

Evolution Rule

The Game of Life is a popular cell automaton algorithm that simulates the evolution of life. The algorithm was designed by British mathematician John Conway and has gained popularity for its simplicity. In its purest form, the universe for the Game of Life is represented by a grid which has an infinite number of cells.

Each grid cell can contain a dead or living cell. The game starts with the user providing a seed generation of living cells. Based on the initial generation of cells, the universe evolves through generations to simulate evolution. For a generation to evolve, the following four rules are applied to the current generation:

1. Any live cell with fewer than two live neighbours dies (due to underpopulation).
2. Any live cell with two or three live neighbours lives on to the next generation.
3. Any live cell with more than three live neighbours dies, (due to overcrowding).
4. Any dead cell with exactly three live neighbours becomes a live cell (by reproduction).

And that's it. By applying these four rules, it is surprising to see how a universe can evolve to create complex symmetrical patterns, even when there is no symmetry or pattern in the seed generation.

Neighbour cells

<i>Neighbour 1</i>	<i>Neighbour 2</i>	<i>Neighbour 3</i>
<i>Neighbour 8</i>	(Target Cell)	<i>Neighbour 4</i>
<i>Neighbour 7</i>	<i>Neighbour 6</i>	<i>Neighbour 5</i>