

Completed • Swag • 142 teams

Conway's Reverse Game of Life

Mon 14 Oct 2013 – Sun 2 Mar 2014 (16 months ago)

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1. Miranda

2. Martin O'Leary

3. Cromarty Rockall

4. jgans

5. Crimson4Life

6. Glen

7. Pear Attack

8. Coalition of the Awexome for improved space travel for dinosaurs

9. mushtaq

10. Landslide

Forum (20 topics)

GoL explained by John Conway

16 months ago

Congratulations Miranda!

16 months ago

Alternative scoring

16 months ago

RGL 2.0

16 months ago

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Reverse the arrow of time in the Game of Life

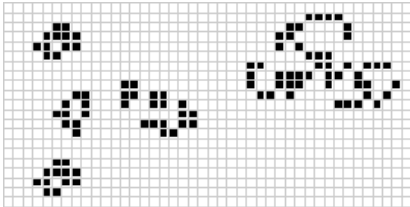


Image source: Weisstein, Eric W. "[Game of Life](#)." From MathWorld—A Wolfram Web Resource.

The Game of Life is a cellular automaton created by mathematician John Conway in 1970. The game consists of a board of cells that are either on or off. One creates an initial configuration of these on/off states and observes how it evolves. There are four simple rules to determine the next state of the game board, given the current state:

1.

Any live cell with fewer than two live neighbors dies, as if caused by under-population.
2.

Any live cell with two or three live neighbors lives on to the next generation.
3.

Any live cell with more than three live neighbors dies, as if by overcrowding.
4.

Any dead cell with exactly three live neighbors becomes a live cell, as if by reproduction.

These simple rules result in many interesting behaviors and have been the focus of a large body of mathematics. As [Wikipedia](#) tells it,

Ever since its publication, Conway's Game of Life has attracted much interest, because of the surprising ways in which the patterns can evolve. Life provides an example of emergence and self-organization. It is interesting for computer scientists, physicists, biologists, biochemists, economists, mathematicians, philosophers, generative scientists and others to observe the way that complex patterns can emerge from the implementation of very simple rules. The game can also serve as a didactic analogy, used to convey the somewhat counter-intuitive notion that "design" and "organization" can spontaneously emerge in the absence of a designer. For example, philosopher and cognitive scientist Daniel Dennett has used the analogue of Conway's Life "universe" extensively to illustrate the possible evolution of complex philosophical constructs, such as

16/07/2015

many to one?
16 months ago

Simulation Approach
16 months ago

teams

players

entries

Description - Conway's Reverse Game of Life | Kaggle

consciousness and free will, from the relatively simple set of deterministic physical laws governing our own universe.

The emergence of order from simple rules begs an interesting question--*what happens if we set time backwards?*

This competition is an experiment to see if machine learning (or optimization, or any method) can predict the game of life in reverse. Is the chaotic start of Life predictable from its orderly ends? We have created many games, evolved them, and provided only the end boards. You are asked to predict the starting board that resulted in each end board. Although some people have examined this problem, it is unknown (at least, to us...) just how difficult this will be.

Started: 8:18 pm, Monday 14 October 2013 UTC

Ended: 11:59 pm, Sunday 2 March 2014 UTC (139 total days)

Points: this competition awarded standard [ranking points](#)

Tiers: this competition counted towards [tiers](#)