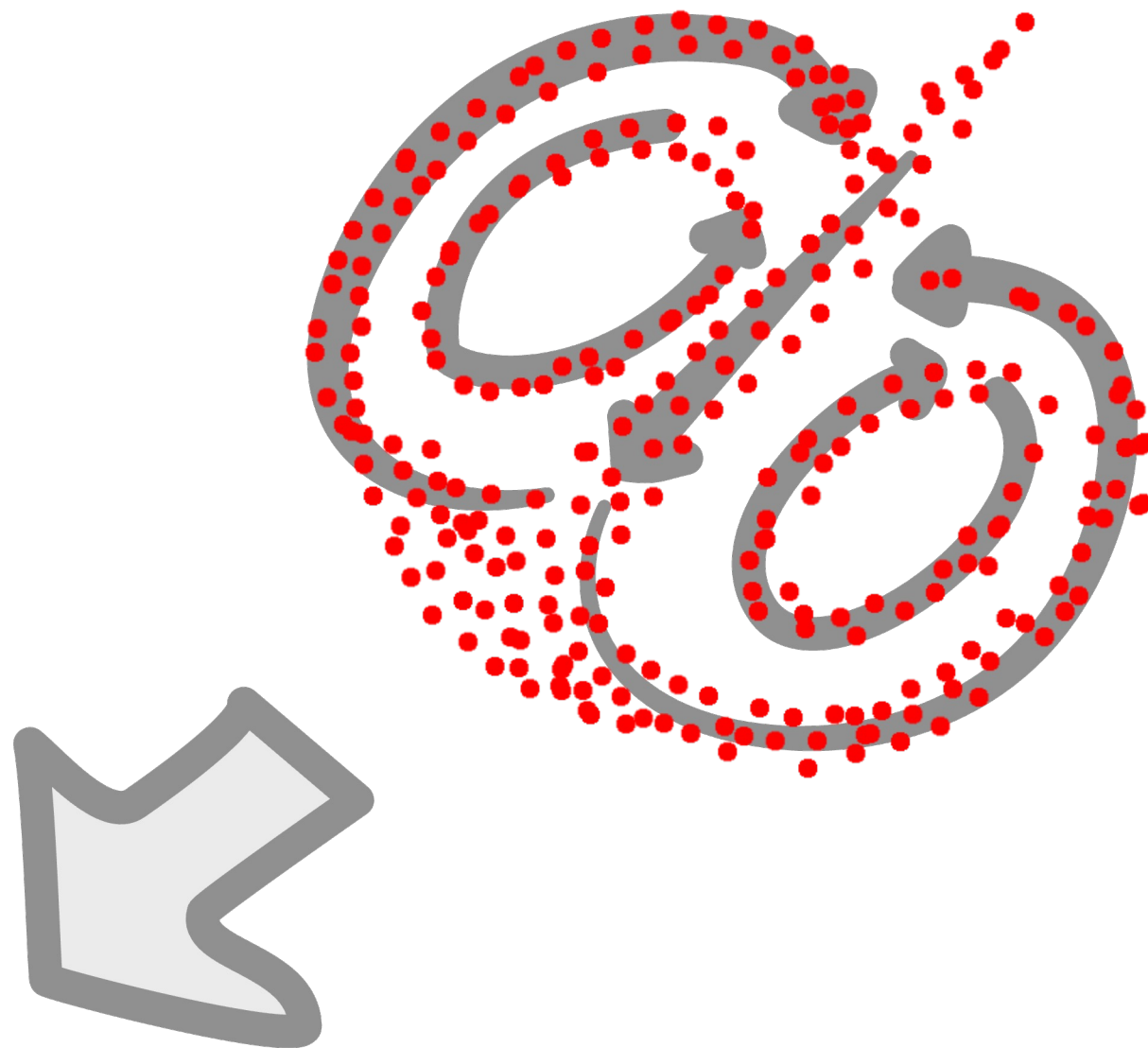- Force field calculated based on Boids and Lenia rules.

Current implementation: Per-pixel particle

Future plans

- Re-implement to handle arbitrary Lenia parameters.
- Define "interesting behavior" and use machine learning to find parameters

Expected outcome

Thank you